LIST

OF

AMERICAN VARIETIES OF VEGETABLES FOR THE YEARS 1901 AND 1902.

BY

W. W. TRACY, JR., ASSISTANT,

BOTANICAL INVESTIGATIONS AND EXPERIMENTS.

Issued January 17, 1903.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1903.
BUREAU OF PLANT INDUSTRY.

B. T. GALLOWAY, Chief of Bureau.

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W. F. Wight, Assistant, Geographic Botany.
W. O. Richtmann, Pharmacognostical Expert.
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1903.
LETTER OF TRANSMITTAL.

U. S. Department of Agriculture,
Bureau of Plant Industry, Office of the Chief,
Washington, D. C., May 7, 1902.

Sir: I have the honor to transmit herewith the manuscript of a List of American Varieties of Vegetables for the years 1901 and 1902, and respectfully recommend that it be published as Bulletin No. 21 of the Bureau series. The manuscript was prepared by Mr. W. W. Tracy, jr., Assistant, Botanical Investigations and Experiments, and was submitted by the Botanist.

Respectfully,

B. T. Galloway.

Chief of Bureau.

Hon. James Wilson,
Secretary of Agriculture.
In the Yearbook of the Department of Agriculture for 1900 (p. 543) it is stated that American seedsmen catalogued the preceding year 685 real or nominal varieties of cabbage, 320 of table beets, 340 of sweet corn, 560 of bush beans, 255 of pole beans, 320 of cucumber, 530 of lettuce, and an equally large number of varieties of other vegetables.\(^a\)

In such a maze of names, a large proportion of which are accompanied by the most meager descriptions, the progressive cultivator, endeavoring to ascertain what varieties are best adapted to his particular location, soil, climate, and uses, has little to guide him. Among seedsmen, also, similar difficulties exist. A small number of the larger houses maintain extensive trial grounds, but the information secured in this way is usually not made public. There remains a strong demand, both from the seed trade and from the public, for more precise information about the qualities of the various advertised varieties—information which can be furnished only after years of careful study and experimentation. There is one necessary preliminary to such work, namely, a catalogue of the names of the varieties.

There is no published work which gives all the varieties of vegetables sold by American seedsmen, and the Department of Agriculture has therefore undertaken to supply this want with a list, which is presented herewith.

The list has been prepared by Mr. W. W. Tracy, jr., who has charge of the Department’s variety testing, with the aid of Mr. J. E. W. Tracy, also of the Department of Agriculture.

Frederick V. Coville,

Botanist.

Office of the Botanist,

Washington, D. C., April 26, 1902.

\(^a\) In counting the number of these varieties, names were included which differed from others simply by the addition of a descriptive word, such as “improved,” “large,” “early,” or the names of persons, while other varieties, having attached to them unimportant descriptive words, such as “select,” “new,” and “choice,” were not included.
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LIST OF AMERICAN VARIETIES OF VEGETABLES
FOR THE YEARS 1901 AND 1902.

INTRODUCTION.

This list is intended as an index or catalogue to serve the purposes of seedsmen and experimenters, and aims to supply information which can not be readily found in seedsmen's catalogues. For those who wish to obtain a certain variety the names are given of all seedsmen in the United States and Canada who catalogue that variety; for those who inquire for synonymous varieties there will in many cases be found synonyms given with the names of the seedsmen who cite them as such; while for those who look for a shortening and simplifying of our already long and complex list of names there will be found here a foundation upon which such work can be carried on.

Variety names of vegetables in this country are being greatly multiplied every year by the renaming of old varieties. This practice, as well as the giving to new varieties names similar to names already used, has made the nomenclature of the whole very complex and misleading. The 320 names of lettuce entered in the list, for example, could be reduced to less than 90 distinct varieties, and the similarity of many of the names and the distinctions which must be borne in mind to separate the varieties make the whole subject very bewildering. To illustrate, the Favorite, Rudolph's Favorite, Sutton's Favorite, Florida Favorite, and Gardeners' Favorite varieties of lettuce refer to types very different from one another, while Early Dutch Butter, Dutch Speckled Butter, Hornberger's Dutch Butter, Philadelphia Dutch Butter, and Philadelphia Butter all refer, except the last, to the same variety. Besides this, there are often several different types of the same variety recognized by different seedsmen, as is well illustrated by the case of the Philadelphia Butter and Silver Ball varieties.

Besides being useful for reference, this list, it is hoped, will bring about some desirable changes, of which the first to be mentioned is the adoption of a single name for all identical varieties. There are, however, some difficulties in the way which should be well understood before such work is undertaken. Where the names are similar the varieties are generally identical, but, as already pointed out, there are,
altogether, a large number of cases where they are not so; besides this there are often recognized by different seedsmen several widely different types under the same variety name. Then also certain words which might be dropped from most names must be retained in others, as, for example, “extra” and “early,” which may be dropped from the variety of bean known as Extra Early Red Valentine, but must be retained in the Extra Early Refugee variety to separate it from the distinct variety commonly known as Refugee. For these reasons very few inflexible rules for shortening and simplifying our variety names can be laid down. It will require extensive field tests to determine all of our synonymous varieties, but it is hoped that this list, perfected by successive additions and corrections, will bring about a better understanding of varieties, especially as regards synonyms, and finally establish a body of distinct varieties, eliminating many synonyms which now claim the attention of the trade and public as representing distinct varieties.

Another improvement which this list should bring about is the prevention of the duplication of old names or the giving to new varieties names which closely resemble some old name. Introducers of new varieties have sometimes given names to their introductions exactly duplicating names already applied to other varieties, or if not duplicating them very much resembling them, not knowing, of course, that such names existed. By referring to this list introducers will hereafter have a means of preventing the confusion arising from this source.

**RULES OF NOMENCLATURE.**

In preparing this list the following words and phrases have been omitted from the variety name as being unnecessary, and multiplying names which mark no real varietal differences: Improved, extra, perfected, pedigree, select, extra select, choice, extra choice, superior, celebrated, fine, famous, our, our own, true, new, the, and the names of persons. Exceptions have been made and some of the above words retained where they are supposed or claimed to indicate a real difference in type or where the dropping of such a word would be confusing and misleading because the variety is generally and familiarly known only by the full name, as in case of Horsford’s Market Garden and Nott’s Excelsior peas. The words giant, mammoth, large, early, and extra early have in every case been retained, because, though not usually indicating a difference in type, there are many cases where they do indicate such a difference. There is, perhaps, more reason for retaining the words “improved” and “perfected” and the names of persons than the other words mentioned as omitted, and for this reason they have been allowed to stand in the groups of similar names, though, as
already stated, they have been omitted from the alphabetical arrangement.

Occasionally some of the above descriptions mark real superiority of stock, especially as regards purity and vigor, due perhaps to careful "rogueing" or to climatic, soil, or cultural conditions. It would be much better, however, if such superiority were left to be known by the reputation of the seed house rather than advertised by the addition of the seedsman's name or adjectives to the simple variety name, a practice which has been so much abused that these additions have little or no significance.

Besides the above reductions in the regular catalogue names other changes have been made, as follows: When the words "earliest" and "early" are applied by different seedsmen to the same variety, not marking any difference in type, as in Early Sheffield and Earliest Sheffield, that one of the two forms has been taken up which has been most generally adopted by seedsmen. Incomplete variety names like Plum and Cherry have been changed to more exact names, as Yellow Plum, Red Plum, Yellow Cherry, and Red Cherry, wherever it has been possible from the descriptions given in the catalogue to determine which kind is referred to.

In beans the name Lazy Wives of some seedsmen has been changed to the more generally recognized Lazy Wife, and Marrowfat whenever used is changed to Marrow. In beets the words "blood" and "turnip" not being used with any regularity by seedsmen, even with reference to the same variety, have been dropped from names whenever possible, and retained only when they serve to distinguish different though similar-named varieties, as Bastian's Half Long Blood and Bastian's Blood Turnip, or where the dropping of them would make the name misunderstood or incomplete, as in Early Blood Turnip. In cabbages "headed" and "heading" have been dropped from all names and Holland changed to the more generally accepted name Hollander. In cauliflower Late Algerian has been changed to the more generally accepted name Late Algiers. In lettuce Early Stone, Golden Stone, and Spotted Dutch Butter were changed to the more generally accepted names Early Stonehead, Golden Stonehead, and Speckled Dutch Butter, and the words "white-seeded" and "black-seeded" retained only when necessary. In muskmelons the words "cantaloupe," "citron," and "nutmeg," not being used with any regularity for the varieties to which they are applied by some seedsmen, have been dropped from variety names, excepting where it has been necessary to retain them to make a name complete. In onions "long-keeping" has been dropped from all names. In peas "marrow" has been changed to "marrowfat." In peppers "thornless," which botanically speaking is an incorrect term to apply to peppers, has been changed to "spineless," which is the word used by most seedsmen.
In squashes the word "golden" as used in Golden Summer Crookneck, Mammoth Golden Summer Crookneck, Giant Golden Summer Crookneck, and Early Golden Summer Crookneck, has been changed to the more generally adopted word "yellow." In tomatoes One Hundred Day and Advanceer have been changed to the more generally adopted names Hundred Day and Advance.

**RULES FOR ENTERING.**

The present list of varieties includes, it is believed, all the garden varieties of vegetables cataloged by seedsmen in the United States and Canada. The utmost endeavor has been made to secure every catalogue. After each variety name are given abbreviations of the names of the seedsmen who catalogue the variety. When in italics they indicate that the variety was cataloged by that seedsman in 1902 only. When all the names are in italics the variety is indicated as being a new introduction of 1902. Whenever similar names exist or synonyms are cited these also are given. By similar names are meant names resembling each other given by different seedsmen, whether to like or unlike varieties. In some cases such varieties are all dissimilar in type or essential characters. Most of them, however, are similar or identical in this regard and sometimes they are so in purity of stock also. The synonyms cited include only those given by seedsmen in their own catalogues, though some of them are undoubtedly incorrect; this is due usually to a local misunderstanding of the generally recognized type or to a misapplication of names rather than a lack of knowledge of the varieties themselves.

**LIST OF ABBREVIATIONS OF NAMES OF SEEDSMEN.**

The following are the abbreviations, alphabetically arranged, which have been adopted to designate the seedsmen referred to in this bulletin. The list includes, so far as is known, all the seedsmen of the United States and Canada who issued catalogues or price lists for the years 1901 and 1902.

- **Agn**  H. C. & J. B. Agnew, Agnew, Cal.
- **AGT**  A. G. Tillinghast, Laconner, Wash.
- **All**  John H. Allan Seed Co., Three Mile Bay, N. Y.
- **Alr**  Almeer Bros., Rockford, Ill.
- **Alx**  Alexander Seed Co., Augusta, Ga.
- **Anb**  E. Annabil, McPherson, Kans.
- **Ans**  A. H. Ansley & Sons, Milo Center, N. Y.
- **Ar**  L. E. Archias Seed Co., Carthage, Mo.
- **Bai**  Bailey & Sons, Salt Lake City, Utah.
- **Bak**  Baker Bros., Fort Worth, Tex.
- **Bdg**  Alfred Bridgeman, New York, N. Y.
- **Bel**  J. J. Bell, Deposit, N. Y.
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<th>Name and Location</th>
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<td>Ber</td>
<td>A. A. Berry Seed Co., Clarinda, Iowa.</td>
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<tr>
<td>Bgs</td>
<td>Briggs Brothers &amp; Co., Rochester, N. Y.</td>
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<tr>
<td>Bkt</td>
<td>W. C. Beckert, Allegheny, Pa.</td>
</tr>
<tr>
<td>Blg</td>
<td>F. W. Bolgiano, Washington, D. C.</td>
</tr>
<tr>
<td>Bmg</td>
<td>William H. Brunning, Rahway, N. J.</td>
</tr>
<tr>
<td>Bon</td>
<td>William A. Bours &amp; Co., Jacksonville, Fla.</td>
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<tr>
<td>Bow</td>
<td>E. J. Bowen, San Francisco, Cal.</td>
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<tr>
<td>Brb</td>
<td>E. W. Burbank Seed Co., Fryeburg, Me.</td>
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<tr>
<td>Brd</td>
<td>Luther Burbank, Santa Rosa, Cal. = LBk</td>
</tr>
<tr>
<td>Brn</td>
<td>Wm. Brinker, Cleveland, Ohio.</td>
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<tr>
<td>Brs</td>
<td>Joseph Breck &amp; Sons, Boston, Mass.</td>
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<tr>
<td>Brt</td>
<td>Fred P. Burr &amp; Co., Middletown, Conn.</td>
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<td>Btu</td>
<td>The W. E. Barrett Co., Providence, R. I.</td>
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<tr>
<td>Brw</td>
<td>John A. Bruce &amp; Co., Hamilton, Canada.</td>
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<td>Bt1</td>
<td>E. E. Burwell, New Haven, Conn.</td>
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<td>Btd</td>
<td>F. Barteldes &amp; Co., Lawrence, Kans.</td>
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<tr>
<td>Buc</td>
<td>H. W. Buckbee, Rockford, Ill.</td>
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<tr>
<td>Cam</td>
<td>L. Cameron, Jacksonville, Fla.</td>
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<td>C&amp;B</td>
<td>Claus &amp; Boddington Co., New York, N. Y.</td>
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<td>CCo</td>
<td>Cole Seed Co., Buckner, Mo.</td>
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<td>CE</td>
<td>Chesmore-Eastlake Mercantile Co., St. Joseph, Mo.</td>
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<td>C&amp;J</td>
<td>Cadwell &amp; Jones, Hartford, Conn.</td>
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<td>Cle</td>
<td>Cleveland Seed Co., Cape Vincent, N. Y.</td>
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<td>Cok</td>
<td>A. T. Cook, Hyde Park, N. Y.</td>
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<td>Col</td>
<td>Cole's Seed Store, Pella, Iowa.</td>
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<td>Cox Seed Co., San Francisco, Cal.</td>
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<td>Crg</td>
<td>Craig Seed Co., Memphis, Tenn.</td>
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<td>CSC</td>
<td>C. S. Clark, Wakenan, Ohio.</td>
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<td>Cur</td>
<td>The Everett B. Clark Co., Milford, Conn. = EBC</td>
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<td>The Dingee &amp; Conard Co., West Grove, Pa.</td>
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<td>Dei</td>
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<td>Dvn</td>
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<td>Eas</td>
<td>Eastman Seed Co., East Summer, Me.</td>
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<td>EBC</td>
<td>The Everett B. Clark Co., Milford, Conn.</td>
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<td>Ebe</td>
<td>F. H. Ebeling, Syracuse, N. Y.</td>
</tr>
<tr>
<td>Ebr</td>
<td>W. M. Eber &amp; Son, Quincy, Ill.</td>
</tr>
<tr>
<td>Eic</td>
<td>Eichling Seed and Nursery Co., New Orleans, La.</td>
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J. Wm. Elliott & Sons, New York, N. Y.
Evr J. A. Everitt, Indianapolis, Ind.
Ewg Wm. Ewing & Co., Montreal, Canada.
Fax M. B. Faxon, Boston, Mass.
Fld Henry Field, Shenandoah, Iowa.
Fle Fleming & Sons, Brandon, Manitoba, Canada.
Fnr Farmer Seed Co., Faribault, Minn.
Frd Ford Seed Co., Ravenna, Ohio.
Gdn Amzi Godden Co., Birmingham, Ala.
Ger Germain Fruit Co., Los Angeles, Cal.
GH The Goodwin-Harris Co., Chicago, Ill.
Gls Heman Glass, Barnard’s Rural Delivery, near Rochester, N. Y.
GN The Great Northern Seed Co., Rockford, Ill.
Gng Grainger Bros., Toronto, Canada.
Gra Graham Bros., Ottawa, Canada.
Grn W. H. Grenell, Pierrepont Manor, N. Y.
Grw Griswold Seed Co., Lincoln, Nebr.
Gry Thomas Griswold & Co., S. Wethersfield, Conn. = TG.
Ham Griffith & Turner Co., Baltimore, Md.
Ham Harry N. Hammond Seed Co., Bay City, Mich.
Haw Budd D. Hawkins, Reading, Vt.
Hbt Thos. W. Hobart, South Sioux Falls, S. Dak.
H&C Hoermann & Cleary Seed Co., Terre Haute, Ind.
Hde David Hardie Seed Co., Dallas, Tex.
Hen Peter Henderson & Co., New York, N. Y.
Him H. L. Holmes, Harrisburg, Pa.
Hly The Holloway Seed & Grain Co., Dallas, Tex.
Hme John Hume, Port Hope, Ontario, Canada.
Hns Haines Seed Co., Denver, Colo.
Hnt Hunt Seed Co., Lewistown, Pa.
Hop Carl S. Hopkins, Brattleboro, Vt.
H&P Huntington & Page, Indianapolis, Ind.
HP The Henry Philips Seed and Implement Co., Toledo, Ohio.
Hrm H. T. Harmon & Co., Portland, Me.
Hrn The Harnden Seed Co., Kansas City, Mo.
Hrs Joseph Harris Co., Coldwater, N. Y.
Hrv Harvey Seed Co., Buffalo, N. Y.
Hse H. F. House & Co., Hiram, Ohio.
Iml Jno. D. Inlay, Zanesville, Ohio.
Iow Iowa Seed Co., Des Moines, Iowa.
Jac Jacobs Pharmacy, Atlanta, Ga.
JCM J. Charles McCullough, Cincinnati, Ohio.
Jer The George W. P. Jerrard Co., Caribou, Me.
Jes Jessamine Gardens, Jessamine, Fla.
JL Livingston’s Seed Store, Des Moines, Iowa.
ABBREVIATIONS OF NAMES OF SEEDSMEN.

J&M  Johnson & Musser Seed Co., Los Angeles, Cal.
JMM  J. M. McCullough's Sons, Cincinnati, Ohio.
JMP  J. M. Philips' Sons, Mercersburg, Pa.
Jeo  C. H. Josten, New York, N. Y.

Mark W. Johnson Seed Co., Atlanta, Ga. = MWJ.
R. H. Johnston, Victoria, British Columbia, Canada. = RJI.

Kei  Keith & Co., Winnipeg, Manitoba, Canada.
Kel  The Kelly Co., Cleveland, Ohio.
Ken  A. C. Kendel, Cleveland, Ohio.
K&F  Kennedy & Farnham, Carrollton, Mo.
Kg  T. J. King Co., Richmond, Va.
Koe  W. H. Koerner, Milwaukee, Wis.
Kos  Theo. Koss, Milwaukee, Wis.
Kra  J. N. Kramer & Son, Cedar Rapids, Iowa.
K&W  Kendall & Whitney, Portland, Me.
Lam  Buell Lamberson's Sons, Portland, Oreg.
LB  Lilly, Bogardus & Co., Seattle, Wash.
LBk  Luther Burbank, Santa Rosa, Cal.
Lnr  S. F. Leonard, Chicago, Ill.
Liv  The Livingston Seed Co., Columbus, Ohio.
Livingston's Seed Store, Des Moines, Iowa. = JL.

Loh  The Lohrman Seed Co., Detroit, Mich.
Lon  W. B. Longstreth, Gratiot, Ohio.
Man  Mann & Co., Cape Vincent, N. Y.
P. Mann & Co., Washington, D. C. = PM.
May  L. L. May & Co., St. Paul, Minn.
McK  A. E. McKenzie & Co., Brandon, Manitoba, Canada.
McM  McMillan's Seed Store, Atlanta, Ga.

J. Charles McCullough, Cincinnati, Ohio. = JCM.
J. M. McCullough's Sons, Cincinnati, Ohio. = JMM.

Mic  Michael's Seed Store, Sioux City, Iowa.
Mls  F. B. Mills, Rose Hill, N. Y.
Mnd  W. A. Manda, South Orange, N. J.
Mns  J. Manns Co., Baltimore, Md.
Mrs  C. C. Morse & Co., Santa Clara, Cal.
MV  Missouri Valley Seed Co., St. Joseph, Mo.
MWJ  Mark W. Johnson Seed Co., Atlanta, Ga.
Mzy  Muzzy Bros., Paterson, N. J.
Neb  The Nebraska Seed Co., Omaha, Nebr.
NI  Northern Indiana Seed Co., Valparaiso, Ind.
NK  Northrup, King & Co., Minneapolis, Minn.
Nol  J. F. Noll & Co., Newark, N. J.
Old L. L. Olds, Clinton, Wis.
OV Ohio Valley Seed Co., Evansville, Ind.
Pac Pacific Seed Co., Sacramento, Cal.
Pg The Page Seed Co., Greene, N. Y.
The Henry Philipps Seed and Implement Co., Toledo, Ohio.=HP.
J. M. Philips' Sons, Mercersburg, Pa.=JMP.
Pir The Pierce Seed Co., Pueblo, Colo.
Pks J. M. Perkins, Winnipeg, Manitoba, Canada.
Pm P. Mann & Co., Washington, D. C.
Pne Pine Tree State Seed Co., Bath, Me.
Pnt Plant Seed Co., St. Louis, Mo.
Poo Poole's Seed Store, Tacoma, Wash.
Por Portland Seed Co., Portland, Oreg.
Pot Walter A. Potter & Co., Providence, R. I.
Pri George H. Price, Albany, N. Y.
Prn F. R. Pierson Co., Tarrytown-on-Hudson, N. Y.
Ptt Frank S. Platt, New Haven, Conn.
Pug Puget Sound Nursery and Seed Co., Seattle, Wash.
Qkr Quaker City Seed Co., Philadelphia, Pa.
Ree Jerome B. Rice, Cambridge, N. Y.
RE Robert Evans Seed Co., Hamilton, Canada.
Ree C. A. Reeser Co., Urbana, Ohio.
Ren Wm. Rennie, Toronto, Canada.
RHJ R. H. Johnston, Victoria, B. C., Canada.
Rim Horace Rimby, Collegeville, Pa.
Rob J. C. Robinson, Waterloo, Nebr.
Roe Rockford Seed Co., Rockford, Ill.
Rog Rogers Bros., Chaumont, N. Y.
Roh Waldo Rohnert, Sargent, Cal.
RP Rush Park Seed Co., Independence, Iowa.
Rt The A. I. Root Co., Medina, Ohio.
Rtk J. R. Ratekin & Sons, Shenandoah, Iowa.
Sal John A. Salzer, La Crosse, Wis.
SB Steele, Briggs Seed Co., Toronto, Canada.
SC Schisler-Corneli Seed Co., St. Louis, Mo.
S&F Schlegel & Fottler, Boston, Mass.
S&H The Storrs & Harrison Co., Painesville, Ohio.
Shm R. H. Shumway, Rockford, Ill.
Sie Geo. L. Siegel, Erie, Pa.
Sim J. A. Simmers, Toronto, Canada.
S&O Shugart & Ouren Seed Co., Council Bluffs, Iowa.
Sox Sioux City Seed and Nursery Co., Sioux City, Iowa.
Spf Springfield Seed Co., Springfield, Mo.
Sqr Jas. M. Squier & Son, Lindsay, Ontario, Canada.
S&R Savage & Reid, Salem, Oreg.
Stk J. Steckler Seed Co., New Orleans, La.
Stw Stewart's Seed Store, Omaha, Nebr.
S&W Stumpp & Walter Co., New York, N. Y.
Tat George Tait & Sons, Norfolk, Va.
TB Thompson Bros., Muscatine, Iowa.
LIST OF VARIETIES.—ARTICHOKE.

Chinese. Drw. 
**Seedsmen’s synonyms.** Vegetable White Ball, Drw. Stachy’s Affinis, Drw.

Colossal. M&S.

**Similar names.** Sutton’s White, Sutton’s Colossal.

Early Campania. Del.

Early Purple. Thr. For similar names see Purple Globe.

**Seedsmen’s synonyms.** Violet, Brk.

Early Purple Globe. Ewg. For similar names see Purple Globe.

French. Bdg MWJ. For similar names see French Globe.

**Seedsmen’s synonyms.** Green Globe, Bdg.

French Globe. Ken Mnd My Mzy Nox Tat Thr.

**Similar names.** Large French Globe, French Green Globe, French, White French, Mammoth White French.


**Similar names.** See French Globe, Green Globe.

Giant Green Globe. Raw Ren. For similar names see Green Globe.

Giant White. May. For similar names see White.

Globe. Chl Cur OV. For similar names see Green Globe.
Green Globe. Alx Brd Bdg Bru Crs D&H Del Emr RE Evr Ewg Fax GH Gra Hns Hrn RIIJ Man McM Mhl NK Pac Pri SC Sox T&B Vk Wd.


Seedsmen's synonyms. French, Bdg.

Green Laon. Thr. For similar names see Paris.


Italian Purple. Thr. For similar names see Purple Globe.


Similar names. Large Jerusalem, Improved Large White Jerusalem, Red Jerusalem.

Seedsmen's synonyms. Giant White French, Frd.

Large Flat Brittany. Thr.

Large French Globe. Ptt. For similar names see French Globe.

Large Globe. Brn Buc C&B Fqr Fer Lan Lea Lnr LB Liv JMM Pks SB W&D WS.

Similar names. See Green Globe.


Similar names. See Green Globe.

Large Jerusalem. NK. For similar names see Jerusalem.

Large Paris. Mnd Vin. For similar names see Paris.

Large White Jerusalem. Ar. For similar names see Jerusalem.

Le Normand's Mammoth. RE.

Mammoth White. Del. For similar names see White.

Mammoth White French. Eic Evr G&H Ham Kos.

Similar names. See French Globe.


Seedsmen's synonyms. Large Globe, Fer Liv.

Purple Globe. Gra.

Similar names. Early Purple Globe, Early Purple, Italian Purple.

Red Jerusalem. S&R. For similar names see Jerusalem.

Sutton's Colossal. Entered as Colossal.

Sutton's White. Ren. For similar names see Sutton's Colossal, White.

Violet. Brk Thr.

Seedsmen's synonyms. Early Purple, Brk.

White. S&R.

Similar names. Sutton's White, Giant White, Mammoth White.

White French. Eic H&P Lam WS Wd. For similar names see French Globe.

Asparagus.

Argenteuil. Vin.

Similar names. Giant Argenteuil, Early Purple Argenteuil.
Barr's Mammoth.  Air Bai Bkt Bel Ber Bgs Bri Bue Bji Bar CE CF Crs Cur Del D&C Drv Ebe Ebr RE Eev Fst Fle Frd Gls Gh G&T Grw Ham Hbr Hm Ht H'C H'm Hsc Hsl Hmn Idl Ken K&F Lur Liv M'dd May JMM Mic Mhl Mls MV Nef NK Pae Pg HP JMP Ptt For Pri Png Raw Ree Roe Rs S&l S&R Shm Sox Tat Tem Tex Thr Til Vau Wdr Yng.


Similar names.  See Barr's Mammoth.

Berliner Freuds.  Sal.


California Large White.  Bel.

Charleston.  Tat Wlt.

Seedsman's synonyms.  French, Tat.  Palmetto, Tat.

Colossal.  Air Bt Bkt Bow Bri C&B Cur DD Dm M Mdr Ebr G&T Hrv Hri Hly JCM JMM Lan M'dd Mns JCM MeM Mzy Nef Pmr Poo Ree SB Stw Tex Thb Thl W&D.

Similar names.  See Conover's Colossal.

Columbian.  Dw Mx WS.  For similar names see Columbian Mammoth White.

Columbian Mammoth White.  Air Anb Air Bai Bak Brd Btl Bkt Bel Ber Big Bow Bgs Bri Bru Bue Bar Brv CE Col Cox C'S Cur Dhw D&H Dl Del Drv Ebr Eic Eli RE Evt Ew Eg Enq Fer Frd Fle Flr Gls Gdn Gnd Ghi Gra Ggy Grw Hns Hrn Hrs Hw Htt Hop Hsc Hsl Hsw J&M J&S Kg Kmn Lam Lar LB Liv JL Man May JMM Mck Mhl MV M&S Neb Nef NoL NK Pk HP Pir Prn Put Ptt For Pri Qkr Ren Ree Roe Rs RP S&W Sc S&F Shw Sim Sox Spf Stk SB S&H S&W Tat Tem Tex Thb Thm AGT Thr Til Trn Vl Vau Vn Wn Wrl Wlt Y&S.


Columbian White.  Col MWJ Raw Shn.

Similar names.  See Columbia Mammoth White.

Conover.  Sal.  For similar names see Conover's Colossal.


Similar names.  Conover, Colossal, Conover's Palmetto, Conover's Giant, Conover's Mammoth.

Seedsman's synonyms.  Early Purple Argenthail, Bru.

Conover's Giant.  RHJ.  For similar names see Conover's Colossal, Giant.

Conover's Mammoth.  Mic.

Similar names.  See Conover's Colossal, Barr's Mammoth.

Cox's California Mammoth.  Cox.  For similar names see Barr's Mammoth.

Defiance.  Nef.

Similar names.  Smally's Defiance.


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Dreer’s Eclipse. Entered as Eclipse.
Early Purple Argenteuil. Brt. For similar names see Argenteuil.

SEEDSMEN’s SYNONYMS. Conover’s Colossal, Brt.

Eclipse. Drr Mhl Thr.
SIMILAR NAMES. Dreer’s Eclipse.

French. Tat Wlt.
SIMILAR NAMES. Giant White French.

SEEDSMEN’s SYNONYMS. Charleston, Tat. Palmetto, Tat.

Giant. Cox Shm Tpk.
SIMILAR NAMES. Conover’s Giant, Moore’s Giant, Large Giant, Southern Giant.

Giant Argenteuil. Alx Cur Mw Mnd MWJ Wer Wlt Wd.
SIMILAR NAMES. See Argenteuil.

Giant Palmetto. Ham Sal. For similar names see Palmetto.

Giant Purple Top. Ewg.
SIMILAR NAMES. Moore’s Giant Purple Top, Large Purple Top.

Giant Snow Cap. Da&I Ewg. For similar names see Snow-head.

Giant White French. For similar names see French.

Hub. Brk Fqr.

Ivy. Tem.

Large Giant. Sim. For similar names see Giant.

Large Purple Top. Pac. For similar names see Giant Purple Top.

Hammond’s Mammoth White. Ham.

SIMILAR NAMES. See Columbian Mammoth White.

Henderson’s Palmetto. Entered as Palmetto.

Mammoth. Chl H&P MWJ. For similar names see Barr’s Mammoth.

Mammoth White. Brk G&T. For similar names see Columbian Mammoth White.

Maule’s Mammoth. Mau. For similar names see Barr’s Mammoth.

Moore’s Cross Bred. Drn Ggy.
SIMILAR NAMES. Moore’s Giant Cross Bred, Moore’s Giant Purple Top, Moore’s Giant.

Moore’s Giant. Gry Raw. For similar names see Giant, Moore’s Cross Bred.

Moore’s Giant Cross Bred. Fqr. For similar names see Moore’s Cross Bred.

Moore’s Giant Purple Top. Brk S&F.
SIMILAR NAMES. See Giant Purple Top, Moore’s Cross Bred.

SIMILAR NAMES. Conover’s Palmetto, Henderson’s Palmetto, Giant Palmetto.

SEEDSMEN’s SYNONYMS. Charleston, Tat. French, Tat.

Paris Mammoth. Pug. For similar names see Barr’s Mammoth.

Quality. L.Bk.

Smalley’s Defiance. Entered as Defiance.

Snowhead. Ger.
SIMILAR NAMES. Giant Snow Cap.

Southern Giant. Shm. For similar names see Giant.

Starkey’s Early Prolific Mammoth. M&S.
SIMILAR NAMES. See Barr’s Mammoth.

Vick’s Mammoth. Vl. For similar names see Barr’s Mammoth.
**BEAN (BUSH LIMA BEAN).**

**Burpee's Bush.** Air Anb Ar BAI Brd Brt Btl Bel Ber *Big* Bow Bgg Brk Bdg Brt Brn Brn Bg Bng Bne Brl Brk Brr Bsw C&J Cam CE Chl Cle C&B Col CF Cws Cw CA Chm Dlw D&H Del D Drr Drw Drm Ebc Ebr Eic Elt Emr RE Exv Ewg Fnr Fqr Fst Fax F&F Frl Ger Gls Gh GJ Gra GX Gfy Gry Gfy G&T Grw TG Hns Him Hrn Hrz Hrs HBr H&C Hlm Hop Ilse Hut H&P Iow Jbc MJW J&M J&S Jns Kel K&W Ken K&F Kg Kos Kra Lam Lan Lnr LB Liv JL Loh Lom Mnd Mgd Man PM MsS Mas Man May JCM JMM JkK McM Mic Mhl Min MsS MV MsS Mzy Nxb Nol Nk Old Pac Pg HP JMP Jk Pnt Ptn Prt Pror Pot Pri Png Qkr Rlk Raw Rec Ren Rec Rim Roe Rt Rs RP Sal &R SC S&F S&B S&O S&V S&H S&W Tm Te Thm Thr THb Thh Tlk Til Tpk Trm T&B Vl Van Vl Wat Wea Web W&D Wer WH Wd Wdr WS Wyw Yng YdH.

**Similar names.** Burpee's Large Bush, Burpee's Willow Leaf Bush, Burpee's Quarter-Century.

**SEEDSMEN'S SYNONYMS.** *Dwarf Large White, J&S.*

**Burpee's Large Bush.** Airx Bkt Gg Hde Pnt Spl Tat.

**Similar names.** See Burpee's Bush.

**Burpee's Quarter-Century.** Entered as *Quarter Century.*

**Burpee's Willow Leaf.** Entered as Willow Leaf.

**Calico.** *Cam.*

**SEEDSMEN'S SYNONYMS.** *Southern, Cam.*

**Cox's Bush.** *Cox.*

**Cox's Southern Bush.** *Cox.*


**Similar names.** Dreer's Large Bush, Dreer's Wonder Bush.

**SEEDSMEN'S SYNONYMS.** *Kumiche, Bnt Bkt Bur For Fer J&S, etc.* Thorburn, Kra Man Vl.

**Dreer's Large Bush.** Big Nol. For similar names see Dreer's Bush.

**Dreer's Wonder.** *Bur Drr Liv Mns. For similar names see Dreer's Bush.*

**Dwarf Carolina.** *Lan.*

**SEEDSMEN'S SYNONYMS.** *Dwarf Lima, Lan.*

**Dwarf Large White.** Fer Im J&S.

**Similar names.** Dwarf White, Large Bush.

**SEEDSMEN'S SYNONYMS.** *Burpee's Bush, J&S.*

**Dwarf Lima.** Brb Grg Fer Hw Lea MeL OV Vl Yng.

**SEEDSMEN'S SYNONYMS.** *Dwarf Carolina, Lan.*

**Dwarf Sieva.** Fer J&S Mnd MV NK.

**SEEDSMEN'S SYNONYMS.** Henderson's Bush, Fer J&S Mnd MV NK HP Thr.

**Dwarf White.** *Mzy. For similar names see Dwarf Large White.*

**Extra Early Bush.** *M&S.*

AMERICAN VARIETIES OF VEGETABLES.

S&W S&W Tat Tom Tex TB Thm Thr Thb Tpk Trm T&B VI Vau Vin Wea Web W&D Wer Wt WS Wyg Y&H.


Seedsmen's synonyms. Dwarf Siera, Fer &S Mnd MV NK HP Thr.

Henderson's Improved Bush. Entered as Henderson's Bush.

Henderson's Small Dwarf. Alx. For similar names see Henderson's Bush.

Hoermann & Cleary's Wax Lima. H&C.

Improved Bush. Vk.


Similar names. Mill's Wonder, Deeer's Wonder, New Wonder.


Seedsmen's synonyms. Deere's Bush, Brt Bkt Bur Fir Fer J&S, etc. Thorburn, Kra Liv NK Vk.

Large Bush. Bzg. For similar names see Dwarf Large White.

Mexican Lima. Pir.

Mill's Wonder. Mls. For similar names see Jackson Wonder.

Moore & Simon's Improved Large Early. Entered as Moore & Simon's Large Early.

Moore & Simon's Large Early. M&S.

Similar names. Moore & Simon's Improved Large Early.

Potato Bush. Tat.


Small Bush. Tat Vk.

Southern. Cam Cov.

Seedsmen's synonyms. Southern, Cam.

Thorburn's Bush. CE CF DD Ebr Elt Hst Liv Man McM NK Ree S&W Thm Thr Wdr.


Washington Market. Lm.

Wilkie's Perfection Prize. M&S.

Willow Leaf. Bur Sim.

Wonder. For Hweb J&S Spf. For similar names see Jackson Wonder.

Wood's Improved. Ebr Rt.

Similar names. Wood's Prolific.

Wood's Prolific. Bng Bur Ebr Hbt Roe Shw Vk Wd WS.

Similar names. See Wood's Improved.

BEAN (GREEN-PODDED BUSH BEAN).

Alexander's Stringless Green Pod. Entered as Stringless Green Pod.

Bacon. Wd.

Similar names. Wood's Bacon.

Banner Leafless. Ham.

Similar names. Hammond's Banner Leafless.

Best of All. Alx All Ans Bkt Bel Brk Bgs Bri Brn Buc Bui Bur Brw Cam CE Cle Col CA Del DD Eic Evr Fmr Fst Fer Frd Gln GH Grn Gg Gd&T TG Hrn Hbt Hly Hlm Jae MWJ J&S Kei Kg Lnr LB Liv Mnd Man May JCM JMM McM Mol Mhl Liv MV M&S Nef NK Pg JMP Pnt Qkr Roe Roe Rog Rs Sal Shm Sox Spl Stk S&W Tem Thm Thr Wbr Wd WS Yng.

Best of All Early Market. Nol M&S.

Black Morrow. Sal.

Black Turtle Soup. Drr JCM. For similar names see Turtle Soup.

Black Valentine. Hen S&W W&D. For similar names see Red Valentine.
Blue Poddted Butter. Bur Hbt Rog S&F.

Boston. Hme-See Y&H. For similar names see Boston Pea.

SEEDSMEN’S SYNONYMS. Goddard, Y&H. California Yellow, Hme.

Boston Favorite. All Br. Rgy Bra Bur Brr C&J CE CF Emr Ewg Fqr Fax Frd Gyn Gry Hrs Hse Lnr Mos MV NK HP Put Qkr Raw Rec Rog Rs Sor Wea Wdr.

SIMILAR NAMES. See Boston Pea.


Boston Improved Round Pod Extra Early Snap Short. Entered as Boston Round Pod Extra Early Snap Short.

Boston Marrow. Hrs. For similar names see Boston Pea, White Marrow.

Boston Pea. Brn Del Drr Fmr Hme Kos Kra Liv May M&S Mus Nol HP Y&H.

SIMILAR NAMES. Pea, White Pea, Boston Small Pea, Boston Pea, Early Boston Navy, Boston Favorite, Boston Marrow, Boston Yellow Eye, Boston Improved Round Pod Extra Early Snap Short.


Boston Round Pod Extra Early Snap Short. M&S.

SIMILAR NAMES. See Boston Pea.

Boston Small Pea. Brd Bgs Bur CE C&B Crs Car DD Hrs Hen Lnr MV Rec Sox Ten. For similar names see Boston Pea.

Boston Yellow Eye. Ebe. For similar names see Boston Pea, Yellow Eye.


Breck’s String and Shell. Brk.

Broad Windsor. Bt Bow Brk Bdg Cle Cox Crs Car Dl Wd D&H DD Drr Ebe Ebr Eie Emr RE Fmr Fqr Fpr Feg Fle Ger Gra Gry G&T Hms RHJ Kei K&W Ken Kos Lam Lnr Loh Mlf May NK Pac Pir Pks Ptt Poo Por Pri Pug Raw Rec Ren Sal S&R SC S&F Sim Stk SB S&W Thr Van Wnd Wd Wkr.

SIMILAR NAMES. English Broad Windsor, Green Windsor.


Brown. NK. For similar names see Brown Six Weeks.

SEEDSMEN’S SYNONYMS. Swedish, NK.

Brown Six Weeks. Bt Bkt Bri Wd WS.

SIMILAR NAMES. Early Brown, Brown. See also Yellow Six Weeks.

SEEDSMEN’S SYNONYMS. Early Mokawk, Sox WS. Mokawk, Bkt Btt.

Brown Swedish. Brn.

Brown Speckled Valentine. Bt Bkt. For similar names see Red Valentine.

SEEDSMEN’S SYNONYMS. One Thousand or One, Lam. Refugee, Bkt Btt Dlw Lam.


SEEDSMEN’S SYNONYMS. Early Valentine, G&T.

Buckbee’s Early Wonder. Entered as Early Wonder.

Buist’s Early Lightning Valentine. Entered as Early Lightning Valentine.

Burlingame Medium. Ans Brk Car Fmr Frd Hen J&S Mau.

SIMILAR NAMES. See White Medium.

Burpee’s Stringless Green Pod. Entered as Stringless Green Pod.

Byer. CE Chl CF Thr.

Cal. JL.

SEEDSMEN’S SYNONYMS. Mexican Tree, JL.

California Branch. At H&P Iow 17. For similar names see California Tree.

SEEDSMEN’S SYNONYMS. Tree, H&P. Prolific Tree, At Iow.

California Pea. Gra Ren. For similar names see California Tree.
California Tree.  Til 't Web Wyg.
Similar names.  California White Tree, California Branch, California Yellow, California Wonder, California Pea.  See also Prolific Tree.
Seedsmen's synonyms.  Prolific Tree, Wyg.

California White Tree.  CE GH May.
Similar names.  See California Tree, Prolific Tree.

California Wonder.  Fmr NK.
Similar names.  See California Tree, Canadian Wonder.
Seedsmen's synonyms.  Improved Tree, NK.

California Yellow.  Hme.  For similar names see California Tree.
Seedsmen's synonyms.  Boston, Hme.

Canadian Universal.  D&II.

Canadian Wonder.  All Bai Bdg Bri Cox Dlw Fle Ger Gra Hme RHJ J&M Ken NK Pac HP Por Qkr Rec Rog S&R Sim Til T&B Vin Wer.
Similar names.  Simmer's Canadian Wonder, English Wonder, California Wonder, Newington Wonder, Early Wonder, Buckbee's Early Wonder, White Wonder, Salzer's White Wonder, Little Wonder Mary, Johnson's Wonderful.

Carmine Dwarf Horticultural.  GH.  For similar names see Dwarf Horticultural.

Chilian.  Brr Ptt.
Seedsmen's synonyms.  Red Kidney, Brr Ptt.

China.  Brn Fqr Grn Pri Ren.  For similar names see China Red Eye.
Seedsmen's synonyms.  Red Eye, Pri.

China Red Eye.  All Brn Bar Cle Dlw Ebe Him Lea Lnr May Mc K McM NK Pac Pot Qkr Vin.
Similar names.  Early China Red Eye, Early China, China, Red Eye.

Chocolate.  Thr.

Cleveland's Improved Extra Early Refugee, Cleveland's Improved Red Valentine, Cleveland's Improved Valentine.  Entered as Extra Early Refugee, Red Valentine, and Valentine.

Coffee.  Crs.

Colossal Stringless Green Pod.  Sal.  For similar names see Stringless Green Pod.

Cornhill.  Btl.

Cox's Improved Red Valentine.  Entered as Red Valentine.

Craig's Stringless Wonder.  Entered as Stringless Wonder.

Cream Valentine.  Bkt Hen Kei.  For similar names see Red Valentine.

Crimson Beauty.  Frd Rs.

Day's Improved Leafless Medium, Day's Leafless Medium.  Entered as Leafless Medium.

Dewey Navy.  Wll.  For similar names see Navy.

Dun Color.  Ewg.

Dwarf Black Green Podded.  AGT.

Dwarf Cherry.  PM Mns.
Seedsmen's synonyms.  Dwarf Horticultural, Bdg PM Mns.

Dwarf Cranberry.  Bel Brr Fqr Haw Hsc NI Roe Wer Wer Y&H.
Similar names.  Red Dwarf Cranberry, Yellow Dwarf Cranberry, White Dwarf Cranberry, Large White Dwarf Cranberry.
Seedsmen's synonyms.  Dwarf Horticultural, Bel Brr Hsc Roe Wer Y&H. (quail Head, Brr.

Dwarf Dutch Case Knife.  Jos.
Seedsmen's synonyms.  Emperor William, Jns.

Dwarf French.  RHJ.  For similar names see French Kidney.

Dwarf Horticultural.  All Amb Ans Bai Brl Brl Btl Bkt Bel Bdg Bow Bgg Brk Bdg Bgs Brn Buc Brl Bur Brr Brw C&J Cau CE Cie C&K CF Crs Cur Dun Eas Ebe Elt Emr Ewg Fmr Fqr Fax Fer Frd Grv Grn GH Grn Gry G&T TG Hns
Early Marrow Pea. Fer Loh.

Dwarf Wren’s Egg. Lan.

Early Boston Navy. McK. For similar names see Navy, Boston Pea.

Early Brown. Lan. For similar names see Brown Six Weeks.

Early Brown Mohawk. Hde K&F Ptt SC. For similar names see Mohawk.


Early Long Pod. Ger Ken Pec SC W&D.

Early Long Yellow Six Weeks. Ar Bow Buc Bri Brb Bow Cox Crs Dlw D&H Del Drm Ebe Est Fax Gdn TG Jac Kei K&W Lan JL May JCM McM Mhl Min Mls NK JMP Pir Pks Put Ptt Por Pug Qkr Raw Rec Rs S&R SC Shm Spf SB S&W VI Web Wer Wdr Yng.

Early Marblehead Dwarf Horticultural. Fer Ggy Pec.

Early Marrow. Ewg. For similar names see White Marrow.

Early Marrow Pea. Fer Loh. For similar names see White Marrow.

Early Mazagan. D&H May Mzy Sim S&W Thr W&D.

Similar names. Mazagan, Green Mazagan.
AMERICAN VARIETIES OF VEGETABLES.


Early Mohawk Six Weeks. Bui Crg Eic Gdn Kg Stk Wlt.

Early Prolific Broad. Iow.

Early Red Lightning Valentine. Loh.

Early Red Speckled Valentine. Gdn Jae. For similar names see Red Valentine.

Early Red Valentine. Ar Bt Bl Bg Bn Brk CE CB COL CRs Chm Del Drw Env Egw Ger Gra Gng Gif G&T Hns Hrm Hen Hop Hme H&P Jer Kos Lam LB PM Mns Min JCM Mel Mt&S Pac Poo Pot Raw Ree RP Shw Tem Thb Til Tpk Vin Web &D Wdr WS Yng Y&H.


Early Round Pod Speckled Valentine. Drm.

Early Round Pod Valentine. TG Ind Sox Trm.


Early Royal Dwarf Kidney. Roc. For similar names see Royal Dwarf.

Early Royal Dwarf White Kidney. Bac. For similar names see Royal Dwarf.

Early Valentine. Ber Bui Brw Eas Ebr RE Fqr Fax Hrv Hnt Iow RIJ K&W Kra Mzy Pac Pm Pue Rtk S&F Shm.

Early Warick. All Hen Thr.

Early White Marrow. Gra. For similar names see White Marrow.

Early White Valentine. Liv.

Early Wonder. Buc Roc. For similar names see Canadian Wonder.

Early Yellow Eye. Brt. For similar names see Yellow Eye.

Early Yellow Kidney Six Weeks. Fer Loh.

Early Yellow Six Weeks. AIX Bur Brr DD Drm Ebr Eie Ext Ext Fqr Ftd Gng Gry Hns Hnt Htt Kg Kos Man MeK M&S Pac Pot RP Shw Stk Tat Trm Vin Wat Wea Web Wlt Wd WS Y&H.

Electric Tree. Buc Roc. For similar names see Prolific Tree.

Emerson's Pea. Emr.
Emperor of Russia. Thr.
Similar names. Early Emperor William, Improved Emperor William.
Seedsmen's synonyms. Dwarf Dutch Case Knife, Jns.
English. Bri Cox Fur Kei Mhl NK Raw Vau.
Similar names. Broad Windsor, NK.
English Broad. Lam.
Similar names. Broad Windsor, Lam.
English Broad Windsor. Mek Pot Pot. For similar names see Broad Windsor.
English Wonder. Lam. For similar names see Canadian Wonder.
Eureka. Frd.
Everbearing. Bug Bur DD Htt MWJ Mzy Sal Thr Thk.
 similar names. See Evergreen. Evt. Excelsior Refugee. Hst. For similar names see Refugee.
Extra Early. Hll Pg.
Extra Early Dun Colored. Thr.
Extra Early English Kidney. Pks.
Extra Early Long Yellow Six Weeks. DD H&C.
 Similar names. See Long Yellow Six Weeks.
Extra Early Mohawk. Koe. For similar names see Mohawk.
 Similar names. Six Weeks, Koe.
Extra Early Prize Winner. Rt.
Extra Early Red Speckled Valentine. JMF.
 Similar names. See Red Valentine.
Extra Early Red Valentine. All Air Bak Bel Bug Bur Brn CA Dlw DD Drr Eic Elt Frd GH GI G&G Hrr Hst Hly K&P Koe Lam Lnr LB Mas Mhl Mls Min My M&S Put Pri Qkr Reg Reo Sox Ste Sw Vc Wat Wea Wip.
 Similar names. See Red Valentine.
Similar names. Improved Round Pod Valentine, Frd.
Extra Early Round Pod Valentine. Fmr.
 Similar names. See Red Valentine.
Extra Early Round Pod Red Valentine. Bow Buc Fer Lam Pg Wbt Wyg.
 Similar names. See Red Valentine.
 Similar names. See Red Valentine.
Extra Early Valentine. Afx Bai Bdg Buc Emr Kg Mnd Man Mck NK Ptt Ree Ren Roc Tat Thr.
 Similar names. See Red Valentine.
Extra Early White Valentine. Bui. For similar names see Red Valentine.
Extra Early Yellow Six Weeks. Htt H&C.
 Similar names. See Long Yellow Six Weeks.
Farquhar's Dwarf Horticultural. Entered as Dwarf Horticultural.
First in the Market. Aix MWJ Lan Mel Stw.


French Forcing. Van.

French Kidney. Ger.

Similar names. Dwarf French.

Seedsmen’s synonyms. Red Turkey, Ger.


Galega Refugee. Raw Thr. For similar names see Refugee.

Seedsmen’s synonyms. Large Refugee, Raw.

Georgia Prolific Bean. 1st.

German Soup. Sal. For similar names see Turtle Soup.


Similar names. See Red Valentine.

Giant Green Pod Valentine. All J&S Wru. For similar names see Red Valentine.

Giant Stringless Green Pod. All Bld Bly Bng Col Dfr DB Drr Dm Dm Gbn Ggw G&Z Harr H&C MWJ Jd Lxv Loh JCM M&S Old Ptu Thr Vau WS.

Similar names. See Stringless Green Pod.

Goddard. All Amd Brn Brn Brr CE Ccy Fjr Fks Fcr Hrs Hse Lvr Mss Pg HP Pot Raw Reo Rs S&F Shw Wdr Y&H.

Similar names. Goddard’s Favorite, Improved Goddard.

Seedsmen’s synonyms. Boston, Y&H. Boston Favorite, Bur Fqr S&F Ggy Raw Reo, etc.

Goddard’s Favorite. Pri. For similar names see Goddard.

Goddard’s Horticultural. Bdg.

Golden Refugee. Mz W&B Thr W&D. For similar names see Refugee.

Great Northern. Wll.

Great Western. Evr.

Green Flageolet. Dtt Etl Thr. For similar names see Victoria Dwarf Flageolet.

Seedsmen’s synonyms. Wonder of France, Dtt Etl.

Green Long Pod. Kei. For similar names see Early Long Pod.

Green Mazagan. Bdg. For similar names see Early Mazagan.

Seedsmen’s synonyms. English Horse Beans, Bdg.

Green Nonpriel. Bdg.

Green Pod Stringless Valentine. S&H. For similar names see Red Valentine.

Green Windsor. Thr. For similar names see Broad Windsor.

Gunkler. Bgs Crs.

Seedsmen’s synonyms. Prolific Pielker, Bgs.

Hammond’s Banner Leafless. Hammond’s Improved Extra Early Round Pod Valentine.

Hammond’s Earliest. Ham.

Hasting’s Excelsior Refugee. Entered as Excelsior Refugee.

Henderson’s Cream Valentine, Henderson’s Knickerbocker. Entered as Cream Valentine, Knickerbocker.


Horse. Gra.

Similar names. Small Horse, Early Horse Pea.

Improved Dwarf Horticultural, Improved Early Long Yellow Six Weeks, Improved Early Mohawk, Improved Early Red Speckled Valentine, Improved Early Red Valentine, Improved Early Round Pod Speckled Valentine, Improved Early Round Pod Valentine, Improved Early Valentine, Improved Early Yellow Six
BEAN. BUSH GREEN-PODDED.


Inexhaustible. Bug Bur Mau Mzy Thr.

Seedsmen’s synonyms. Everbearing, Bug Thr.

Johnston and Stokes’ Giant Green Pod Valentine. Entered as Giant Green Pod Valentine.

Johnston’s Wonderful. Kei. For similar names see Canadian Wonder.

King of the Early Market. M&S. For similar names see First in the Market.

King’s Long Pod Stringless. Kg.

Knickerbocker. Hen.

Landreth’s First in the Market. Entered as First in the Market.

Large Marrow. RF.

Large Negro Kidney. Hme. For similar names see Negro Long Pod.

Large Red Kidney. H&C Shm. For similar names see Red Kidney.

Large Refugee. Raw SB. For similar names see Refugee.

Seedsmen’s synonyms. Galega, Raw.

Large White Dwarf Cranberry. Ken. For similar names see Dwarf Cranberry.

Seedsmen’s synonyms. Large White Marrow, Ken.


Similar names. See White Kidney.

Seedsmen’s synonyms. Royal Dwarf, Ptt Raw.

Large White Marrow. All Brl Btl Bel Bri Bue Bw CE Fer Frl TG Hlm Hop Hse H&P Iow Kra Lnr Loh Mau Min JMP Ren Rec Roe Shw Shm Sim Sox Trn VI Vk.

Similar names. See White Marrow.

Seedsmen’s synonyms. Large White Cranberry, Ken. Mountain, Fer Inl Kra Vk.

Late Refugee. All Rog Thr. For similar names see Refugee.

Seedsmen’s synonyms. One Thousand to One; Brk McK Qkr Rog Thr Wer.

Lead Pencil. Nol.

Leafless Medium. Ham J&S. For similar names see White Medium.

Lightning. Eas Thr.


Little Wonder Navy. Grw. For similar names see Navy, Little Wonder Navy.

Livingston’s Round Yellow Six Weeks, Livingston’s Yellow Six Weeks. Entered as Round Yellow Six Weeks, Yellow Six Weeks.

Longfellow. Bkt Hen Inl Lnr Lur May Rec Van W&D.

Long White Kidney. Shm.

Long Yellow Six Weeks. All Anb Bai Bel Brd Btl Btr Bkt Ber Bgg Brk Bdg Bgs Brn Bng Brw C&J CE Cle C&B CF Cur CA D&H Drr Dtn Elt Emr Fmr Ger Gls GH Gm G&T Hde Hnm Hrv Hen Hm H&P Iow J&J J&S Jns Ken Kra Lea Lnr LB Liv Mnd Mgd JMM MV Mzy Nef Nol Pae Pg HP Prn Put Pri


**Seedsmen's synonyms.** Rob Roy, Ken.

**Low's Champion.** All Brt Brk Brb Brr C&J CE Cle CF Dow Elt Emv Ggy Grn Gry Hrm Hlm K&W MV JMP Pne Pot Raw Ree Rog Rs S&F Sox Wdr.

**Similar names.** Low's Early Champion, Lyonaise. Thr.

**McCullough's Improved Round Pod Red Valentine.** Entered as Round Pod Red Valentine.

**McKenzie's**'s Matchless, McKenzie's Marrowfat. Entered as Matchless, Marrow.

**McMillan's Stringless Round Pod Valentine.** Entered as Stringless Round Pod Valentine.

**Mammoth Stringless Green Pod.** CF Drr TG Hrm Lan Lar Mhl Rs Van W&D Wdr.

**Similar names.** See Stringless Green Pod.

**Mammoth Stringless Valentine.** Tat. For similar names see Red Valentine.

**Marblehead Dwarf Horticultural.** GH. For similar names see Dwarf Horticultural.

**Marrow.** Ken McK. For similar names see White Marrow.

**Marrow Pea.** Hrs. For similar names see White Marrow.

**Seedsmen's synonyms.** White Navy, Hrs.

**Marvel of Paris.** Mzy Thr.

**Matchless.** McK.

**May's White Valentine, May's Yellow Six Weeks.** Entered as White Valentine, Yellow Six Weeks.

**Mazagan.** Gra. For similar names see Early Mazagan.

**Medium.** NK Ptt. For similar names see White Medium.

**Medium Navy.** Ar. For similar names see Navy, White Medium.

**Mexican.** Air CE DD Hns JMM MV Pir Ree Sox.

**Similar names.** Mexican Tree, Mexican Prolific Tree, White Mexican.

**Mexican Prolific Tree.** Ren. For similar names see Mexican, Prolific Tree.

**Mexican Tree.** JL. For similar names see Mexican, Prolific Tree.

**Seedsmen's synonyms.** Cala, JL Prolific Tree, Air JMM.

**Mill's Improved Prolific Tree.** Entered as Prolific Tree.

**Mohawk.** Brt Bkt Bri Bru Cam Cle Dlw Ebe RE Grn Hme Lan McK McM Nei Ptt Ren Sim.

**Similar names.** Early Mohawk, Improved Early Mohawk, Extra Early Mohawk, Early Brown Mohawk, Early Mohawk Six Weeks.

**Seedsmen's synonyms.** Brown Six Weeks, Brt Bkt. Early Brown Six Weeks, Dlw Lan.

**Mountain.** Fer Kra Vk.

**Seedsmen's synonyms.** Large White Marrow, Fer Inl Kra Vk.

**Navy.** Btl Brc Buc Fmr GH Grn Hns Ken Kra Lnr Mns JCM JMM Nol NK Pir Ptt Shw Stw Tat Van Wer.
BEAN, BUSH GREEN-PODDED. 29


Negro Long Pod. All RHJ.

Similar names. Large Negro Kidney. See also *Early Long Pod.*

Ne Plus Ultra. Bur Hme Mzy Wat.

Newington Wonder. Hme M&S *Nol.* For similar names see *Canadian Wonder.*

North Star. GN.

Norwood Giant Stringless Green Pod. JMM.

Similar names. *See Stringless Green Pod.*


Oregon Green Podded. Lnn.

Oregon Tree. Bow.

Page's Extra Early. Pg.

Pea. Btl J&S My Tat. For similar names see *Boston Pea.*

Seedsmen's synonyms. *Navy, Ggy. White Navy, Bri Iow J&S MV.*

Pride of Newton. Stk Thr Wer.

Prolific Market. Brk Stk Thr W&D. For similar names see *First in the Market.*

Prolific Pickler. Bgs Vks. For similar names see *Vik's Prolific Pickler.*

Seedsmen's synonyms. *Gambler, Bgs.*

Prolific Tree. Alr Ar Bkt Brk Brur CE Col Cok Cur Del DD Fqr Fst Fls Frd Grn Gry Hst Hbt Iow JMM J&S Lnr Mau Mgd Mie Ms MV Neb NI Pg HP Rec RP Shw S&O Shm Sox Tem Wer Wyg.

Similar names. Improved Prolific Tree, Mill's Improved Prolific Tree, Mexican Prolific Tree, Mexican Tree, Tree Bean, Improved Tree, Electric Tree, Wisconsin Tree, California Tree, California White Tree, Wernich's Improved Prolific Tree, Tree.


Purple Speckled. Hme.

Quail Head. Brr.

Seedsmen's synonyms. *Cranberry, Brr. Horticultural, Brr.*

Rapp's Favorite. J&M.

Similar names. Shipper's Favorite.

Red Dwarf Cranberry. Brk Emr GH. For similar names see *Dwarf Cranberry.*

Red Eye. Brr Ptt Pri. For similar names see *China Red Eye.*

Seedsmen's synonyms. *China, Pri.*

Red Kidney. All Bkt Brn Brb Buc Brr C&B Crs Dun Eic Emr Ger GH Grm Hen Kg MWJ JCM NK Ptt Rec Rl Shw Shm Sox Stk.

Similar names. Improved Red Kidney, Large Red Kidney.

Seedsmen's synonyms. *China, Brr Ptt.*

Red Speckled Valentine. JMM. For similar names see *Red Valentine.*

Red Turkey. Ger.

Seedsmen's synonyms. *French Kidney, Ger.*
AMERICAN VARIETIES OF VEGETABLES.


Similar names. Improved Refugee, Improved Round Pod Refugee, Round Padded Refugee, Improved Large Refugee, Large Refugee, Late Refugee, Early Refugee, Extra Early Refugee, Thornburn's Extra Early Refugee, Cleveland's Improved Extra Early Refugee, Improved Extra Early Refugee, Hastings' Excelsior Refugee, Golden Refugee, Galega Refugee, Refugee Pickling, Excelsior Refugee.

Seedsmen's synonyms. Extra Early Refugee, All Hlm. One Thousand to One, Ebe WS Bur Fer Hen Lan, etc. Brown Speckled Valentine, Bkt Btl Dlw Lan.

Refugee Pickling.  Ebe. For similar names see Prolific Pickler, Refugee.


Seedsmen's synonyms. Long Yellow Six Weeks, Ken.

Rose.  HP.

Round Pod Red Valentine.  Cam Cle Grw JCM JMM Spf.

Similar names. See Red Valentine.

Round Pod Refugee.  Hst Mnt McM. For similar names see Refugee.

Round Pod Six Weeks.  Lon. For similar names see Long Yellow Six Weeks.


Similar names. See Red Valentine.

Round Red Speckled Valentine. HIm J&S. For similar names see Red Valentine.
Round Yellow Six Weeks. Bow Brk Brn Bur Crg Eic. Fer H&C HIm Jns Lam
Liv Mnd Min Mzy Put Rec Stv Thr Vnl.

Similar names. See Yellowstone Six Weeks.

Seedsmen's synonyms. Yellow Cranberry, Brk.

Royal. Bdg. For similar names see Royal Dwarf.

Royal Dwarf. Brd Bkt Bui Crs Dlw Drr Frd Hrv J&S Liv JMM Mhl MV Nef Ptt
Raw Sim Sow Wdr.

Similar names. Royal, Early Royal Dwarf Kidney, Improved Royal White, Royal White Kidney, Royal Dwarf White Kidney, Early Royal Dwarf White Kidney, Royal Dwarf Navy, Royal White.


Royal Dwarf Kidney. Bow Fer Hrn Lam Loh Nef Ren SB.

Royal Dwarf Navy. Fer. For similar names see Navy, Royal Dwarf.

Royal Dwarf White Kidney. Mns JMM Min Put Spf Stw.

Similar names. See Royal Dwarf.

Royal White. CE Rec. For similar names see Royal Dwarf.

Seedsmen's synonyms. White Kidney, Rec.

Royal White Kidney. For Rec S&R. For similar names see Royal Dwarf.

Ruby Dwarf Horticultural. Rec Rog S&F.

Similar names. See Dwarf Horticultural.


Savage & Reid's Stringless. S&R.

Scotia. Hrs.

Shipper's Favorite. Bui Gdn. For similar names see Rapp's Favorite.

Simmers' Canadian Wonder. Entered as Canadian Wonder.

Sion House. Mhl Wat.

Small Horse. Thr. For similar names see Horse Bean.

Small Navy. Ar Kos. For similar names see Navy.

Small White Navy. Shm. For similar names see Navy.

Smart's Hybrid. Chl.

Snowflake. Ggy K&W M&S.

Seedsmen's synonyms. Boston Pea, M&S.

Speckled Cranberry Bush. Bgy Ger Rs.

Seedsmen's synonyms. Dwarf Horticultural, Rs.

Speckled Valentine. Trn. For similar names see Red Valentine.

Stringless Green Pod. Alx All Alr Ans Ar Bak Brd Btl Bkt Blg Bow Brg Bdg Brn Bng Brc Bui Brb Burr Brw C&J Cun CE CF Crs Cur Chm DD Drr Drh Dmr Ebr Elt Emr Fin Enq Fer Fld Frd Gdn GH GN Gg G&J Gre TG Hlm Hde Hrs Hrv Hst H&C Hm Iml Iow Juc Jer JMJ J&S Jns K&W Ken K&F Kg Koe Lam Lnr Lrur LB Liv JL Mgd Mns Mau May JCM JMM Mm Mbl Mh Mlb Mls Mv Mzy Nol Old Pj JMP Pw Pmt Poo For Pot Qkr Raw Rec Rm Roc Rog R& R'SC S&F Shw Shm Sie Sox Spf Stw S&H S&W Tat Tm Trm Tex Thm Thb AGT Til Til Trm VI Van Vl Wat Wea Web W&D Wlt Wd Wdr WS Wyg Yng Y&H.

Similar names. Stringless Green Round Pod, Improved Stringless Green Pod, Alexander Stringless Green Pod, Burpee's Stringless Green Pod, Giant Stringless Green Pod, Norwood Giant Stringless Green Pod, Mammoth Stringless Green Pod, Salzer's Colossal Stringless Green Pod, Colossal Stringless Green Pod.

Stringless Green Round Pod. DD Ebr Ptt.

Similar names. See Stringless Green Pod.
Stringless Round Pod Valentine. McM. For similar names see Red Valentine.
Stringless Wonder. Cry.
Similar names. Craig's Stringless Wonder.
Succotash. Grw.
Similar names. White Marrow, Grw.
Swedish. NK.
Similar names. Brown Field, NK.
Sword Long Pod. Bdg D&H DD Mzy RE Thr. For similar names see Early Long Pod.
Similar names. Long Turkey, Bdg.
Taber's IXL. Sim.
Tait's Extra Early Valentine. Entered as Extra Early Valentine.
Taylor's Broad Windsor. Brn D&H.
Taylor's Green Pod. WS.
Tree. CCo Fnr H&P Kra NK Por S&R Spf. For similar names see Prolific Tree.
Similar names. California Wonder, NK. California Branch, H&P.
Vineless Marrow. Lam.
Turtle Soup. Brk Grn S&F.
Similar names. Black Turtle Soup, Salzer's German Soup, German Soup.
Uncle John. Lam.
Union White Valentine. H&P. For similar names see Red Valentine.
Valentine.- All Brb Brb Cle Dun Fle Gdn Gry Hrs Jae MWJ Kei Mnd Sie Stk Thd VI.
Similar names. See Red Valentine.
Vick's Prolific Pickler. Entered as Prolific Pickler.
Victoria Dwarf Flageolet. Thr.
Similar names. Green Flageolet, White Flageolet.
Vineless Marrow. Bur Ebr Fer Hbt Lam Lar Maui Pg.
Similar names. See White Marrow.
Similar names. Tree, Lam.
Vienna Forcer. S&F Thr.
Wait's Early Long Pod. Grau. For similar names see Early Long Pod.
Wait's Improved Early Long Pod. Entered as Wait's Early Long Pod.
Warren. All Brt Btl CF Cur Elt Fqr Ggyl Grn Gry Ptt Ree Rog S&F.
Wernich's Improved Prolific Tree. Entered as Prolific Tree.
White Dwarf Cranberry. Stw. For similar names see Dwarf Cranberry.
White Field. McK Ptt Reh.
White Flageolet. All RJJ Thr.
Similar names. Improved White Kidney, Large White Kidney, Dwarf White Kidney.
Similar names. Improved Royal Dwarf, Ree. Royal Dwarf, Brd Bkt Bui J&S Mhl Vl, etc.
BEAN, POLE.

SILMARIL Names. Early White Marrow, Large White Marrow, Improved Large White Marrow, Marrow, Early Marrow, Boston Marrow, Vincible Marrow, Marrow Pea, Early Marrow Pea, Large Marrow.

SEEDSMEN'S SYNONYMS. Sacrouash, Grw.

White Medium. Bit Crys Hme Wdr.

SILMARIL Names. Medium, Medium Navy, Burlingame Medium, Day's Leafless Medium, Day's Improved Leafless Medium, Leafless Medium.

White Mexican. 1st Shm. For similar names see Mexican.


SILMARIL Names. See Navy.

SEEDSMEN'S SYNONYMS. Boston Pea, May HP. Marrow Pea, Hrs. Pea, Bri Iml MV.


SILMARIL Names. See Boston Pea.

SEEDSMEN'S SYNONYMS. Navy, Ptt.


SILMARIL Names. See Red Valentine.


SILMARIL Names. See Salzer's Yankee Winter.

Yankee Winter. Sal. For similar names see Salzer's Yankee Winter.

Yellow Dwarf Cranberry. Brk Gry Raw S&F Wdr.

SILMARIL Names. See Dwarf Cranberry.

SEEDSMEN'S SYNONYMS. Round Yellow Six Weeks, Brk.

Yellow Eye. Brk Emr Ewg Fgr Gry K&W Raw S&F.

SILMARIL Names. Early Yellow Eye, Improved Yellow Eye, Boston Yellow Eye, Wilson's Yellow Eye.

SEEDSMEN'S SYNONYMS. Boston Favorite, Ewg.

Yellow Kidney. Lon.

Yellow Six Weeks. Big Bri Brut Chm Ewr Ewg Fgr Grs Gra Hly Hme K&F Lan Lnr Lon PM May NI OY Ren Sim Temp.

SILMARIL Names. See Long Yellow Six Weeks.

BEAN (POLE BEAN).

Alpha. Ewr. For similar names see Everett's Alpha.

American Sickle. JMP. For similar names see Sickle.

Andalusia. Sal.

SILMARIL Names. Golden Andalusia.

Archias' Improved Kentucky Wonder. Entered as Kentucky Wonder.

Arlington Red Cranberry. Fgr Raw S&F. For similar names see Cranberry.

Asparagus. Bai Bow Bdg Bru CCo RE Ewg Ger Gra Kei Lam M&S Por S&F Sim.

SILMARIL Names. Vair's Asparagus, French Asparagus, Cuban Asparagus.


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  Seedsmen’s synonyms.  White Crease Back, Bkt Col Drr McM Old.  Transylvania Butter, M&S.

Big Sioux.  Spi.
  Seedsmen’s synonyms.  Hemisphere, Spi.

Black Algerian Wax.  Ggy.
  Seedsmen’s synonyms.  Indian Chief, Ggy.

Black Butter Pole.  Ewg Gra McK.  For similar names see Butter Pole.
  Seedsmen’s synonyms.  Indian Chief, Ewg Gra Ren.

Black Kentucky Wonder.  JCM.  For similar names see Kentucky Wonder.

Black Wax Pole.  Bel Brb Cle Crs Dun Ebe GH Grw Hrm Hrn J&S May Mzy OV Rog Rs RP Tpk Trm Wea W&D.
  Similar names.  German Black Wax, Tall German Black Wax, Tall Black Wax, Giant Black Wax, Salzer’s Giant Black Wax.
  Seedsmen’s synonyms.  Indian Chief, Brk Cle Dun GH J&S Rs.

Brockton.  Brk CF Emr Fqr Grn Gry Raw Ree Rs SC S&F.

Buckbee’s Holstein.  Entered as Holstein.

Burpee’s Sunshine Wax, Burpee’s White Zulu.  Entered as Sunshine Wax, White Zulu.

  Similar names.  Golden Butter, Black Butter, German Butter, Transylvania Butter, White Seeded Butter.
  Seedsmen’s synonyms.  German Wax, Pri.  Black Wax, Wea.

California Wax.  Ahs.

Carmine King Horticultural Pole.  Brt.
  Similar names.  See Horticultural Pole.

Carmine Padded.  All.
  Similar names.  Carmine Padded Horticultural Pole, Worcester Carmine Padded.

Carmine Padded Horticultural Pole.  Brk K&W.
  Similar names.  See Horticultural Pole.

Case Knife.  Ar Brb Brs Ebe Ebr Lan Sal.  For similar names see Dutch Case Knife.
  Seedsmen’s synonyms.  White Dutch, Lan Brb.

Cherry Pole.  Big PM.
  Similar names.  White Cherry.
  Seedsmen’s synonyms.  Speckled Horticultural, Big PM.

Childs’ Mammoth Padded Horticultural Pole.  Entered as Mammoth Padded Horticultural Pole.

Columbia.  Fqr.
  Similar names.  Farquhar’s Columbia.

Concord.  Emr Grn Pot Rs.

Corn Field.  Alx Gdn MWJ Wd WS.  For similar names see Corn Hill.


**BEAN, POLE.**

**Similar names.** Red Cranberry, Arlington Red Cranberry, Speckled Cranberry, Speckled Horticultural Cranberry, Horticultural Cranberry, Mammoth Horticultural Cranberry.


**Creaseback.** Alx Bai Cur DD *Dre* Eic Fmr Fst Ger Gdn Gra Gm G&T H&C Illy Jac J&M Lan Stk TB Thm Van Wd WS.

**Similar names.** White Creaseback, Improved White Creaseback, Southern White Creaseback, Southern Creaseback.

**Seedsmen’s synonyms.** *Fat Horse*, Alx Eic Fmr G&T Lan Wd, etc. *Mobile Bean*, Eic.

**Crosby’s Horticultural Pole.** Fqr. For similar names see *Horticultural Pole.*

**Cuban Asparagus.** Bur Col Frd Liv Pks Ren.

**Similar names.** See *Asparagus.*

**Seedsmen’s synonyms.** *Yard Long*, Bur Col Liv Pks Ren.

**Cut Short.** Alx Brd Btl Ber Bri CE. Col *Crg Crs Dre* Ebr Fld Ger GH Grw Hns Iow JL Lon Mgd Mns May JCM JMM XI Ren Ree Shw S&O Sox SB Trm VI Wd WS Yng.

**Similar names.** Cut Short White, Cut Short Red Speckled, Cut Short Speckled, Cut Short Oval Seeded Red Speckled, Cut Short Speckled Corn Bean.

**Seedsmen’s synonyms.** *Corn Field*, Alx Wd. *Corn Hill*, Brd Btl JL JCM Mgd Trm, etc. *Red Speckled*, SB.

**Cut Short White.** H&C Ree. For similar names see *Cut Short.*

**Dreer’s Early Golden Cluster, Dreer’s Golden Cluster.** Entered as *Early Golden Cluster* and *Golden Cluster.*


**Similar names.** Improved Dutch Case Knife, Early Case Knife, Early Dutch Case Knife, Early White Dutch Case Knife, Long White Dutch Case Knife, Case Knife, White Dutch Case Knife, Salzer’s Case Knife, White Case Knife.

**Dutch Runner.** Man. For similar names see *White Runner.*

**Early Case Knife.** CF. For similar names see *Dutch Case Knife.*

**Early Dutch Case Knife.** C&J E1t Grw TG Kei K&F JL Neb Pnt Por Pug S&R Sim Thb W&D.

**Similar names.** See *Dutch Case Knife.*


**Similar names.** See *Golden Cluster.*

**Early White Dutch Case Knife.** Evr. For similar names see *Dutch Case Knife.*

**Eastern Wonder.** Pg. For similar names see *Tennessee Wonder.*

**Everett’s Alpha.** Entered as *Alpha.*

**Extra Early Golden Cluster.** Sie W&D. For similar names see *Golden Cluster.*

**Extra Early Horticultural Pole.** Rs.

**Fallson.** Ber.

**Farquhar’s Columbia.** Entered as *Columbia.*

**Fat Horse.** Alx Bai Bri Bui Cur CA DD *Dre* Gdn G&T Hde H&C Jac MWJ J&S K&F Lan M&S Nol Pnt Spf TB Wd WS.

Flagolet Wax Pole. Ans Brk Cle Mzy Shw.

Similar names. Golden Wax Flageolet Pole.

French Asparagus. Bkt DD Mau. For similar names see Asparagus.

Seedsmen's synonyms. Yard Long, Bkt DD.

Florida Butter. Ggf.

French Yard Long. Bow Mzy Ptt Thr Vin. For similar names see Yard Long.

Seedsmen's synonyms. Asparagus, Bow.

Georgia Monstrous. CA.

German Black Wax Pole. CE CF Crs Emr Ger Tg Hly Kos Mas Neb Ptt Ree S&O S&W Thr Wer.

Similar names. See Black Wax Pole, German Wax Pole.

Seedsmen's synonyms. Algerian, Bdgi Indian Chief, Ptt Ree.

German Butter Pole. W&D. For similar names see Butter Pole.

Seedsmen's synonyms. Black Wax, W&D. Indian Chief, W&D.

German Wax Pole. Bui C&B Gdn Hen Hlm Jac Pri Tat Y&H.

Similar names. Tall German Wax Pole.

Seedsmen's synonyms. Butter, Pri Bui.

Giant Black Wax Pole. Sal. For similar names see Black Wax Pole.


Similar names. See Giant Wax Pole.

Giant Sword. Dlw.

Giant Wax Pole. Int Kei JMP.

Similar names. Giant Red Wax, Tall Wax.

Giant White Runner. Sim. For similar names see White Runner.

Golden Andalusia. Alr Bel Bae CE Cur Frd H&P JMM McK MV HP JMP Ree Roe Ren Shw Shn Sim Sox Thr 'l Wer.

Similar names. See Andalusia.


Golden Butter Pole. Brk Bdgi CE Cok Dun Fqr Gry Hlm Kg Man Pir Prn Ree Sal S&F.

Similar names. See Butter Pole.

Seedsmen's synonyms. Mont d'Or Wax, Brk Bdgi Dun Fqr Gry Ken S&F.

Tall Mont d'Or, Cle Prn.

Golden Champion. Bkt Buc Col Drr Elt Fqr Ggy Hen Lnr Pg Ree Rog Sim S&W Tm Wdr.

Golden Cluster. Bai Bt Bkt Bel Brk Bdgi Bug Bur CE CF Crs Cur Dnm Eas Ebe Elt Emr Fer Fqr Fld Frd GH Ggy Gry Tg Hns Hrs Hrv Hse Hnt Imi Imo MWJ Ken Mnd Mgd Man May JMM MV NK JMP Put Pot Qkr Ree Rim SC S&F S&B Sox Thr Wer Y&H.


Seedsmen's synonyms. Mont d'Or, MV Wer.

Golden Lazy Wife. Mau. For similar names see Lazy Wife.

Golden Mastiff Pod. Mck Ren.


Similar names. See Flageolet Wax Pole.

Golden Wax Pole. Mau. For similar names see Golden Cluster.

Hammond's Lazy Wife. Entered as Lazy Wife.

Hampden. All Brg Pot Ree.

Hemisphere. Put Spf.

Seedsmen’s synonyms. Big Sioux, Spf.

Hempshire. JCM.

Holstein. Buc.

Similar names. Buckbee’s Holstein.


Similar names. See Horticultural Pole, Cranberry.

Seedsmen’s synonyms. Wren’s Egg, Hlm.

Horticultural Lima. All Bgg Brw CE Cur Eas Fqr Hrn Hse Lam Lan Lea Lar McK Mhl MV Mzy Rec Roe Sox.


Improved Dutch Case Knife, Improved Dutch Runner, Improved Kentucky Wonder, Improved Old Homestead, Improved Southern Prolific, Improved White Cressback. Entered as Dutch Case Knife, Dutch Runner, etc.

Indian Chief. Brk Bdg Brw CE Cle Dww Ewg Fqr Fax GH Gra Hrn Hrn J&S K&W Lam Mm Ptt Poo Por Pug Raw Ree Rog Rs S&R S&F SB W&D.


Similar names. Improved Kentucky Wonder, Archias Improved Kentucky Wonder, Black Kentucky Wonder.

Seedsmen’s synonyms. Old Homestead, Btt Bkt Elt J&S Raw Wd, etc. Asparagus, Lam. Texas Pole, Jac.

King Horticultural Pole. Brr Errm Fqr Gdn Gyr H&C JMM Ree S&F.

Similar names. See Horticultural Pole.

Seedsmen’s Synonyms. Mammoth Horticultural, H&C.

Large White Marrow. Btl.

Seedsmen’s synonyms. Corn Hill, Btl.

Similar names. Hammond's Lazy Wife, Yellow Lazy Wife, Golden Lazy Wife.


Similar names. See Horticultural Pole.

Long White Dutch Case Knife.  Web.  For similar names see Dutch Case Knife.

Seedsman's synonyms. Cranberry, SB.  Speckled Cranberry, Bow Fer JL Lam Ptt Vl, etc.  Wren's Egg, Bui Ggy Vl.


Similar names. See Carmine Podded.

Mammoth Horticultural Cranberry Pole.  C&J.

Similar names. See Cranberry Horticultural Pole.

Mammoth King Horticultural Pole.  Hrn Thr.

Similar names. See Horticultural Pole.

Mammoth Podded Horticultural Pole.  Buc Dun Fer Frd H&C Iow Lnr Liv Pne Ten Ws.

Similar names. See Horticultural Pole.


Maryland White.  G&T.

Milan.  Vin.

Missouri White Cornfield.  K&F.


Similar names. See Southern Prolific.

Mont d'Or Wax.  Bdg Dun Fqr Gry Ken MV Mzy S&F Sox Thr Wer.

Seedsman's synonyms. Golden Butter, Brk Bdg Dun Fqr Gry Hen, etc.  Golden Cluster, MV Wer.

Noxali.  Man.


Similar names. Improved Old Homestead.

Seedsman's synonyms. Kentucky Wonder, Bui Bur Drr Fer Thr Vl, etc.  Asparagus, Lam.

Onondaga.  Ebe.

Ornamental Scarlet Runner.  Brk.  For similar names see White Runner.

Oval Seed Field Corn.  TB.  For similar names see Corn Hill.

Painted Lady.  Ewg Grn Pri Ren SB.

Philips' American Sickle.  Entered as American Sickle.

Powell's Prolific.  CCo Cok Liv.  For similar names see Southern Prolific.

Red Cranberry.  Brk Cle Dun Emr Fax GH Grn Gry Hrn Hrn K&W Pae Thm.

Similar names. See Cranberry.

Red Speckled.  Cms Mns Ren Rec RP Shw SB Yng.

Seedsman's synonyms. Corn Hill, RP.  Cut Short, SB.

Seedsmen’s synonyms. Corn Hill, Buc Crs Fer Liv HP Rec, etc. Horticultural, Anb.

Red Speckled Oval Seeded Cut Short Corn Field. CA Put.

Similar names. See Corn Hill, Cut Short.

Royal Corn. Liv.

Salzer’s Case Knife, Salzer’s Giant Black Wax Pole. Entered as Case Knife and Giant Black Wax Pole.

Scarlet Flowering Runner. Bdg. For similar names see White Runner.


Similar names. See White Runner.

Schaetzle’s French. Ebr.

Seek No Further. Lan.

Sickle. Mel.

Similar names. White Sickle, Philips’ American Sickle, American Sickle.

Snake. Ger.

Seedsmen’s synonyms. Asparagus, Ger.

Southern Creaseback. GI 1st Shw Thr. For similar names see Creaseback.

Southern Prolific. Aix Ar Bai Bak Bou Bow Brn Bui Bur C&M CE Cle Cox Crg Crs Dnm Emr Fst Fer Gdn GH Grn Giy G&T Hde Hly Hln J&S Kg Lan Lnr Liv May JCM JMM McM Mel MV Nol OV Pac Pnt Qkr Rec Reg Rog Sal SC Shw Sor Spf Stk Tex Thm Thr Tpk Trm Wt Wd WS Wyg.

Similar names. Improved Southern Prolific, Monstrous Podded Southern Prolific, Powell’s Prolific, Texas Prolific.

Southern White Creaseback. Bui. For similar names see Creaseback.

Seedsmen’s synonyms. Fat Horse, Bui.

Speckled Cranberry. Anb Bai Bow Brk Brv C&B Col Cox Crs Cur Drr Dnm Emr Fnr Fnr Fer Ger Hrm Hrs Hrs Hrn Hse H&P Iml Ken Lam Lea Liv JL Loh Mnd Mgd Mas McK Png Mhl MV Mzy Neb Nol OV Pac Png HP Ptt Pri Raw Rs Shw S&O Sox S&W Tat Thb Thm Vj Vk Vin Wea Wyg.

Similar names. See Cranberry, Horticultural Pole.

Seedsmen’s synonyms. Bred Egg, Liv. Horticultural, Cox Cur Drr Hen Raw Thr, etc. London Horticultural, Bow Fer JL Ptt Vk Vin, etc. Wren’s Egg, Ebe JMM Vk.

Speckled Horticultural Cranberry Pole. Nef.

Similar names. See Cranberry, Horticultural Pole.

Speckled Cut Short. Gdn G&T Hrn J&S Nol Sor Spf Thr.

Seedsmen’s synonyms. Corn Hill, G&T Hrn J&S Spf Thr. Corn Field, Gdn.

Speckled Horticultural Pole. Bg G&T PM.

Similar names. See Horticultural Pole.

Seedsmen’s synonyms. Cherry Pole, Big PM. Wren’s Egg, G&T.

Sunshine Wax. Bkt Bur Fqr McM Rim.

Similar names. Burpee’s Sunshine Wax.

Tall Black Wax Pole. Bow Lam Por Pug Raw S&R SB.

Similar names. See Black Wax Pole.

Seedsmen’s synonyms. Indian Chief, Lam Por Pug Raw S&R SB.

Tall German Black Wax Pole. Alr Cur CA Fnr Hly J&M Thm Wt.

Similar names. See Black Wax Pole, German Wax Pole.
Tall German Wax Pole.  Lan McM Min HP.
Similar names.  See German Wax Pole, Black Wax Pole.
Seedsman's synonyms.  Indian Chief, HP.

Tall July Runner.  Thr.  For similar names see White Runner.

Tall Mont d'Or.  Cle Prn.

Tall Wax.  Min.  For similar names see Giant Wax Pole.
Seedsman's synonyms.  Indian Chief, Min.

Tall Sioux.  Phi MV Sox.

Tennessee White Corn Hill.  M&S.  For similar names see Corn Hill.

Tennessee Wonder.  Lan.
Similar names.  Eastern Wonder.

Texas.  Gdn Jac.
Similar names.  Texas Prolific.
Seedsman's synonyms.  Kentucky Wonder, Jac.

Texas Prolific.  Hst MWJ.  For similar names see Texas, Southern Prolific.

Titan Runners.  Gra.  For similar names see White Runner.

Transylvania Butter.  M&S.  For similar names see Butter Pole.
Seedsman's synonyms.  Best of All, M&S.

Vair's Asparagus.  Ren.  For similar names see Asparagus.

Wax Pole.  Fqr Kei.  For similar names see Golden Cluster.
Seedsman's synonyms.  Indian Chief, Fqr.

White Case Knife.  K&W Pac S&F.  For similar names see Dutch Case Knife.

White Cherry.  G&T.  For similar names see Cherry.

White Cornfield.  DD SC Yng.  For similar names see Corn Hill.
Seedsman's synonyms.  White Corn Hill, SC.

White Corn Hill.  SC.
Seedsman's synonyms.  White Corn Field, SC.

Similar names.  See Creaseback.
Seedsman's synonyms.  Best of All, Bkt Col Drr McM Old.  Fat Horse, Bri Hde J&S M&S Spf K&F Pnt.

White Dutch.  Ar Brb Lan.
Seedsman's synonyms.  Case Knife, Brb Lan.

White Dutch Case Knife.  Anb Btl Bg Bg Bri Bru Bur CE Col Drr Drm Gdn Hde Hrm Hly Hlm Iow Jac RHJ J&M Ken Kos Liv Min OV JMP Qkr Rec Roe RP SC Shm Sic Stw Thm Tpk Vl Wei Yng.
Similar names.  See Dutch Case Knife.

White Dutch Runner.  Ans Brk Bdg Bur Brr C&J CE Cle CF Crs Drr Dun Ebe Elt Elfr RE Hrm Hrn Hse K&W Mas May MV Ptt Pri Rec Roe Rod Sox SB S&W Thr Wdr.
Similar names.  See White Runner.

White Horticultural.  Fqr.


White Seeded Butter Pole.  Dlw.  For similar names see Butter Pole.

White Sickle.  Fer Lan Lar Rec Spf.  For similar names see Sickle.

Similar names.  Burpee's White Zulu.
Willing’s Pride. Sal.

Worcester. All Raw. Wear.


Similar names. See Worcester, Horticultural Pole.

Worcester Mammoth Horticultural. Rs. For similar names see Worcester.


Similar names. French Yard Long, Yard Long Stringless Green Pod.


Yard Long Stringless Green Pod. Mcl. For similar names see Yard Long.

Yellow Lazy Wife. Ans. For similar names see Lazy Wife.

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**BEAN (POLE LIMA BEAN).**

Black Lima. Hse Ree.

Similar names. Early Black Lima.

Bliss’s Extra Early. Raw. For similar names see Extra Early.

Seedsmen’s synonyms. Early Jersey, Raw.


Butter. Ar Bt CA Eic Grw TG Hde MWJ K&F Pnt Stk Wd WS Yng.

Similar names. King’s Improved Butter, King’s Butter.

Seedsmen’s synonyms. EXTRA LARGE LIMA, CA. LARGE LIMA, Grw MWJ. LARGE WHITE LIMA, Ar Bt Hde Pnt. Siera, Bui. SMALL CAROLINA, Bui. SMALL LIMA, Wd. SOUTHERN WILLOW LEAF SIEVE, Stk. Willow Leaf Sivee, Eic.

California Lima. Lan.

Carolina. Btl Bur Cle CA Eic Fer Gdn GH Hns Hlm Jac MWJ Lan Min Shw Stk Tat Thm Tex Wlt.

Similar names. Small Carolina, Carolina Sewee.

Seedsmen’s synonyms. Sivee, Eic Gdn Lan MWJ Tat. Siera, Cle CA Fer Hlm Tex Thm. SMALL BUTTER, Eic. SMALL LIMA, Hns Shw Tat. SMALL WHITE LIMA, CA Fer Hlm Tex Thm.

Carolina Sewee. Bui Shw Wlt. For similar names see Carolina, Sivera.

Seedsmen’s synonyms. Siera, Bui. SMALL LIMA, Wlt.

Challenger. Bai Bkt Bow Brk Bdg Bui Bur CE Cle CF Emr Evr Fqr Fst Fer G&T TG H&J Hlm J&S Lan Liv Mnd May Mel Mzy Nol Ree Ree S&F S&W Thr Wdr W&D.

Seedsmen’s synonyms. POTATO, J&S Wdr. POTATO LEAF, Bur. Dreer’s Improved, Bui Bur Bkt G&T Hlm Nol, etc.

Champion. May.

Similar names. May’s Champion.

Dreer’s Improved Lima. Entered as Dreer’s Lima.

**Similar names.** Dreer's Improved Lima.

**Seedsmen's synonyms.** Potato, J&S. Potato Leaf, Bur. Challenger, Bui Bur Bkt J&S Liv S&F, etc.

Early Black Lima. Buc Bur D&C Mhl Roc. For similar names see Black Lima.

Early Dawn. Liv.

Early Golden Lima. Ham. For similar names see Golden Lima.


**Similar names.** See Jersey Lima.

**Seedsmen's synonyms.** Bliss's Extra Early, Raw.

**Early Large White Lima.** Bkt Bri Buc Bwr CA DD G&T TG H&C PM JCM Pir Roc Wyg.

**Similar names.** See Large White Lima.

Early Leviathan. Hen.

**Similar names.** Henderson's Early Leviathan.

Early Lima. Ckn. For similar names see Extra Early.

**Seedsmen's synonyms.** Frost, Ggy. Sicc, Ggy.

**Extra Early.** Brl Btr Brg Bdg Flg Flr Pir Prn Rl Thb Wer.

**Similar names.** Bliss's Early Extra, Improved Early, Salzer's Improved Early, Salzer's Early, Early Lima.

**Extra Early Jersey Lima.** Bgg Bng Bui Bur Brr Cle C&B CF Crd Dd Drn Fqr Fst Frd GH G&T TG Hen Hlm Ihm Jmm J&S Lsn Lnr Jl Mnd Man JCM Mhl M&S Neb Nol OV Pq Pnt HP Prk Prk SC Scc Sox Stw Thb Tpk Vl W&D Y&H.

**Similar names.** See Jersey Lima.

**Extra Early Large White Lima.** Gdn Jck.

**Similar names.** See Large White Lima.

**Extra Large White Lima.** Cle CA G&T Liv JMM Min HP SC Wdr.

**Similar names.** See Large White Lima.

**Seedsmen's synonyms.** Butter, CA. Mammoth White Lima, HP.

Florida Butter. Hst.

Ford's Extra Large. MWJ. For similar names see Ford's Mammoth.

**Seedsmen's synonyms.** King of the Garden, MWJ.

**Ford's Extra Large Mammoth.** Brg. For similar names see Ford's Mammoth.


**Similar names.** Ford's Extra Large Mammoth, Ford's Extra Large, Godden's Mammoth, Jersey Mammoth, Salem Mammoth, Improved Salem Mammoth, Mammoth.

Godden's Mammoth. Gdn. For similar names see Ford's Mammoth.


**Similar names.** Buckbee's Golden Lima, Hammond's Early Golden Lima, Early Golden Lima.


Henderson's Early Leviathan. Entered as Early Leviathan.

**Improved Early Lima.** Improved Extra Large White Lima, Improved Large White Lima, Improved Salem, Improved Salem Mammoth. Entered as Early Lima, Extra Large White Lima, Salem, and Salem Mammoth.

**Improved Lima.** Hut Vk.

**Similar names.** Wood's Improved Lima, Moore & Simon's Improved Lima, Moore & Simon's Lima, Wood's Lima.
Jersey Lima. May TB.
Similar names. Early Jersey Lima, Extra Early Jersey Lima, Large Jersey Lima, Michig' Large Jersey Lima, Jersey Mammoth.

Jersey Mammoth. Est. For similar names see Ford's Mammoth, Jersey Lima.


Similar names. Buckbee's King of the Garden.

Seedsmen's synonyms. Ford's Extra Large, MWJ. Large White Lima, Alx.

King's Butter. Kg.

Similar names. King's Improved Butter.

King's Improved Butter. Entered as King's Butter.

Large Evergreen Lima. M&S.

Large Jersey Lima. Lam McM Mhl Stw. For similar names see Jersey Lima.


Seedsmen's synonyms. Butter, Ar Btl Hde Pnt Grw MWJ. King of the Garden, Alx.

McCullough's Extra Large White Lima. Entered as Extra Large White Lima.

Mammoth. Chl. For similar names see Ford's Mammoth.

May's Champion. Entered as Champion.

Michig' Large Jersey Lima. Entered as Large Jersey Lima.

Moore & Simon's Improved Lima. Entered as Moore & Simon's Lima.

Moore & Simon's Lima. M&S. For similar names see Improved Lima.


Prolific Thick Green Lima. M&S.

Similar names. Walter's Prolific Thick Green Lima.

Rimby's Improved Large White Lima. Entered as Large White Lima.

Salem. J&S Mnl. For similar names see Salem Mammoth.

Salem Mammoth. Bui Gdn MWJ M&S.

Similar names. Improved Salem Mammoth, Improved Salem.

Salzer's Early. Sal. For similar names see Extra Early.

Salzer's Improved Early. Entered as Salzer's Early.

Scroll. Jac.

Seibert. Brw S&F. For similar names see Seibert's Early.
American Varieties of Vegetables.

Seibert's Early.  Brd Buc Brr C&J CE CF Drf Ebe Evr Fqr Fer Frd Gls Ggy
H&C H&I ImI J&S Jns Lnr Liv Loh Mns JMM Man Nol OId Pg Hp Pri Raw
Ree Roe Rs S&I Tex '17 Vk Wdr.
Similar names.  Seibert's Large Early, Seibert's Extra Early, Seibert.

Seibert's Extra Early.  JMM Mhl M&S Ptt Shw Tem.  For similar names see
Seibert's Early.

Seibert's Large Early.  Bur Gdn TG.  For similar names see Seibert's Early.

Seewee.  Alx Boun Cam Eic Gdn Mwj Lan Stk Tat.  For similar names see Sieva.

Small Lima, Alx Tat.

Shallercross Market Queen.  J&S.

Shotwell's Improved Thick Lima.  Entered as Shotwell's Thick Lima.

Shotwell's Thick Lima.  J&S.

Similar names.  Shotwell's Improved Thick Lima.

Sieva.  Brk Bng Bui Bur CE Cle CF Crs Cur CA DD Dir Ebr Emr Fqr Fax Fer
GH Gry Hrm Hde Hen H&C Hlm K&F Lnr May Mhl Ptt Ptt Pot Raw Ree
S&F Spf Tex Thm Woa Wer.
Similar names.  Sieva, Carolina Sieva, Willow Leaf Sieva, Southern Willow
Leaf Sieva.

Seedsmen's synonyms.  Butter Bean, Bur.  Carolina, Cle CA Fer Hlm Tex
Bur.  Small Lima, Cur Drr Fqr Hen Mhl Ptt, etc.  Small White Lima, CA Emr
Fer Liv Ptt SC, etc.

Small Carolina.  Bur.  For similar names see Carolina.


Small Lima.  Alx Bui Brk Bur Cm CE CF Crs Crs Cur Drr Ebr Fqr Fax Gry Hns
Hst Hen K&W Lnr Liv May Mcm Mhl Ptt Ptt Pot Raw Shw Ree SC Spf Tat
Trm Woa Wlt Wd WS.
Similar names.  Small White Lima.

Sieva, Wlt.  Sieva, Alx Tat.  Sieva, Drr Fqr Hen Mhl Ptt Raw, etc.

Small White Carolina.  H&C.

Small White Lima.  CA DD Drm Emr Fer Hlm K&F Mnd Mcm Min Mzy Tex
Wer.
Similar names.  See Small Lima.

Seedsmen's synonyms.  Carolina, CA Fer Hlm Tex Thm.  Sieva, CA Fer Hrm
Ptt SC Tex, etc.

Southern Willow Leaved Seewee.  Stk.  For similar names see Willow Leaf, Sieva.

Stokes' Evergreen.  J&S.

Trucker's Delight.  Hlm.

Seedsmen's synonyms.  Butter, Stk.

Walter's Prolific Thick Green Lima.  Entered as Prolific Thick Green Lima.

Washington Market.  Lnr.

Willow Leaf.  Bue Bux Brr CE Gdn Gh Hst Mwj Mcm Ree Roe Shw Sim.
Similar names.  Willow Leaf Seewee, Southern Willow Leaved Seewee.

Willow Leaf Seewee.  Eic.  For similar names see Willow Leaf, Sieva.

Wood's Lima.  Wd WS.

Bean (Wax-Podded Bush Bean).

Alexander's Flageolet Wax, Alexander's Valentine Wax.  Entered as Flageolet
Wax, and Valentine Wax.

Algerian Wax.  Mzy.

Similar names.  Black Algerian Wax.
Allan's Imperial Wax. All Feb Ken Ptt Til.
Alneer's Rust Proof Golden Wax. Entered as Rust Proof Golden Wax.
Archias' Black Wax. Entered as Black Wax.
Beckert's Speckled Wax. All. For similar names see Speckled Wax.
Bell's Improved Kidney Wax. Entered as Kidney Wax.
Bell's Prolific Rustless Wax. Bel.

Bismarck Black Wax. CE Ebr MV Rec S&O Sox Thr Wer.

Similar names. See Black Wax.

Bismarck Wax. Bui Fnr Hlm. For similar names see Black Wax.

Black Algerian Wax. Gru. For similar names see Algerian Wax.

Black Eyed Wax. Bai Bow Bgs Bue CE Evr Fer Gng Gnu Hlm Hop Kei Lam Lnr Mnd May McK MV Pg Por Qkr Ren Roc Roc S&R S&O Sox Tat VI Web Ytg.

Similar names. Early Black Eyed Wax.


Bolgiano's Wax. Bg.


Burpee's Perfection Wax. Burpee's Saddleback Wax, Burpee's Twentieth Wax, Burpee's Brittle Wax. Entered as Perfection Wax, Saddleback Wax, Twentieth Century Wax, and Brittle Wax.


Cabbage Wax. Wd.

Seedsmen's synonyms. Crystal White Wax, Wd.

California Black Wax. Tat.

California Rust Proof Wax. M&S NoL. For similar names see Rust Proof Wax.


Similar names. Early Challenge Black Wax, Extra Early Challenge Black Wax. See also Black Wax, Prolific Black Wax, German Black Wax.

Challenge German Black Wax. Bur.

Similar names. See Challenge Black Wax.

Champion Wax. Tat.

Similar names. Golden Champion Wax.
**Similar names.** See Flageolet Wax.  
**Seedsmen's synonyms.** *Scarlet Flageolet*, Ptn.

**Crystal Wax.**  Brr Dnm Gra Hrs Kei Lan XI Pir Prm Rog RP.  
**Similar names.** Crystal White Wax, Early Crystal Wax.

**Crystal White Wax.**  Bdg *Brn* Bui Bur Brr CE Cle Fmr Fst Fer Ggy Hrn Hst H&C H&P LB Liv May McK Min Pae Ree Roe Sal Shm Sox SB Trm T&B J7 Wd.  
**Similar names.** See Crystal Wax.  

**Currie's Improved Rust Proof Wax.**  Entered as Currie's Rust Proof Wax.

**Currie's Rust Proof Black Wax.**  Brk CE CF Emr Fst Frd GH G&T Hme J&S Ken K&F May M&S NK Pnt JMP Qkr Rog Rs Thr W&D.  
**Similar names.** See Currie's Rust Proof Wax.

**Currie's Rust Proof Golden Wax.**  Bag Buc Bar Koe Kra Lnr Mns HP Prn Wer.  
**Similar names.** See Currie's Rust Proof Wax, Golden Wax.

**Similar names.** Currie's Rust Proof Black Wax, Currie's Improved Rust Proof Wax, Currie's Wax, Currie's Rust Proof Golden Wax.

**Currie's Wax.**  Bkt Fqr.  For similar names see Currie's Rust Proof Wax.

**Cylinder Black Wax.**  M&S Nol HP Poo.  
**Similar names.** See Cylinder Ivory Wax.  
**Seedsmen's synonyms.** *Prolific German Black Wax*, HP.

**Cylinder Ivory Wax.**  Ggy.  
**Similar names.** Cylinder Wax, Ivory Pod Wax, Cylinder Black Wax.

**Cylinder Pod Wax.**  Bkt Bur J&S.  For similar names see Cylinder Ivory Wax.  

**Darch & Hunter's Monarch Wax.**  Entered as Monarch Wax.

**Date Wax.**  Bgs Lnr.

**Davis Early White Kidney Wax.**  Crs.  For similar names see Davis Wax.

**Davis Kidney Wax.**  Brrl Btr Btl Bkt Blg Brk Brl Brb Brw CE Cle CCo Col Dd Dnm Dun Evr Fmr Fqr Grs Gdn GH Ggy Grn Gry Hns Hsh Hsp Hrr Hlm H&P J&S Jns Ken Kg Kos Lnr Lon Mgd PM Mns Mav May JCM JMM M&S Nol NK Old HP JMP Pri Raw HP Sic Spf S&W Thm Thr Til Trm Vl Vau Wea Wd WS.  
**Similar names.** See Davis Wax.

**Davis Wax.**  All Alr Bai Bak Bov Buc Cmr Clm Dlw Drw Drr Ebc Eic Fer Frd Grw Imor Ktr Lamn Lan Liv JL Loh Neb Pn Pnt Ptt Por Roe Rog Rt S&R Shw Stk S&H Tat Thm W&D.  
**Similar names.** Davis White Wax, Davis Kidney Wax, Davis White Kidney Wax, Davis Early White Kidney Wax.

**Davis White Kidney Wax.**  Alx Ans Ar C&J Del Ebr Elt Fld G&T TG Haw Hlm Pri Pnt Ree Re-SC S&F S&O Shm Web Y&H.  
**Similar names.** See Davis Wax.

**Davis White Wax.**  Bel Ber Bur CF Emr Gng Hrs K&W Mic MV Ptt Qkr Ptk Sox Thb Thl Vk W&.  
**Similar names.** See Davis Wax.

**Detroit Golden Wax.**  RE.  For similar names see Detroit Wax, Golden Wax.
**BEAN, BUSH WAX-PODDED.**

**Detroit Wax.** All Bul Red Bow Bgg Bga Brg Bru Buc CE Cle Ehe Emr Ewg Fer Fle GH Gra Ggy Grm G&T Hlm Hme Iml Lam Lan Luc Man May McK MV May NK Put Por Pri Pug Qkr Ren Rec Roe Rs S&R Sim Sox Stk Thr Til Van Wdr.

**Similar names.** Ferry’s Detroit Wax, Detroit Golden Wax.

**Seedsmen’s synonyms.** Rust Proof Wax, Bow Por Pug S&R Stk.

**Dixie Land.** CA.

**Double Barreled Wax.** Lan.

**Similar names.** Landreth’s Double Barreled Wax.

**Early Black Eyed Wax.** Crs. For similar names see Black Eyed Wax.

**Early Black Wax.** Crs Fle Hly Sim. For similar names see Black Wax.

**Seedsmen’s synonyms.** Butler, Crs.

**Early Challenge Black Wax.** Crs. For similar names see Challenge Black Wax.

**Early Crystal White Wax.** Sim. For similar names see Crystal Wax.

**Early Dolly Varden.** CCo.

**Early Flageolet Wax.** Col. For similar names see Flageolet Wax.

**Early German Wax.** Bui CA. For similar names see German Black Wax.

**Early Golden Eyed Wax.** Brr Chl C&B Crs Ggy Wl.

**Similar names.** See Golden Eyed Wax.

**Early Golden Wax.** Bel Brr C&J Col Crs Mas Sim.

**Similar names.** See Golden Wax.

**Early Prolific Black Wax.** Buc Col Crs. For similar names see Prolific Black Wax.

**Early Red Flageolet Wax.** Crs. For similar names see Flageolet Wax.

**Early Refugee Wax.** Crs DD Lnr. For similar names see Refugee Wax.

**Early Valentine Wax.** Crs Hrs W&D. For similar names see Valentine Wax.

**Early White Wax.** Brr CE Col Rec Sim Thm. For similar names see White Wax.

**Eclipse Wax.** Dk&II.

**Eichling’s White Kidney Wax.** Eic. For similar names see Kidney Wax.

**El Dorado Wax.** Tat.

**Similar names.** Tait’s El Dorado Wax.

**Emperor William Wax.** Hlm.

**Epicure Wax.** M&S.

**Everbearing Giant Wax.** Hop. For similar names see Giant Wax.

**Extra Early Black Wax.** Sim. For similar names see Black Wax.

**Extra Early Challenge Black Wax.** Bow Buc Bru Por Pug Roe S&R.

**Similar names.** See Challenge Black Wax.

**Extra Early Refugee Wax.** Big Frd Gdn Ggy Hrm Hse Jac Rog W&D.

**Similar names.** See Refugee Wax.

**Extra Early Valentine Wax.** Tat. For similar names see Valentine Wax.

**Ferry’s Detroit Wax, Ferry’s Golden Wax.** Entered as Detroit Wax, and Golden Wax.

**Fillbasket Wax.** Thr.

**Flageolet Wax.** Alx Ans Bkt Bdg Buc C&B Crg Cur CA Eic Ewg Grm TG Hrv Hen Hme Lnr Man Mas Mau May Mic MV Poo Pri Roe Sox Stk S&W Til Van W&D.

**Similar names.** Alexander’s Flageolet Wax, Early Flageolet Wax, Germain’s Improved Golden Eyed Flageolet Wax, Golden Eyed Flageolet Wax, Violet Flageolet Wax, Golden Flageolet Wax, Crimson Flageolet Wax, Purple Flageolet Wax, Scarlet Flageolet Wax, Red Flageolet Wax, Early Red Flageolet Wax.

**Seedsmen’s synonyms.** Burpee’s Perfection Wax, Man. Perfection Wax, Col. Scarlet Wax, Ewg.

**Fuller’s Black Wax.** Ggy Rog. For similar names see Black Wax.

**Fuller’s Ringleader Wax.** J&S. For similar names see Black Wax.
American Varieties of Vegetables.

Germain's Improved Golden Eyed Flageolet Wax. Entered as Golden Eyed Flageolet Wax.

German Black Wax. Ar Anb Bou Bri Brn Bng Cum CE Cle CF Cox Crg DD Drm Fmr Fst GH Grn Grg Grw TG Hrv Hst Hwft Hft H&C Hln J&S Jns K&F Lan Lea LB Jl PM Mns Min MV OV Old Pac JMP Rcv SC Sox Stw Tat Tem Thm Thl Tpk Vat Wat Wea Web Wll Wlt. Similar names. German Wax, Early German Wax, Improved German Wax, Prolific German Wax, Improved Prolific German Wax, Improved Prolific German Black Wax, Prolific German Black Wax, Improved German Black Wax. See also Black Wax, Challenge Black Wax, Prolific Black Wax.

Seedsmen's synonyms. Butter, Cox Fmr J&S. Prolific German Black Wax, Alr.

German Wax. Ar Brt Ber Dlw Eic Fqr Fer Gdn Jac MJW RHJ McM Mhl Min Pri Rt Rs RP Shw Stw Tat Vin Wd WS Y&H. Similar names. See German Black Wax.


German White Wax. Bow Brn Grw Hde Kei Pks Por Pug S&R Sox Tpk Web. Similar names. See White Wax.

Giant Poddled Stringless Wax. Grn. For similar names see Giant Wax.

Giant Red Wax. RE SB. For similar names see Giant Wax.


Seedsmen's synonyms. Mammoth Red German Wax, Ren.

Golden Beauty. D&H.

Golden Champion Wax. Roc. For similar names see Champion Wax.


Similar names. Golden Crown Stringless Wax.

Golden Crown Stringless Wax. Thr. For similar names see Golden Crown.

Golden Eyed Flageolet Wax. Ger.

Similar names. See Flageolet Wax, Golden Eyed Wax.


Golden Flageolet Wax. Brn Grn. For similar names see Flageolet Wax.

Golden Prize. Cok.

Golden Queen Wax. Vin.


Grenell's Golden Wax. All Eie May MV Pit Stk.

Grenell's Improved Golden Wax, Grenell's Improved Rust Proof Golden Wax.


Hammond's Butter Wax. Hammond's Luscious Stringless.


Hodson's Improved Black Wax. Entered as Black Wax.

Holmes' Everbearing Giant Wax, Holmes' Improved Silver Wax. Entered as Everbearing Giant Wax and Silver Wax.

Imperial Golden Wax. 1st.

Imperial White Wax. Man.

Improved Black Wax, Improved Early Golden Wax, Improved German Black Wax, Improved German Wax, Improved Golden Wax, Improved Prolific Black Wax, Improved Prolific German Black Wax, Improved Prolific German Wax, Improved Rust Proof Golden Wax, Improved Rust Proof Wax, Improved Refugee Wax, Improved White Wax, Improved Yellow Eyed Wax. Entered as Black Wax, Early Golden Wax, German Black Wax, etc.

Ivory Pod Wax. CE Frd 11ht Lnr May Min Rec RP St W&D.

Jones' Stringless Wax. All Ale Brn Buc Col Fqr Fer Fer Gls Hrn Ind Jns Lnr Liv Man Mgd Man Neb Pg Pri Rec Van.

Jones' Stringless White Wax, Stringless White Wax, Rennie's Stringless Wax.

Jones' Stringless White Wax. Frd Neb Thr Vk Wd.

Keeney's Early Rustless Golden Wax. Cns.

Keeney's Improved Stringless Refugee Wax, Keeney's Pencil Pod Black Wax, Keeney's Pencil Pod Wax. Entered as Stringless Refugee Wax, Pencil Pod Black Wax, and Pencil Pod Wax.

Keeney's Rustless Golden Wax. All Ans Bow Bgg Brn Buc Bur C&B Col CF D&H Del Evr Fer Gra Ggy Grn G&T Grw Hen Hlm Jer J&8 Lnr May OV Old Pne Pit Pit Rce Rce Rg S6k SB S&H S&W Tat Thm Thr.

Keeney's Rustless Wax, Keeney's Early Rustless Golden Wax, Keeney's Pencil Pod Wax, Keeney's Pencil Pod Black Wax, Keeney's Improved Stringless Refugee Wax, Rustless Golden Wax, Stringless Refugee Wax.

Similar names.  See Keeney's Rustless Golden Wax.

Seedsmen's synonyms.  Golden Wax, D&H.

Kidney Wax.  All Bel Bug Brw CE Drm Koe Jl Man Mel Xi Ptt Ptk Rce Sie.


King of the Wax.  M&S.

Landreth's Double Barreled Wax, Landreth's Scarlet Wax.  Entered as Double Barreled Wax and Scarlet Wax.

Large White Marrow Wax.  Hlmu.


Lima Wax.  All Brk Brb Gry May Sal Stk.

Similar names.  Roger's Lima Wax.

Longfellow.  Gm.

Lyonnaise.  Nol.

McKenzie's Perfection Wax.  Entered as Perfection Wax.

Mammoth Red German Wax.  McK Ren.

Seedsmen's synonyms.  Giant Wax, Ren.

Mammoth Wax.  SB.  For similar names see Giant Wax.


Maule's Butter Wax.  Buc Man Roc.  For similar names see Butter Wax.

Midsummer Wax.  Sal.

Milliken's Wax.  K&W.

Mills' Rust Proof Wax.  Ms.  For similar names see Rust Proof Wax.

Monarch Wax.  D&H.

Mountain of Gold.  D&H.

New York State Golden Wax.  Pg.  For similar names see Golden Wax.

Pencil Pod Black Wax.  All Bur Dvr J&S Thr AGT.

Similar names.  See Keeney's Pencil Pod Wax.


Similar names.  See Keeney's Pencil Pod Wax.

Similar names.  Keeney's Pencil Pod Black Wax, Keeney's Pencil Pod Wax, Pencil Pod Black Wax.

Perfection Kidney Wax.  Alx.  For similar names see Perfection Wax, Kidney Wax.

Perfection Wax.  Ans Bgs Bug Buc Bui Bur Brw CE Col Dlw Dtr Flbl GH Gra Hlm J&S Mnd Mau McK Mhl Mk Prn Poo Qkr Rce Roc Sie YKH.

Similar names.  Burpee's Perfection Wax, Young & Halstead's Perfection Wax, Perfection Kidney Wax.

Seedsmen's synonyms.  Flagcolet Wax, Mau Col.  Violet Flagcolet, Fer.  Violet Wax, J&S.


Similar names.  Improved Prolific Black Wax, Early Prolific Black Wax.  See also Black Wax, Challenge Black Wax, German Black Wax.


Prolific Everbearing Wax.  M&S.

Prolific German Black Wax.  All Bel Bow Bldg Bur Drm Gls Hde Hlm Iml Liv Mns Pks Pnt Qkr Spf Ton Tex Van Vq Yng.

Similar names.  See German Black Wax.

Prolific German Wax. Bkt Bgs Buc Bui Drm Ear Eic For Frd Ham J&S LB Loh PM McM Neb Nol HP Roc Stk VI.

Similar names. See German Black Wax.

Purple Flageolet Wax. Web. For similar names see Flageolet Wax.

Red Flageolet Wax. Bkt Bgs Elt GI McDonal Mzy HP Put Qkr Thn Thr Wer.

Similar names. See Flageolet Wax.
Seedsmen’s synonyms. Scarlet Flageolet, Pt.


Rennie’s Stringless Wax. Rn. For similar names see Jones’ Stringless Wax.


Similar names. See Lima Wax.

Round Pod Kidney Wax. Ans Bkt Drr For Gun Hlm J&S Liv JMM Mhl Mos Put.

Similar names. See Kidney Wax.

Round Podded White Wax. All. For similar names see White Wax.


Similar names. See Golden Wax, Keeney’s Rustless Golden Wax.

Rust Proof Black Wax. Brd Elt. For similar names see Black Wax.


Similar names. See Golden Eyed Wax.


Similar names. See Golden Wax.

Rust Proof Wax. Ans Bow Buc DD GN Grw McM Por Pug RP S&R Stk Vin.

Similar names. Improved Rust Proof Wax, Mill’s Rust Proof Wax, Shumway’s Rust Proof Wax, California Rust Proof Wax.
Seedsmen’s synonyms. Detroit Wax, Bow Por Pug S&R Stk.

Saddleback Black Wax. Brk Brn Reg.

Similar names. See Saddleback Wax, Black Wax.


Similar names. Burpee’s Saddleback Wax, Saddleback Black Wax.

Salzer’s Earliest Wax. Sal.

Salzer’s Giant Stringless Wax. Sal. For similar names see Giant Wax.

Salzer’s Golden Wax. Entered as Golden Wax.

Salzer’s Round Podded Wax. Sal.


Similar names. See Flageolet Wax.

Scarlet Wax. Bui DLW Ewg Lan Rim Stw Tat.

Similar names. Landreth’s Scarlet Wax.
Seedsmen’s synonyms. Flageolet Wax, Ewg.

Shumway’s Rust Proof Wax. Shm. For similar names see Rust Proof Wax.

Silver Wax. Hlm Man Sim.

Similar names. Holmes’ Improved Silver Wax.
Simmers' Early Giant Wax. Sim. For similar names see Giant Wax.

Speckled Kidney Wax. Bui Jac.

Similar names. See Speckled Wax, Kidney Wax.

Speckled Wax. Bue DD Fid Gln LB Roc.

Similar names. Beckert's Speckled Wax, Speckled Kidney Wax.

Seedsmen's synonyms. Wardwell's Kidney Wax, Gdn.

Stringless Refugee Wax. J&8 Van Wdr. For similar names see Refugee Wax.

Stringless Round Pod Wax. Thr.

Stringless White Wax. Grn. For similar names see Jones' Stringless Wax.

Tait's El Dorado Wax. Entered as El Dorado Wax.

Thorburn Refugee Wax, Thorburn Valentine Wax. Entered as Refugee Wax and Valentine Wax.

Twentieth Century Wax. Bur.

Similar names. Burpee's Twentieth Century Wax.

Valentine Wax. A1x All Bkt Bow Brk Bdg Brn Brun Buc C&J Cam CE CF CA Drr RE Evr Fue Fqr Fer Frd Grn Ggy Gra TG Hrs Hst Jmp Hm Hhn H&P J&8 Kos.

Lar LB Liv Mgd Man May JMM Mhl MV M& Mz Nol Prn Jmp Pot Pri Raw Rec Roc Rg Ros Sal S&F Shw So Sph So Sim Sor Tet Thr Thb 17 Van Wk WEA WS Wdr.


Violet Flageolet Wax. Bn Buc CE Fer GH Lnr LB Rec Roc Shr.

Similar names. See Flageolet Wax.

Seedsmen's synonyms. Perfection Wax, Fer.


Wardwell's Early Kidney Wax. Crs Dlw Tm Van.

Similar names. See Wardwell's Kidney Wax.

Wardwell's Improved Kidney Wax. Entered as Wardwell's Kidney Wax.


Seedsmen's synonyms. Speckled Wax, Gdn.

Wardwell's Wax. Bkt Pg Roc. For similar names see Wardwell's Kidney Wax.

White Kidney Wax. DD Eic Prc Wer. For similar names see Kidney Wax.


Similar names. Improved White Wax, Early White Wax, Round Podded White Wax, German White Wax.


Wonder of France. Grn.

Yellow Eyed Wax. Entered as Golden Eyed Wax.

Yosemite Black Wax. Brk Bng.

Similar names. See Yosemite Wax, Black Wax.
Yosemite Giant Wax.  Sim Vau.  For similar names see Yosemite Wax.


SIMILAR NAMES.  See Yosemite Wax.

Yosemite Monster Wax.  Chl GN.  For similar names see Yosemite Wax.

Yosemite Wax.  (CF) Drr Hme Lar Man JMM S&F S&W.

SIMILAR NAMES.  Yosemite Mammoth Wax, Yosemite Monster Wax, Yosemite Giant Wax, Yosemite Black Wax.

York Wax.  Ggy.

SEEDSMEN'S SYNONYMS.  Golden Wax, Ggy.

Young & Halstead's Perfection Wax.  Entered as Perfection Wax.

Young's Improved Golden Wax.  Entered as Golden Wax.

**BEET (GARDEN BEET).**

Acme.  Si.

Acme Early Blood.  CE.

Acme Second Early.  J&S M&S.

Albani.  Pri.

Alexander's Early Red Turnip.  Alx.  For similar names see Early Blood Turnip.

Alneer's Early Columbia.  Entered as Early Columbia.

American Egyptian.  M&S.  For similar names see Extra Early Egyptian.

Archias's Blood Turnip.  Ar.  For similar names see Early Blood Turnip.

Archias' Improved Blood Turnip.  Entered as Archias's Blood Turnip.

Arlington.  CE C&B Cur Dw Del RE Hrc Hrn LB Nol HP Pri Ren Rec Wdr.


SEEDSMEN'S SYNONYMS.  Favorite, Wdr.  Rawson's Boston Market, HP.

Arlington Blood Red.  McK M&S.  For similar names see Arlington.


SIMILAR NAMES.  See Arlington.

Arlington First Early.  Lan.  For similar names see Arlington.

Atlanta's Earliest.  Jac.

SIMILAR NAMES.  Birmingham's Earliest, Faust's Early, Hammond's Early.

Baltimore Early Market.  G&T.  For similar names see Early Market.

Bassano.  Bel Bon Bui Brr Ebe Elt Gry G&T Hde Iml MWJ Kg Ln Loh Mnd Man PM JMM Mc K Mc M OV Prn Pnt Shw Stk Stw S&W Thr Tpk Wlt Wdr.

SIMILAR NAMES.  Early Bassano, Extra Early Bassano, Extra Early Flat Bassano, Early Flat Red Bassano, Early Flat Bassano, Flat Bassano, Early Egyptian Bassano.

SEEDSMEN'S SYNONYMS.  Extra Early, Bow Shw Stk Wlt.  Extra Early Turnip, Bui Lan G&T.

Bastian.  Anb Bgy Bng Buc Chl C&B Cur D&H DD Ebe Gry Hrs Hen Hnt Lar Mas JMM MV Mzy Nol Pri Pri Ren Roe Rs S&R S&O Sox Thr Tum Thr V&H.

SIMILAR NAMES.  See Bastian's Early Blood Turnip.

Bastian's Early.  Brk C&J CF Eas Ebe Emr Fqr Fax Gls Jns May Min Pot Raw Rs Wea.

SIMILAR NAMES.  See Bastian's Early Blood Turnip.

Bastian's Early Blood Turnip.  Alr Bak Bgs Brr CE C'E Cc Cw Cur Drr Dtm Dm Frr Gyr Grg Tg Haw Hly Hlm Liv Jl JMM Mc M Ptt Rec RP Shw Sox Spf S&H Tlp Tpk Vl Wr W&W Wr Wdr WS.
American Varieties of Vegetables.


Similar names. See Early Blood Turnip.

Bastian's Extra Early Red Turnip. Bui Bar PM Pac.

Similar names. See Bastian's Early Blood Turnip.

Seedsman's synonyms. Lentz, Bui.

Bastian's Extra Early Turnip. Egg Cam CA RE Exr GH Hst H&C Hlm Jer J&S Kg Mhl OV Sal Shm Tpk VI Wat.

Similar names. See Bastian's Early Blood Turnip.


Similar names. See Bastian's Early Blood Turnip.


Similar names. See Bastian's Early Blood Turnip.

Seedsman's synonyms. Philadelphia Perfection, Bur PM.

Beats All. Brk. For similar names see Best of All.

Beckert's Perfection Blood Turnip. Bkt.

Similar names. See Early Blood Turnip, Philadelphia Perfection.

Beckert's Winter. Bri.

Best of All. GN Sal.

Similar names. Salzer's Best of All, Breck's Beats All, Beats All.

Birmingham's Earliest. Gdn. For similar names see Atlanta's Earliest.

Bismarck. Bue Roc.

Black Prince. SB.

Black Queen. Bui Chl Roc Thr W&D.

Similar names. Black Queen Half Long Blood, Queen of the Blacks.

Black Queen Half Long Blood. W&D. For similar names see Black Queen.

Blood Red Turnip. Mel. For similar names see Early Blood Turnip.

Blood Turnip. Bel Ber Cam D&C Exr Fld Lara PM McK Prn Ren Rim Roc SB.

Similar names. See Early Blood Turnip.


Similar names. See Early Blood Turnip.

Bolgiano's Extra Early Eclipse. Entered as Extra Early Eclipse.

Bonsecours Market. Ewg Gra.

Boston Market. HP Raw.

Similar names. Rawson's Boston Market.

Seedsman's synonyms. Improved Arlington, HP.

Breck's Beats All. Entered as Beats All.

Briggs' Extra Early. SB. For similar names see Extra Early.

Bruce's Long Dark Blood. Entered as Long Dark Blood.


Similar names. See Early Blood Turnip.


Buist's Extra Early. Bui. For similar names see Extra Early.


Buist's Scarlet Perfection. Bui. For similar names see Philadelphia Perfection.

Burpee's Blood Turnip. Bnt. For similar names see Early Blood Turnip.

Burpee's Extra Early. Bnt. For similar names see Extra Early.

Burpee's Improved Blood Turnip. Entered as Burpee's Blood Turnip.

Cardinal. Mau Ren.
Carter's Excelsior. Mhl MV Rec. For similar names see Excelsior.
Seedsmen's synonyms. Columbia, J&S Cle.


Chicago Early Blood Turnip. Sk. For similar names see Early Blood Turnip.

Chicago Market. Dbe Kra Vi Van.
Similar names. Vaughan's Chicago Market, Chicago Early Blood Turnip.

Columbia. Bti Btl Btk Bt Bel Bgr Brg Btr Bcr Btr C&J Cle Col Dcl Ebr EIt RE Ewr Fqr Fst Frd GH Gra GN Gry JMM Hem Hop Hse Jer J&S Lan Lat Man Ms M&S Neb Pac Pg HP Qkr Rec Roc Shw Tem Thr Til Vin Wd W&D Y&H.

Columbian Red. Loh. For similar names see Columbia.

Cooper's Market King. Entered as Market King.

Covent Garden. Fwg.

Cox's Blood Turnip. For similar names see Early Blood Turnip.

Cox's Improved Blood Turnip. Entered as Cox's Blood Turnip.

Crimson Globe. Ale At Bt Brk Bar Brr Brrb Brrb Brrb C&J Cle Col Fqf Fst Frd GH Gra GN Gry HJ JMM Hem Hop Hse Jer J&S Lan Lat Man Ms M&S Neb Pace Pg HP Qkr Rec Roc Shw Tem Thr Til Vin Wd W&D Y&H.

Crimson King. Sal.
Similar names. Hasting's Crimson King, Lower's Early King, Market King.

Crimson Purple Globe. Shm. For similar names see Crimson Globe.

Crosby. Bt Bt Bt Btr Btr Btr.

Crosby's Dark Red Egyptian. Bgs Crs SC Thu.
Similar names. See Extra Early Egyptian.

Crosby's Early. Mgd Y&H. For similar names see Extra Early Egyptian.

Crosby's Early Blood Turnip. RIIJ.
Similar names. See Early Blood Turnip, Extra Early Egyptian.

Crosby's Early Dark Red Egyptian. Pnt.
Similar names. See Extra Early Egyptian.

Crosby's Early Egyptian. Bt Cle Gra Ggy Hns Ken Roe Rs.
Similar names. See Extra Early Egyptian.

Crosby's Egyptian. Bt Bt Btr Btr Brg Brr Brr Brr Brr Brr Brr C&J CE EBC C&B Col CF Cur Dlw D&H Dtr Dtr Ebe Ebe Ebr Ebr Ebr Fqr Fqr Fqr Fqr Gls Ggy Gry G&G Grw TG Ham Hrs Hen Hlt H&C Hlm Hse Inf low J&S Jos K&W K&F Koe Kos Kra Lan Lnr LB Liv JL Loh Man PM Mrs NAY J&D JMM JMM JMM JMM JMM M&K Mhl Neb Nol NK Old Pace Pg HP Prn Ptt Ptt Ptt Ptt Pfk Raw Ren Rec Rs S&F Shw S&O Shm Spf Stk SB S&H Tat Thb
Dark Red Egyptian. Brn Col CF Cox Crs Ger GIH Man Mzy XI Pir Ptt Raw Sal Stk Thm Vin.

Similar names. See Extra Early Egyptian.

Dark Red Blood. Kel.

Dark Red Turnip. Pri. For similar names see Early Blood Turnip.

Seedsmen's synonyms. Columbia, Pri.

Dark Stinson. Buc Bar Jr J&S Mls Rec. For similar names see Stinson.

Dell's Black Leaved. Brn Fgr RJJ Sm Thr W&D.

Similar names. Dell's Crimson Leaved, Dell's Improved Black Leaved, Dell's Superb Black, Dell's Flower Garden, Dell's Dark Crimson Long Smooth.

Seedsmen's synonyms. Dell's Crimson Leaved. Sim.

Dell's Crimson Leaved. Sim. For similar names see Dell's Black Leaved.

Seedsmen's synonyms. Dell's Black Leaved. Sim.

Dell's Dark Crimson Long Smooth. M&S.

Similar names. See Dell's Black Leaf.

Dell's Flower Garden. Kel. For similar names see Dell's Black Leaved.

Dell's Improved Black Leaved. Entered as Dell's Black Leaved.

Dell's Superb Black. Ewg Gra. For similar names see Dell's Black Leaved.

Detroit. Lam. For similar names see Detroit Dark Red.

Detroit Blood Red. Brn Emr Gra. For similar names see Detroit Dark Red.


Detroit Early Dark Red. Chl. For similar names see Detroit Dark Red.

Detroit Red. Fqr. For similar names see Detroit Dark Red.

Dewar's Half Long. Pot SB. For similar names see Half Long Blood.


Dewing's Blood Red. Put. For similar names see Dewing's Blood.

Dewing's Early. Ger Gls Loh Mnd May MV S&F Sim Sow Thr.

Similar names. See Dewing's Blood.


Similar names. See Dewing's Blood.

Dewing's Early Blood Red. Koe. For similar names see Dewing's Blood.


Similar names. See Dewing's Blood.

Dewing's Extra Early. Emr RE. For similar names see Dewing's Blood.

Dewing's Extra Early Blood. Ebe Evr. For similar names see Dewing's Blood.

Dewing’s Red.  Sal.  For similar names see Dewing’s Blood.

Dewing’s Turnip.  Esw Raw.

Similar names.  Dirigo Extra Early.

Dirigo Extra Early.  Gdn Hrn H&C K&W Lan Rec Y&H.
Similar names.  See Dirigo.

Dirigo Extra Early Dark Red.  Tg.

Dobbie’s Globe.  Gra.  For similar names see Dobbie’s Purple.
Dobbie’s Purple.  Ewg Gra.
Similar names.  Dobbie’s Globe.

Dreer’s Excelsior.  Drr.  For similar names see Excelsior.

Dwarf Black.  Ewg Gra.

Earliest Dark Red Egyptian.  Bgs.  For similar names see Extra Early Egyptian.

Early Arlington.  Brk Col Drw Fqr GIH Grw Tg Kra Rec Van.
Similar names.  See Arlington.

Similar names.  See Bassano.

Seedsmen’s synonyms.  Extra Early Turnip, Bdg.  Sugar, Bdg CA.

Similar names.  See Early Blood Turnip.

Early Blood Turnip.  Alr Ab Bt Bow Brl Bkt Bt Bow Bow Bgy Bgs Brm Brw Bng Buc Bai Bbr Brw Can CE Chl Cle C&B Col CF Crg Csc Cur CA Drr Dru Dru Etr Etm Rr RC Fer Frc Frd Gls GI Ggy Gry Grw Th Hns Hde Hrn Hrs Hst Hwn Hn H&C Hly Hop J&M J&RS Jns Kei Kei Kg Kos Lam Lea Lnr LR LB Lvr Jl Loh Lon Mnd Mgr Mns May JCM JMM JMK Mic Min MV Mzy Nfl NI NK NV Nks HP JMP Ftr Pnc Ptu Ptt Por Pri Rtk Rec RP Sal S&R SC Shw S&O Sim Sox Spf Stk SB SW Tnd Tnm Thm Thb Tpk Trm Tbl TBP VL VK Vin Web Wer Wd Wdr WS Yng Ya&H.

Early Columbia.  Alr Hns.  For similar names see Columbia.

Early Crimson.  Ewg.  For similar names see Crimson Globe.

Early Crimson Globe.  Tg.  Low.

Early Dark Blood Turnip.  Gdn Thl Whl.
Similar names.  See Early Blood Turnip.
Early Dark Egyptian. Ch. For similar names see Extra Early Egyptian.

Early Dark Red. Dw. For similar names see Early Blood Turnip.

Early Dark Red Egyptian. JMP SC.

Similar names. See Extra Early Egyptian.

Early Dark Red Flat Egyptian. CA Sim.

Similar names. See Extra Early Egyptian.

Early Eclipse. Alx Alr Btu Bgg Bgs Bui C&J Crg CCA CA Drr Elt Re For Fax Fer Fle Gng Tg Hde Hly Hlm Ken K&F Ky Lnr LB JL Loh May JCM Pg Pks JMP Prt For Pot Pri Qkr Rec Rim Rs S&R S&F Sim SB Tl VI Vun Vk Wlt Wyg.

Similar names. See Eclipse.


Similar names. See Extra Early Egyptian.

Early Egyptian Bassano. Hnt. For similar names see Bassano.

Early Electric. Alr Hen. For similar names see Electric.


Similar names. See Bassano.

Early Flat Red Bassano. Dm Liv. For similar names see Bassano.

Early Half Long Blood. Crg Sox. For similar names see Half Long Blood.

Early Large Egyptian. Big. For similar names see Extra Early Egyptian.

Early Long Blood. Bgg. For similar names see Long Blood.

Early Market. Btg.

Similar names. Wesley's Earliest Market, Baltimore Early Market.

Early Othello. Grn.

Similar names. Early Othello Dark Blood.

Early Othello Dark Bassano. Bgl Evr. For similar names see Early Othello.

Early Turin. Thr.

Similar names. Extra Early Turin.

Early York. Sdl.

Early Yellow Turnip. BgS Buc Bur C&J Elt Evr Grs Hen Hop Nei Ptt Qkr Raw Roe Tms.

Similar names. See Yellow Turnip.


Eclipse Crimson Turnip. Btg. For similar names see Eclipse.


Similar names. See Edmand's Blood.

Edmand Improved. Entered as Edmand.

Edmand's Blood. Bai Brd Bt Btl Bkt Btg Brg Bri Brm Bng C&J Chl Cie C&B Crs D&H DD Drr Eas Fnr Fax Ger GH Ggy Grw Haw Hbt Hsw Jus Lam Lnr Mnd Mgd Man Mns Mau May Mie Mhl MV XI NK OY Pac Pir Ppr Pri Qkr Roe Rs S&R S&F SoX S&W Thr AGT Tlh Til Tpk T&B Wdr Wyg Y&H.

Edmand's Blood Red. Lan. For similar names see Edmand's Blood.

Edmand's Dark Blood. Alx. For similar names see Edmand's Blood.

Edmand's Dark Red. McK. For similar names see Edmand's Blood.


Edmand's Early Red. Bui. RE. Im. J&S. For similar names see Edmand's Blood.


Edmand's Red. G&T. For similar names see Edmand's Blood.


Erfurt Prize. May. OV. Tpk. Some names. Gardener's Prize.

Evans' Improved Early Blood Turnip. Entered as Early Blood Turnip.


Seedsman's synonyms. Columbia, Wd.


Extra Early Arlington Favorite. M&S. For similar names see Arlington.


Seedsman's synonyms. Sugar, Wd. Ws.

Extra Early Crimson Globe. Bnd. For similar names see Crimson Globe.
Extra Early Dark Beauty. Shm. For similar names see Red Beauty.
Extra Early Dark Blood Turnip. Shm. For similar names see Early Blood Turnip.
Extra Early Dark Egyptian. Emr Mas.
SIMILAR NAMES. See Extra Early Egyptian.
Extra Early Dark Red Columbia. Shm. For similar names see Columbia.
Extra Early Dark Red Egyptian. Shw Shm Wdr.
SIMILAR NAMES. See Eclipse.
Extra Early Eclipse. Ber Blg Bow Bug Buc Ebr Emr Gdn Gnf Hrn H&C Kg Koe Lan Mnd Mns MV Mzy Nef Pri Roe Shm Stw Tat TB Wd WS.
SIMILAR NAMES. See Eclipse.
Extra Early Electric. Bdg. For similar names see Electric.
Extra Early Flat Bassano. Tg. For similar names see Bassano.
Extra Early Flat Egyptian. Bdg DD K1 Mns JMM McK Ren.
SIMILAR NAMES. See Extra Early Egyptian.
Extra Early Forcing. Mic. For similar names see Extra Early.
Extra Early Intermediate. Ren. For similar names see Extra Early.
Extra Early Turin. Tat. For similar names see Early Turin.
Extra Long Dark Blood. Shm Stw. For similar names see Long Blood.
Extra Long Smooth Deep Blood Red. Shm. For similar names see Long Blood.
Faust's Crimson. Ggy May. For similar names see Crimson Globe.
SEEDSMEN'S SYNONYMS. Mitchell's Perfected, Ggy.
Faust's Early. Eas. For similar names see Atlanta's Earliest.
Faust's Early Crimson. Fst Ggy Rs. For similar names see Crimson Globe.
Favorite. Wdr.
SEEDSMEN'S SYNONYMS. Arlington, Wdr.
First and Last. Evr.
Flat Bassano. Ewg. For similar names see Bassano.
Flat Egyptian. Kei. For similar names see Extra Early Egyptian.
Gardener's Favorite. Ewg. For similar names see Favorite.
Gardener's Prize. Vl. For similar names see Erfurt Prize.
Golden Turnip. Eas. For similar names see Yellow Turnip.
Grey's Blood Turnip. Gyr. For similar names see Early Blood Turnip.

Griffith & Turner Co.'s Early Blood Turnip. G&T.

Similar names. See Early Blood Turnip.

Half Long. Ely Hlm J&S.


Half Long Blood Red. CA RE H&P Lan Liv Mic Stw 17 Vk Whl WS.

Similar names. See Half Long Blood.


Seedsmen's synonyms. Pear Shaped, Bdg.


Similar names. See Half Long Blood.

Half Long Red. MWJ. For similar names see Half Long Blood.

Hammond's Crimson Globe. Hm.

Hammond's Early. Ham. For similar names see Atlanta's Earliest.

Harrisburg Market Extra Early. Ilmu. For similar names see Extra Early.

Hastings' Blood Turnip. Hst. For similar names see Early Blood Turnip.

Hastings' Crimson King. Hst. For similar names see Crimson King.

Hastings' Improved Blood Turnip. Entered as Hastings' Blood Turnip.


Holmes' Deep Blood Turnip. Ilmu. For similar names see Early Blood Turnip.

Holmes' Surprise. Ilmu. For similar names see Surprise.

Hopkins' Darkest Blood. Hop. For similar names see Early Blood Turnip.

Huntington & Page's Early Dark Red Turnip. H&P.

Similar names. See Early Blood Turnip.

Ideal. Pg.

Imperial Blood Red Turnip. Gfg. For similar names see Early Blood Turnip.


Incomparable. M&S.

Similar names. Simon's Incomparable.

Invincible.

Similar names. Salzer's Invincible.

Johnson & Stokes' Surprise. J&S. For similar names see Surprise.

King's Model. Kg. For similar names see Skull's Model.

Landreth's Very Early. Lan. For similar names see Extra Early.

Large Long Blood. G&T TB. For similar names see Long Blood.
Late Blood Turnip. Bnc Rob. For similar names see Early Blood Turnip.

Late Stinson. Lnd. For similar names see Stinson.

Lentz. Anb Btl Bn Buc Bui C&B Cf Crs D&H Drr Ebo Eic Eit Frd Gls Gra Ggy Tg Hcn Lmn Lmr M&S Ntl OV Pg HP Pnt Pri Ren Rec Rnc Rsk SB Thm Thr Thb Tpk Trm Wat W&D Y&H.

Similar names. Lentz Early, Lentz Extra Early, Lentz Extra Early Red, Lentz Early Red, Lentz Hybrid, Lentz Extra Early Hybrid.


Lentz Early. Alr Bgs Bri Cam Crs Hts JMM Mhl Sie.

Similar names. See Lentz.

Lentz Early Red. Eic. For similar names see Lentz.


Similar names. See Lentz.

Lentz Extra Early Hybrid. Cle. For similar names see Lentz.

Lentz Extra Early Red. M&S Qkr. For similar names see Lentz.

Lentz Hybrid. Drr Ggy Mnd. For similar names see Lentz.

Leonard's Extra Early Egyptian. Entered as Extra Early Egyptian.

Lightning. May OV Tpk.

Lohrman's Egyptian. Entered as Egyptian.

Long Black Red. Hde. For similar names see Long Blood.

Long Blood. Alx Anb Bcl Bui Crg Ebe Ewz Fmr Flh Gdr Gin Gra Hnt Jac MWJ JCM McM Mhl Mls MV Pri Rik Roc RsK Wat.


Long Blood Red. Ar Bcl Ber Bon Bbg Bri Brn Cam Cox Evr Gig Hns RHJ Lan Mel Pac JMP Shw T&K Pri Rik Roc RsK Wat.

Similar names. See Long Blood.

Long Crimson. Sal. For similar names see Crimson Globe.


Similar names. See Long Blood.


Similar names. See Long Blood.

Long Dark Red. Bdg D&H D rrn. For similar names see Long Blood.

Long Dark Smooth. Buc.

Long Red. Man M&N.

Long Smooth Blood. Bai Bkt Brr Cam CE Cle CF Del Eit Enr RE Fqr Fax GH Gry Hde Hrn Hst Kei Ken Kg Lmr JL Man May MV Neb OV Pnt Ptt Pot Rec
BEET, GARDEN.

RP Sal S&F S&O. See SB Tat Thr AGT Til Tpk Wet Wes Web W&D Wh Wd Wdr WS Wyg Y&H.

**Similar names.** See *Long Blood*.

**Seedsmen's synonyms.** *Long Smooth Red*, Cle.


**Similar names.** See *Long Blood*.

**Long Smooth Dark Blood.** Alr Bak Bow Col Eas Ggy Grw TG Haw Kta Old HP Raw Spd Van.

**Similar names.** See *Long Blood*.

**Long Smooth Dark Red.** Alr LB SB Yng. For similar names see *Long Blood*.

**Long Smooth Deep Blood Red.** RE Gng McM Ren SB.

**Similar names.** See *Long Blood*.

**Long Smooth Red.** Brt Bnq C&J Clh Cle Hse Nef Thm.

**Seedsmen's synonyms.** *Long Smooth Blood*, Cle.

**Lower's Early King.** M&S. For similar names see *Crimson King*.

**McCullough's Norwood.** Entered as *Norwood*.

**McMillan's Early Dark Blood Turnip.** McM.

**Similar names.** See *Early Blood Turnip*.

**McMillan's Extra Early.** McM. For similar names see *Early Extra*.

**McMillan's Improved Long Blood.** Entered as *Long Blood*.

**Mammoth Long Red.** CA Lea. For similar names see *Long Blood*.

**Mann's Ruby.** Entered as *Ruby*.

**Market Gardeners.** Alr Buc Col J&H Del Ehr Jns OV Pug Rec Shw Shm Tpk Web.

**Similar names.** Northrup, King & Co.'s Market Gardeners.

**Market King.** Jow Man. For similar names see *Crimson King*.

**Maule's Blood Turnip.** Man. For similar names see *Early Blood Turnip*.

**Maule's Dark Red Egyptian, Maule's Improved Long Red.** Entered as *Dark Red Egyptian* and *Long Red*.

**Meteor.** J&S Kei.


**Mitchell's Dark Red.** Alr. For similar names see *Long Blood*.

**Mitchell's Earliest Dark Red.** Pnt. For similar names see *Long Blood*.

**Seedsmen's synonyms.** Lentz, Pnt.

**Mitchell's Perfected.** Brw CE Frd Hse Neb Rec S&O.

**Similar names.** See *Bast's Scarlet Perfection, Philadelphia Perfection*.

**Seedsmen's synonyms.** *Faust's Crimson*, Ggy.

**Mitchell's Red Turnip.** Bri Cle. For similar names see *Early Blood Turnip*.

**Mitchell's Turnip.** Yng. For similar names see *Early Blood Turnip*.

**Nineteenth Century.** Pg.

**Non Plus Ultra.** Bru GE SB.

**Northrup, King & Co.'s Market Gardeners.** NK.

**Similar names.** See *Market Gardeners*.

**Northrup, King & Co.'s Sterling.** Entered as *Sterling*.

**Norwood.** JMM.

**Similar names.** McCullough's Norwood, Norwood Blood Turnip.

**Norwood Blood Turnip.** JCM.

**Similar names.** See *Early Blood Turnip*, Norwood.

**Nutting's Crimson.** May. For similar names see *Crimson Globe*.

**Nutting's Dwarf.** RHJ.
CA
AMERICAN VARIETIES OF VEGETABLES.

Nutting's Early Gem. M&S.
Nutting's Improved Dwarf. Entered as Nutting's Dwarf.
Olive Shaped. SB.
Pear Shaped. Bd.

SEEDSMEN'S SYNONYMS.  \textit{Half Long Dark, Bd.}

Pearce's Long Dark Red. Entered as Long Dark Red.
Peerless. M&L.


Philadelphia Perfection. Bur Lan PM.


SEEDSMEN'S SYNONYMS.  Bastian's Half Long Blood, Bur PM.

Philadelphia Red. Bui. For similar names see Philadelphia Perfection.

Plant's Early Blood Turnip. Put. For similar names see Early Blood Turnip.

Plant's Improved Early Blood Turnip. Entered as Plant's Early Blood Turnip.

Queen of the Blacks. Gng J&M Thm. For similar names see Black Queen.


Red Beauty. Sal.

Similar names. Shumway's Extra Early Dark Beauty, Extra Early Dark Red Beauty.

Red Turnip. Lan. For similar names see Early Blood Turnip.

Rennie's Intermediate. Ren.

Rochester. Vk.

Royal Half Long. Sal. For similar names see Half Long Blood.

Ruby. Man.

Similar names. Mann's Ruby.


Scarlet Tennisball. Lan.


Similar names. King's Model.

Shumway's Extra Early Dark Beauty. Entered as Extra Early Dark Beauty.

Siegel's Acme. Entered as Acme.

Simmers' Extra Early. Sie. For similar names see Extra Early.

Simon's Early Red Turnip. Eic. For similar names see Early Blood Turnip.


Sterling. NK S&H.

Similar names. Northrup, King & Co.'s Sterling.

Stinson. Roc.

Similar names. Late Stinson, Dark Stinson.

Strasburg Half Long Dark Blood. M&S. For similar names see Half Long Blood.

Sugar. Wd WS.

Similar names. White Flesh Sugar.

SEEDSMEN'S SYNONYMS.  \textit{Early Bassano, Bd. CA. Extra Early Bassano, Wd WS. Extra Early Turnip, Bd.}

Sunset. Roc.
Surprise. RE McM.

Similar names. Holmes' Surprise, Johnson & Stokes' Surprise.

Sutton's Table Delicacy. Entered as Table Delicacy.

Table Delicacy. M&S.

Similar names. Sutton's Table Delicacy.

Vail's Extra Dark Red Turnip. V.

Vaughan's Chicago Market. Entered as Chicago Market.

Vicks' Rochester. Entered as Rochester.

Victoria. D&H Th.

Wait's Dwarf Black. Entered as Dwarf Black.

Wesley's Earliest Market. M&S. For similar names see Early Market.

White Flesh Sugar. Alx. For similar names see Sugar.

Whyte's Deep Blood. Ewg. For similar names see Early Blood Turnip.

Whyte's Extra Dark Red. Ren. For similar names see Long Blood.

Whyte's Very Deep Long Blood Red. Sim. For similar names see Long Blood.

Will's Blood Turnip. Wil. For similar names see Early Blood Turnip.

Will's Improved Blood Turnip. Entered as Will's Blood Turnip.

Wood's Crimson Globe. Wd. For similar names see Crimson Globe.

Yellow Turnip. CE Frd Ggy lst Pri Rec.

Similar names. Early Yellow Turnip, Golden Turnip.

Young & Halstead's Excelsior. Y&H. For similar names see Excelsior.

BEETS (SUGAR BEET AND MANGEL-WURZEL).


American Sugar. GY Ggy. For similar names see Improved Sugar.

Seedsmen's synonyms. Low's Ggy.


Berkshire Prize Yellow Globe. Ewg. For similar names see Yellow Globe.

Breck's Imperial, Breck's Mammoth Long Red. Entered as Imperial and Mammoth Long Red.

Briggs' Mammoth Prize Long Red. Entered as Mammoth Prize Long Red.


Canadian Giant. D&H. For similar names see Giant.


Similar names. See Orange Globe.

Carter's Mammoth Long Red. TG Kei Mas. For similar names see Long Red.

Carter's Prize Intermediate. RE. For similar names see Intermediate.

Carter's Prize Long Red. M&S. For similar names see Long Red.

Carter's Warden Orange Globe. Dun Kei McK.

Similar names. See Orange Globe.

Carter's Warden Prize Yellow Globe. Pks.

Similar names. See Yellow Globe.

Champion. CE GII.

Champion Colossal Long Red. M&S. For similar names see Long Red.

Champion Long Red. Not. For similar names see Long Red.

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American Varieties of Vegetables.

Champion Orange Globe.  For similar names see Orange Globe.

Champion Prize Long Red.  Bui.  For similar names see Long Red.

Champion Red Globe.  Buc D&H Rec.  For similar names see Red Globe.


Similar names.  See Yellow Globe.

Seedsman's synonyms.  Orange Globe, Bur Cox Dm J&S Liv Vlk, etc.

Champion Yellow Intermediate.  G&T Kei.

Similar names.  See Yellow Intermediate.

Seedsman's synonyms.  Gatepost, G&T.


Similar names.  Chirk Castle Long Red, Chirk Castle Mammoth.

Chirk Castle Long Red.  M&S.

Similar names.  See Chirk Castle, Long Red.

Seedsman's synonyms.  Gatepost, M&S.

Chirk Castle Mammoth.  Xol.  For similar names see Chirk Castle.

Colossal Long Red.  C&B Hrn.  For similar names see Long Red.


Danish Improved Red Top, Danish Improved Sugar.  Entered as Danish Red Top and Danish Sugar.

Danish Red Top.  RE.  For similar names see Danish Sugar.

Danish Sugar.  Bur D&H Gra Hrn McK Ren Rec Sim SB Wat.

Similar names.  Danish Improved Sugar, Steele, Briggs & Co.'s Danish, Rennie's Danish, Danish Improved Red Top, Queen of the Danes, Danish Red Top.

Seedsman's synonyms.  Red Top, McK.

Danube.  McK.

Dewar's Half Long.  Fle.

Dignity Long Red.  Iow.

Similar names.  Mammoth Dignity.  See also Long Red.

Eckendorfer Red.  Wer.

Similar names.  Eckendorfer Yellow.

Eckendorfer Yellow.  Wer.  For similar names see Eckendorfer Red.

Eiffel Tower.  Roe Sal.

Elite.  NK.

Elivethan Long Yellow.  Cur Gra Kei.  For similar names see Long Yellow.

England Milk and Butter.

English Prize.  May.

English Prize Long Red.  GH.  For similar names see Long Red.

Erfurt Model.  Dlw Van.


Ferry's Improved Mammoth Long Red.  Entered as Mammoth Long Red.

French Giant Half Sugar.  Thb.

French Half Sugar Rose.  J&S.  For similar names see French White Sugar.

French Imperial.  Hde Mic.  For similar names see Imperial.

French Improved.  Ber.  For similar names see French White Sugar.

French Silesian.  Cox Wat.  For similar names see Silesian.

French Sugar.  CE Hly Lnr Por S&K Trn.  For similar names see French White Sugar.


Similar names.  See French White Sugar.
French White Sugar. Brl Brt Blg Bui Cam Cle Crs Brnt Grv TG Hrn Hst Haw HJ K&W Lam Man May OV Pg Pks JMP Pir Pitt Por Pot Rce RP S&R S&O Sox Sk Thm Thr Tpk Web Wdr.


French White Sugar Red Top. Bok Bow Fcr Eic Gs Loh Pks Rt.

Sllr Names. See French White Sugar.

French Yellow Sugar. Bow Brn Eyr Fcr GH Lam Loh Rec.

Sllr Names. See Yellow Sugar.


Seedsmen's Synonyms. Champion Yellow Intermediate, G&T. Chirk Castle Long Red, M&S. Giant Yellow, AGT.

Gatepost Yellow. Gra. For slllr names see Gatepost.

German Imperial. Sox. For slllr names see Imperial.

German Imperial White. Bow Por S&R. For slllr names see Imperial.

German Sugar. Sal.

Sllr Names. Salzer's German Sugar.

Giant. Bui Roc SC.

Sllr Names. Steele, Briggs Royal Giant, Peac's Canadian Giant, Giant Feeding Sugar, Riverhall Giant Yellow, Giant Yellow Half Long, Canadian Giant, Royal Giant.

Giant Feeding. Fer Jnt. For slllr names see Giant.

Seedsmen's Synonyms. Half Sugar Mngel, Fer.


Sllr Names. See Intermediate.


Giant Half Long Sugar. Brn Bar Jor Sim.

Giant Half Long Sugar Rose. RE.

Giant Holstein. Bui Roc Sal.


Sllr Names. See Yellow Intermediate.

Giant Long Red. Bkt Bel Cle Hns Indl Mck Min.

Sllr Names. See Long Red.

Seedsmen's Synonyms. Mammoth Long Red, SC. Steele Briggs' Prize Mammoth, SC.

Giant Long Yellow. D&H. For slllr names see Long Yellow.

Giant Mammoth Long Red. Shm. For slllr names see Long Red.

Giant Red Ovoid. Ggy. For slllr names see Yellow Ovoid.

Giant Yellow Globe. Mck. For slllr names see Yellow Globe.

Giant Yellow Half Long. Mck. For slllr names see Giant.

Giant Yellow Intermediate. Bow Brn C&J CE Col Crs D&H RE Ewg GH Gng Ggy Gry Hrs Hlm LB Man Rec Sim Thm Thr Vnr Wdr.

Sllr Names. See Intermediate.

Seedsmen's Synonyms. Mammoth Half Long, Sim.

Giant Yellow Ovoid. Ebe. For slllr names see Yellow Ovoid.

Golden Giant. Ham May OV Vk. For slllr names see Mammoth Golden Giant.

Golden Globe. Aix Bui Eic Gdh GH Jac MeM Y&H.

Sllr Names. See Yellow Globe.
Golden King.  D&H.
Golden Monarch.  Buc.  For similar names see Monarch.


Golden Yellow Giant.  M&S.  For similar names see Mammoth Golden Giant.
Golden Yellow Mammoth.  Brt Drr TG Mtl SC S&F.

Similar names.  See Mammoth.

Golden Yellow Tankard.  AGT.  For similar names see Golden Tankard.

Goliath.  C.N.

Great Dane Half Sugar.  Mpd.

Green Top White Sugar.  Drr Ewg SB.  For similar names see Improved Sugar.

Grey's Prize Long Red.  Entered as Prize Long Red.

Half Long Mammoth.  Sim.  For similar names see Mammoth.

Seedsman's synonyms.  Giant Yellow Intermediate, Sim.

Half Sugar.  Fer Hrs Lam Por S&R.

Seedsman's synonyms.  Giant Feeding.  Fer.


Harris' Yellow Globe.  Entered as Yellow Globe.


Holmes' Mammoth Prize Long Red.  Entered as Mammoth Prize Long Red.

Imperial.  Brk Brn Buc Dlw Eas Fld Gig Hrs Lan Man May Mel XI Roe Sim Stw Ten 17.

Similar names.  Breck's Imperial, Buckbee's Imperial, German Imperial, French Imperial, Lane's Imperial, Vilmorin's Imperial, Improved Imperial, Lane's Improved Imperial, Vilmorin's Improved Imperial, Imperial Grey Top, Imperial White, Improved Imperial White, Vilmorin's Improved 'Imperial White, German Imperial White, Lane's Imperial White, Vilmorin's Imperial White.

Imperial Giant Half Long Sugar.  Sim.

Imperial Gray Top.  SB.  For similar names see Imperial.

Imperial White.  Alx Ar Bil Bdg Bgs Drr Ebr Grg J&H Mhl Shm Thr Vl Wea.

Similar names.  See Imperial.

Improved American Sugar, Improved Golden Tankard, Improved Imperial, Improved Imperial White, Improved Klein Wanzleben, Improved Long Red, Improved Mammoth Long Red, Improved Mammoth Prize Long Red, Improved
Intermediate.  Fer Lnf Loh.


Seedsmen’s synonyms.  Yellow Mammoth, Ebc.  Yellow Ovoid, Fer.

Intermediate Red.  McK.

Jaensch’s Victrix.  Fer.

Jumbo.  Man.


Jumbo Long Red.  Hst.  For similar names see Jumbo, Long Red.

Jersey Queen.  May.

Jumbo Red.  HP.  For similar names see Jumbo.


Similar names.  See Yellow Globe.


Lane’s Green Top.  SB.  For similar names see Lane’s Sugar.

Lane’s Imperial.  Alb Bai Bow Bgy Bur CE Col Cur Del D&C Est Fer Ger Gf Grw Ham Hrn Hen Hllm Hup Hse Iow Jer J&M J&S Jns K&W Ken Lnr LB Liv JL Loh Man JMM Msy Neb OV Pz HP Jmp Pyn Pug Qkr Raw Rec Ren Rec Rt S&R Tm TB AGT Tpk Vin W&D Y&H.

Similar names.  See Imperial.

Lane’s Imperial White.  CF Crs Prn Pri Wdr.  For similar names see Imperial.

Lane’s Improved Sugar, Lane’s Improved Imperial, Lane’s Improved White Sugar.  Entered as Lane’s Sugar, Lane’s Imperial, Lane’s White Sugar.

Lane’s Sugar.  Brd Brk Cox D&H Dun Emr Eyr Fqr Frd Gln Gvy Gry Hrs Kra LB Mns JCM JMM McK MV Old Pac Pir Por Its S&O Sox S&H Thm T&B Vau Wat.

Similar names.  Lane’s White Sugar, Lane’s Improved White Sugar, Lane’s Improved, Lane’s Green Top.  See also Vilmarin’s Sugar, Improved Sugar.

Seedsmen’s synonyms.  Improved American Sugar, Ggy.

Lane’s White Sugar.  Brd Chl Drr TG Jns Milh S&F.

Similar names.  See Lane’s Sugar.

Large Obendorf Red.  Dlw.  For similar names see Obendorf Golden.

Large Obendorf Yellow.  Dlw.  For similar names see Obendorf Golden.

Large Red Globe.  CE Jns Mls Ren Rec.  For similar names see Red Globe.


Leviathan.  Gls Por S&R.

Similar names.  Leviathan, Long Red, Yellow Leviathan.

Seedsmen’s synonyms.  Golden Giant Intermediate, Por S&R.

Leviathan Long Red.  W&D.  For similar names see Leviathan, Long Red.

Leutowitzer Red.  Wer.

Long Mammoth.  Mic.  For similar names see Mammoth.


Seedsmen's synonyms.  

Long White.  Ewg.

Similar names.  Sweet White.


Similar names.  Elvethan Long Yellow, Mammoth Long Yellow, Giant Long Yellow.

Mammoth.  McK Roc.


McKenzie's Manitoba Giant Yellow.  Entered as Manitoba Giant Yellow.

Mammoth Dignity.  Emr.  For similar names see Dignity Long Red.

Mammoth Golden Giant.  

Similar names.  Hammond's Golden Giant, Vick's Golden Giant, Golden Mammoth, Golden Yellow Giant, Yellow Giant, Mammoth Yellow Giant.


Similar names.  See Long Red.


Mammoth Long Yellow.  CE Neb Rec.  For similar names see Long Yellow.

Mammoth Prize Long Red.  Bgs Bug Bui Bur CE Fst Haw Hlm Hop Hse JL PM Man JMM Ms Pac JMP Qkr Rec Sie Sim Wd WS.

Similar names.  See Long Red.

Seedsmen's synonyms.  Giant Jumbo, PM.  Jumbo, JL.  Norbiton, PM.  Norbiton Giant, JL.
Mammoth Red Intermediate. Brn McK Sim. For similar names see Intermediate.

Seedsmen’s synonyns. Red Oval Shaped Giant, Sim.

Mammoth Saw Log. RE.

Similar names. Evans’ Improved Mammoth Saw Log.

Mammoth Yellow Giant. Glis RJJ. For similar names see Mammoth Golden Giant.

Mammoth Yellow Intermediate. McK.

Similar names. See Yellow Intermediate.

Manitoba Giant Yellow. McK.

Mastodon. Buc Roc.

Similar names. Buckbee’s Mastodon.

Maule’s Champion Yellow Globe, Maule’s Gatepost. Entered as Champion Yellow Globe and Gatepost.


Minnesota Tankard. Fnr. For similar names see Golden Tankard.

Monarch. Brd.

Similar names. Monarch of All, Golden Monarch.


Monarch of All. Ham.


Norbion Giant. Ar Bk Brl Brg Brg Brr CF Dnm Fgr Fax Gdn GIy Grw Hrs Hrv Hly K&W Ken May Mhl Pg HP Put S&F Sox AGT Thl Til Vin Wtl Wdr.


Similar names. See Norbiton Giant, Long Red.

Norbion Giant Red. Bdg Neb Vin. For similar names see Norbiton Giant.

Norbion Red. Ebr.

Seedsmen’s synonyns. Mammoth, Ebr.

Obendorf Golden. Lnb Wer.

Similar names. Obendorf Yellow, Large Obendorf Yellow, Large Obendorf Red.

Obendorf Yellow. RE. For similar names see Obendorf Golden.

Oblong Red Giant. RE. For similar names see Red Giant.

Olive Shape. Ger.

Similar names. Ward’s, Large Oval Shape.

Seedsmen’s synonyns. Yellow Ovoid, Ger.


Seedsmen’s synonyns. Champion Yellow Globe, Bur Cox Drm Frd J&S Liv, etc. Yellow Globe, Spf Wd WS.

Orange Yellow Globe. Pt. For similar names see Yellow Globe.

Oval Shape Red Giant. Sim. For similar names see Red Giant.

Seedsmen’s synonyns. Mammoth Red Intermediate, Sim.

Pearce’s Canadian Giant. Entered as Canadian Giant.
Perfection Mammoth Long Red. McK. For similar names see Long Red.
Prize Champion Globe. Brd. For similar names see Yellow Globe.
Prize Golden Globe. Bni. For similar names see Yellow Globe.
Prize Long Red. Gry Kos. For similar names see Long Red.
Prize Mammoth. SB.

SEEDSMEN’S SYNONYMS. Giant Long Red, SB.

Prize Orange Globe. Crs. For similar names see Orange Globe.
Queen of the Danes. Ewg. For similar names see Danish Sugar.
Queen of Denmark. Thr.

Red Giant. Mns.

SIMILAR NAMES. Oval Shape Red Giant, Oblong Red Giant.


Red Mammoth. Ar Bkg Mzy Put Trm. For similar names see Mammoth.

SEEDSMEN’S SYNONYMS. Norfolk Giant, Ar Pnt.

Red Ovoid. Crs. For similar names see Yellow Ovoid.

Red Tankard. C&J Sim. For similar names see Golden Tankard.


SEEDSMEN’S SYNONYMS. Danish, McK.

Red Top Silesian. RE. For similar names see Silesian.


SIMILAR NAMES. See Improved Sugar.

Rennie’s Danish. Entered as Danish Sugar.

Rennie’s Danish Sugar, Rennie’s Tankard Cream. Entered as Danish Sugar, Tankard Cream.

Rivenhall Giant Yellow. Ptt. For similar names see Giant.

Royal Giant. DkH SB. For similar names see Giant.

Salzer’s German Sugar. Entered as German Sugar.

Saw Log. SB.

SEEDSMEN’S SYNONYMS. Mammoth Long Red, SB.

Silesian. Btl Dlw Hns Koe Lan JCM Mel Stw Wd WS.


Simmers’ Mammoth Prize Long Red. Entered as Mammoth Prize Long Red.

Steele, Briggs & Co.’s Danish Sugar, Steele, Briggs & Co.’s Royal Giant, Steele, Briggs & Co.’s Prize Mammoth. Entered as Danish Sugar, Royal Giant, Prize Mammoth.


Sweet White. Sal. For similar names see Long White.

Taber’s Gatepost. Entered as Gatepost.

Tankard Cream. Ren. For similar names see Golden Tankard.


Vilmorin’s French White Sugar. Ggy Vl.

SIMILAR NAMES. See French White Sugar.

Vilmorin’s Imperial. Anb Ebe Fmr Frd H&P Jns LB Loh Mns Old Pg Pri Pug Raw Sal Van Web.

SIMILAR NAMES. See Imperial.

Vilmorin’s Imperial White. Kra M&S S&H. For similar names see Imperial.
Viilmolin's Improved French White Sugar, Viilmolin's Improved Imperial, Viilmolin's Improved Imperial White, Viilmolin's Improved Sugar, Viilmolin's Improved White Sugar. Entered as Viilmolin's French White Sugar, Viilmolin's Imperial, Viilmolin's Imperial White, Viilmolin's Sugar, and Viilmolin's White Sugar.

Viilmolin's Sugar. Brl Brk Brn CE Cle Cur Dlw Del Ebr Emr RF Fer GH Hns Hrn Hrs HRC Him low J&M Kg Lan Lnr Man May JMM MV Mzy NK OY Put Por Rec S&K SC Spf SB Stw Thr Til Tpk Tm T&B Td Ttr ThW Yng.

Similar names. Viilmolin's Improved Sugar, Viilmolin's White Sugar, Viilmolin's Improved White Sugar. See also Lane's Sugar, Improved Sugar.


Similar names. See Viilmolin's Sugar.

Wait's Red Tankard. Gra Kei. For similar names see Golden Tankard.

Wanzleben. Bar Elt MWJ Ms Pac Ren Sim T&B Wat.

Similar names. See Klein Wanzleben.

Warden's Orange Globe. Hrn Pri. For similar names see Orange Globe.

Warden's Prize. Bag.

Ward's Large Oval Shape. Eww. For similar names see Olive Shape.

White French. Edg Ctn CE CA Tbl.

Seedsmen's synonyms. Field, Edg. White Silesian, Edg.

White Klein Wanzleben. Brl. For similar names see Klein Wanzleben.

White Silesian. RE Fqr Faz Ger Ggy Gry Ken Mzy S&F Sim.

Similar names. See Silesian.

Seedsmen's synonyms. Field, Edg. White French, Edg.

White Silesian Green Top. McK Ren. For similar names see Silesian.

White Sugar. Alx Alr Bag C&F CB CG Cur DD Ebr Emr G&T Hen Inal MWJ Kos MV Pri Shw S&F Sim S&W Tat Thr Thb W&D.

Similar names. Improved White Sugar, Red Top White Sugar, Green Top White Sugar. See also Viilmolin's Sugar, Lane's Sugar.

Yellow Giant. Gls AGT. For similar names see Mammoth Golden Giant.

Seedsmen's synonyms. Gatepost, AGT.

Yellow Globe. Alr Anh Brt Btl Bow Brn Brr CF Cox Crs CA Dlw DD Drr Dun Elb Ebr Elm Eww Fqr Fq Fr Frd Ggy Gry Grw Tq Hns Hom Hrm Hrs Haw J&M Jns Kei K&W Ken Kg Lan Lnr LB JL Man JMM Mhl Min MV Mzy Pz Pri Por Pri Png Sal S&R S&F Sim S&X Spf S&H S&W Tat Thm Thr AGT Tpk Vin Wea W&D Wd Wdr WS Y&H.


Seedsmen's synonyms. Orange Globe, Spf Wd WS.

Yellow Intermediate. Bgs Brn Ebl Ebe RE Mck Ren.

Similar names. Champion Yellow Intermediate, Mammoth Yellow Intermediate, Giant Intermediate.

Seedsmen's synonyms. Yellow Ovoid, Loh SB.

Yellow Leviathan. Bnl Brn Fbr Lam LB Roe Tem.

Similar names. See Leviathan.


Yellow Mammoth. Ebl. For similar names see Mammoth.

Yellow Ovoid. Bow Bgs Cle Emr Fer Ger GH TG Lan Lar Loh Mls Min Pg Ree Roe Tat Thr.

Similar names. Improved Yellow Ovoid, Giant Yellow Ovoid, Giant Red Ovoid, Red Ovoid.

Seedsmen's synonyms. Yellow Intermediate, Fer Loh SB. Yellow Olive Shape, Ger.

Yellow Sugar. CE Gra Ye H.

Similar names. French Yellow Sugar.

Yellow Tankard. Man Sir. For similar names see Golden Tankard.

BROCCOLI.


Autumn White Cape. AGT. For similar names see White Cape.

Carter's Summer. Cle.

Early Angiers. Mail.

Early Large French. Ebc. For similar names see Large White French.

Early Large White. CA G&T Iow MWJ Lan Liv JMM Mic SC.

Similar names. See Large White.

Early Large White French. Fer Ggy RHJ Vin.

Similar names. See Large White French.

Early Market Alx.

Similar names. Alexander's Early Market.


Similar names. See Purple Cape.

Early Walcheren. GH MV Soc. For similar names see Walcheren.

Early White. CF McM Mzy Pdt Thr. For similar names see Large White.

Early White Cape. Alx Bow Brr C&J CF Cox Crs DD Hrm Hrv Mnd JCM MV Ptt Roe S&O Soc.

Similar names. See White Cape.

Early White French. Bgg.

Easter Day. RHJ.

Extra Large French White Cape. Lam. For similar names see White Cape.

Grange's Autumn White Cape. Mhl. For similar names see White Cape.

Grange's White. Bui. For similar names see Large White.

Improved White Cape. Entered as White Cape.

Landreth's Purple. Mic.


Similar names. Early White, Early Large White, Grange’s White, White.

Large White Cape. Fmr TG OV Tpk. For similar names see White Cape.

Large White French. Bow.

Similar names. Early Large French, Early Large White French.

Large White Mammoth. Btl Drn Van. For similar names see Mammoth White.

Late White Cape. Pri. For similar names see White Cape.

Mammoth White. RHJ Jns Mzy Thr.

Similar names. Large White Mammoth.


Similar names. Early Purple Cape.

Purple Sprouting. RHJ Thr.
Snow White. M&S Not NK.

Similar names. Sutton's Snow White, Snow White Winter.

Snow White Winter. Cam. For similar names see Snow White.

South Hampton. Ebc.


Similar names. Veitch Self Protecting.

Veitch Self Protecting. Thr. For similar names see Veitch.

Walcheren. Bui C&B Del EIt Gdn Hen Kei Lur May Ren Sox W&D.

Similar names. Early Walcheren, White Walcheren.

White. Ren. For similar names see Large White.


Similar names. Early White Cape, Late White Cape, Improved White Cape, Autumn White Cape, Grange's Autumn White Cape, Large White Cape, Extra Large French White Cape.

White Walcheren. RE Ggy Sim SB. For similar names see Walcheren.

**BRUSSELS SPROUTS.**

Brussels Sprouts. Air Anb Bak Brd Bt Bel Ber Bui CE Cox Crg Dlw Eie RE Fer Gb G&T Hns Hdb Hly MWJ Koe Lan LB Mns Min NK Pks Pne SC Shw Shm Spf Stk Stw Tem Vin.

Aigburth. Fqr.

American Mammoth. Iow.

Similar names. Brunning's Mammoth.

Brunning's Mammoth. Bug. For similar names see American Mammoth.

Carter's Perfection. Entered as Perfection.

Dalkeith. Cam Cle C&B Del RE Ggy Hen Kei Prt SB.

Similar names. Giant Dalkeith, Improved Dwarf Dalkeith, Dwarf Dalkeith.

Defiance. Chl.

Dobbie. Gra.

Dr eer's Matchless. Drr. For similar names see Matchless.


Similar names. Improved Dwarf.


Dwarf Dalkeith. Poo. For similar names see Dalkeith.

Dwarf French. Brk Emr Gry Ken S&F. For similar names see French.


Edinburgh Prize. Ewg.

English. Fqr Iow Loh.

Seedsman's synonyms. *Spring Sprouts*, S&W Thr.

Exhibition. Mhl.

Similar names. Sutton's Exhibition.

French. Bdg Brr DD Mnd Man Tat Thr Vin.

Similar names. Tall French, Large Tall French, Improved Dwarf French, Dwarf French.

Seedsman's synonyms. Roseberry, DD Mnd Thr Vin.
AMERICAN VARIETIES OF VEGETABLES.

Giant. Ren.
   Similar names. Scrymger's Giant.

Giant Dalkeith. Gra. For similar names see Dalkeith.

Half Dwarf. Bag Bri CF Fer J&S Kg Nol Pir Soa Thr.
   Similar names. Improved Half Dwarf.

Half Dwarf Paris Market. Hrs RHJ Rec. For similar names see Paris Market.

Half Long. DD.
   Similar names. Improved Half Long.

Hercules. Vun.

   Entered as Brussels Sprouts, Dwarf, Dwarf Dalkeith, Dwarf French, etc.

Large Tall French. Sim. For similar names see French.


Long Island. C&B Ggy J&S Thr W&D.

Long Island Half Dwarf. Drr. For similar names see Long Island.

Market Favorite. M&S.
   Similar names. Veitch's Market Favorite.

Matchless. Chl Mhl.


Perfection. Bag Bug Bar Brr CE Fst Gdn Hop McM Ms Nef Rec Ree Rec S&O Sie Til Wd WS.
   Similar names. Carter's Perfection.
   Seedsmen's synonyms. Improved Dwarf, Frd.

Roseberry. Bdg DD Mnd Put Tat Thr Vin.
   Similar names. Improved Roseberry.
   Seedsmen's synonyms. French, DD Mnd Vin Thr.

Scrymger's Giant. Fqr Hrm. For similar names see Giant.

Sutton's Exhibition. Entered as Exhibition.

Sutton's Matchless. RE M&S. For similar names see Matchless.

Tall. CF Pot W&D.

Tall French. Del Elt Gh Gryn Hen Lnr Raw AGT. For similar names see French.


BURNET.

Burnet. Brt Bkt Bdg Cle Fqr Gry Ken Mnd Sal S&F Thr.

CABBAGE.

Acme Flat Dutch. Bur Fer Hlm Shw Will.
   Similar names. See Large Late Flat Dutch.

Acme Large Late Flat Dutch. Roc.
   Similar names. See Large Late Flat Dutch.

Admiral Dewey. Ms.

CABBAGE.

SIMILAR NAMES. Burpee’s All Head, McMillan’s All Head, Early All Head, Burpee’s Early Hard Head, Eichelberg’s All Head, Mill’s Early All Head, Phillips’ Medium Early All Head.


SIMILAR NAMES. Improved All Seasons, Gregory’s All Seasons, All Seasons’ Vandergaw, Willetts All Seasons’ Surehead.

SEEDSMEN’S SYNONYMS. Succession, For Lanf For S&R AGT Vin. Save Head, Eic & F:&SC. Vandergaw, Btr Btk Col low J&S Rs, etc.

All Seasons Surehead. Wlt. For similar names see All Seasons.

All Seasons Vandergaw. VI. For similar names see All Seasons, Vandergaw.

All the Year Round. Bri J&J Lan Lnl M&S Stw.

SIMILAR NAMES. Landreth’s All Year Round, Landeback’s All Year Round, Market Gardener’s All Year Round.

Allen’s, Early Flat Dutch, Allen’s Market Gardener’s Private Stock Flat Dutch. Entered as Early Flat Dutch and Market Gardener’s Private Stock Flat Dutch.

Almeier’s Excelsior Large Late Flat Dutch, Almeier’s Premium Flat Dutch, Almeier’s Safe Crop, Almeier’s Winter King. Entered as Excelsior Large Late Flat Dutch, Premium Flat Dutch, Safe Crop, and Winter King.

Alpha. Red CF Cur Gey Hct’ Low Jus Sic Wd.

SIMILAR NAMES. Extra Early Alpha.

Amager. TG.

SEEDSMEN’S SYNONYMS. Danish Ball Head, Big Bui Fqr TG. Hollandier, Bui Fqr. Solid Emperor, Fqr.

American Drumhead. Fnr Mud.

SIMILAR NAMES. Late American Drumhead, Improved American Drumhead, Large American Drumhead, Improved Large American Drumhead.

American Perfection Savoy. Btk Wd.


SIMILAR NAMES. Improved American Savoy, Late American Savoy.

Archies’ Extra Early. Ar.

SIMILAR NAMES. Aroostook Extra Early, Maule’s First Early, First Early, Tait’s Extra Early, Wood’s Extra Early.

Aroostook Extra Early. Jer. For similar names see Archies’ Extra Early.

Arrington’s Earliest. CA. For similar names see Earliest.

Augusta Early Trucker. Alx.

Autumn Giant. RHJ M&G.

SIMILAR NAMES. Everett’s Early Giant, Early Giant, Russian Round Giant, Earliest White Giant.

Autumn King. Alex Abh Bld Btr Bn Bldg Btr Bnl Brr Brr CE C&J B C Core D&H Del Dum Ehr Ell RE Ewr Ewe Fnr Frr Frl Ghn GH Gara Gigg Gry G&T LG Hen Hlm Hse H&I Ihm J&S Ken Kg Lam Lan LB Liv Mgd Man
AMERICAN VARIETIES OF VEGETABLES.

PM Mns Man Moy JMM McK McM Nol Pks HP JMP Prn Por Pri Qkr Raw Ree Ren Rec Roe Rs Sal S&R S&O Shm Sie Sim Spi SB S&W Tem Tex Thr Thb Van Vz Wz Wd.

Similar names. Improved Autumn King, Henderson’s Autumn King, Steele, Briggs’ Chester King, Christmas King, Buckbee’s Christmas King, Allee’s Winter King, Winter King, Hastings’ Emerald King, Emerald King, Chester King.

Seedsmen’s synonyms. World Beater, Alx Bkt Bui Bur Man Raw, etc.

Auvergne Quintal. RHJ. For similar names see Schweinfurt Quintal.

Ball Head. Crs Roc. For similar names see Danish Ball Head.


Seedsmen’s synonyms. Emperor, OV. Export, OV. Holland, Roe. Hollander, OV.

Battersea. Tat.


Bell’s Mammoth Wakefield, Bell’s Sure Head. Entered as Mammoth Wakefield and Sure Head.

Bellville. Big Bur.

Similar names. Small Belleville.

Big 4. Hst.


Blood Red Drumhead. Ren. For similar names see Red Drumhead.

Blood Red Dutch. JL. For similar names see Red Dutch.

Blood Red Erfurt. Hst.

Bloomsdale Brunswick. Lan. For similar names see Fottler’s Brunswick.

Bloomsdale Early Drumhead. Lan Stw 17.

Similar names. See Early Drumhead.

Bloomsdale Early Dwarf Flat Dutch. Lan.

Similar names. See Early Flat Dutch.

Bloomsdale Large Late Drumhead. Lan Stw.

Similar names. See Large Late Drumhead.

Bloomsdale Large Late Flat Dutch. Lan Stw.

Similar names. See Large Late Flat Dutch.

Blue Boom. JL.

Similar names. Livingston’s Blue Boom.

Bolgiano’s Early. Bg. For similar names see Earliest.

Bolgiano’s Early Drumhead, Bolgiano’s Early Flat Dutch, Bolgiano’s Early Large York, Bolgiano’s Improved Savoy, Bolgiano’s Large Late Drumhead. Entered as Early Drumhead, Early Flat Dutch, Early Large York, Bolgiano’s Savoy, and Large Late Drumhead.

Bolgiano’s Savoy. Bg. For similar names see Savoy.

Boss Flat Dutch. G&T. For similar names see Flat Dutch.


Boston Hard Head. M&S. For similar names see Hard Heading.

Brandon Market. McK.


Similar names. Old’s Bridgeport Drumhead, Vaughan’s Bridgeport Drumhead, Leonard’s Improved Bridgeport Drumhead, Buckbee’s Mammoth Late Bridgeport Drumhead, Mammoth Late Bridgeport Drumhead, Large Late Bridgeport Drumhead, Mammoth Bridgeport Drumhead.

Bristol. Y&H.
Bristol Flat Dutch. Pri. For similar names see Flat Dutch.
Bristol Improved Late Flat Dutch. Entered as Bristol Late Flat Dutch.
Bristol Late Flat Dutch. CE Rec. For similar names see Large Late Flat Dutch.
Bruce’s Winter. Brn.
Brunning’s Early Flat Head. Bug.

Similar names. See Early Summer Flat Head.
Brunning’s Early Jersey Wakefield, Brunning’s Excelsior Late Flat Dutch. Entered as Early Jersey Wakefield and Excelsior Late Flat Dutch.
Brunswick. Ger Hrs Man JMM Pot. For similar names see Fottler’s Brunswick.

Seedsman’s synonyms. Fottler’s Drumhead, Hrs.
Brunswick Short Stem. Bow For Man Loh Pks HP.

Similar names. See Fottler’s Brunswick.
Seedsman’s synonyms. Fottler’s Early Drumhead, For Loh HP Pks. Fottler’s Drumhead, Bow.
Buckbee’s Christmas King, Buckbee’s Extra Early Large Queen, Buckbee’s Faultless, Buckbee’s Great Dane, Buckbee’s Mammoth Late Bridgeport Drumhead, Buckbee’s Race Horse, Buckbee’s Rockford Market. Entered as Christmas King, Extra Early Large Queen, Faultless, Great Dane, Mammoth Late Bridgeport Drumhead, Race Horse, and Rockford Market.
Buffalo Market. Hrv.
Buist’s Earliest. Bui. For similar names see Earliest.

Buist’s Early Drumhead, Buist’s Early Flat Dutch, Buist’s Early Large York, Buist’s Early York, Buist’s Florida Header, Buist’s Improved Large Late Drumhead, Buist’s Improved Large Late Flat Dutch, Buist’s Prize Medal Drumhead, Buist’s Prize Medal Flat Dutch, Buist’s Short Stem Brunswick. Entered as Early Drumhead, Early Flat Dutch, Early Large York, Early York, Florida Header, Buist’s Large Late Drumhead, Buist’s Large Late Flat Dutch, Prize Medal Drumhead, Prize Medal Flat Dutch, and Short Stem Brunswick.

Buist’s Large Late Drumhead. Bui.

Similar names. See Large Late Drumhead.
Buist’s Large Late Flat Dutch. Bui. For similar names see Large Late Flat Dutch.

Buncombe. Alx Hst MWJ McM Wlt Wd.
Seedsman’s synonyms. North Carolina, Hst Wlt Wd.
Burpee’s All Head, Burpee’s Early All Head, Burpee’s Large Flat Dutch, Burpee’s Large Late Flat Dutch, Burpee’s Late Stonehead, Burpee’s Round Head, Burpee’s Safe Crop, Burpee’s Short Stem Drumhead, Burpee’s Sure Head, Burpee’s World Beater. Entered as All Head, As Early All Head, Large Flat Dutch, Large Late Flat Dutch, Late Stonehead, Round Head, Safe Crop, Short Stem Drumhead, Sure Head, and World Beater.

Burr’s Large Flat Dutch. Entered as Large Flat Dutch.
Burwell’s Extra Flat Dutch, Burwell’s Flat Dutch. Entered as Extra Flat Dutch and Flat Dutch.

Buxton Red Drumhead. S&F. For similar names see Red Drumhead.

Cannon Ball. Anb Wdr.

Similar names. Poole’s Cannon Ball, Early Cannon Ball, Danish Cannon Ball.
Seedsman’s synonyms. Danish Ball Head, Wdr. German Export, Wdr. Solid Emperor, Wdr.

Carolina Hard Header. J&S. For similar names see Hard Heading.

Cassel. Diw.

Centennial Late Flat Dutch. Hst. For similar names see Large Late Flat Dutch.
Champion Late Drumhead. M&S. For similar names see Large Late Drumhead.
Champion Late Flat Dutch. M&S. For similar names see Early Champion.

Charleston Wakefield. Bak Bt Bkt Bg Bow Bri Br Bui Bur Br Tr C&J Cam CE C&B Col Ceg Ccs CA Dtr D&H Drr Eic Ett Fl Fld Fdl Gdn GH Gra Ggy Gig G&T TG Hde Hrs Hst Hen Hlm HXP Iul Jac MJW RJH JS Jns Ken Kg Lm Lan Lur LB Mgld Man PM Mns Man JCM JMM Xeb Xed Xol NK HP Pir Pmt Ptt Poo Por Pot Qkr Raw Roc S&R SC Shw Shm Sie Sph S&H S&W Tat Tex Thm Thr Til TV Van Vkg Wd Wdr Ws Wng.

Similar names. See Early Jersey Wakefield.

Seedsmen's synonyms. Early Large Jersey Wakefield, C&J MJW. Improved Jersey Wakefield, D&H. Large Early Wakefield, CA Pir. Large Headed Wakefield, Spl. Large Jersey Wakefield, Bt Bkt Bni Eic Shw, etc. Large Wakefield, Buc Bur Drr Fer Hen Liv, etc.

Chase's Excelsior. Entered as Excelsior.

Chester King. SB. For similar names see Autumn King.

Chester Savoy. SB. For similar names see Savoy.

Chicago Market. Ltr.

Similar names. Chicago Market Garden, Market Gardener's No. 2, Johnson & Stokes' Market Gardener's No. 2.

Seedsmen's synonyms. Vanderbilt, Ltr.

Chicago Market Garden. Brd. For similar names see Market Gardener's.

Chinese Cabbage. Alx Fqr Thr Vtn.

Seedsmen's synonyms. Pe Tsv. Alx Fqr Thr Tat Vtn.

Chow Bonneuil. Stk.

Seedsmen's synonyms. St. Denis, Stk.

Christmas King. Buc Roc. For similar names see Autumn King.

Cluster Savoy. Fqr. For similar names see Savoy.

Colossal. Ebr Thl.

Similar names. Thorburn's Colossal.

Columbia. Map.

Similar names. Maun's Columbia.

Conc. Bdg HP.

Seedsmen's synonyms. Early Winningstadt, Bdg.

Cox's Early Spring. Cox's Flat Dutch. Entered as Early Spring and Flat Dutch.

Crescent City Flat Dutch. Eic Stk. For similar names see Flat Dutch.

Crescent City Late Flat Dutch. Eic Stk. For similar names see Large Late Flat Dutch.

Crown Jewel. M&S.

Crystal Summer Savoy. Drr. For similar names see Savoy.

Curled Drumhead Savoy. Fqr S&E. For similar names see Drumhead Savoy.


Similar names. See Green Globe Savoy.

Curled Perfection Drumhead Savoy. Bdg Mhil.

Similar names. See Perfection Drumhead Savoy.

Curled Savoy. Bg Bui. For similar names see Green Curled Savoy.


Dallwig's Early Dark Red. Entered as Early Dark Red.

Danish. C&J Hrs JCM. For similar names see Danish Ball Head.

Seedsmen's synonyms. Hollander, C&J JCM.

Danish Ball Head. Alx Alh Ar Brd Brt Btl Bkt Bel Bow Bg Bkg Bli Bn Bui Br Bui Br Brr CE Cie C&B Col CF Cox Chm D&H Del DD Drr Ebe Eic Ett Eml RE Fmr Fqr Fqr Fqr Frl Gds Gdn GH Gra Ggy G&T Gry TG Hns Hm Hde Hrs Hrm Hst HHk Him Hop Hse Iml Iow MJW JS J&S Kei K&W Kg Koe
CABBAGE.

Danish Cannon Ball.  

Danish Large Dark Red Drumhead.  M&S.

Danish Red.  M&S.

Danish Round Winter.  Btu Bue Cts Jns.

Danish Stone Ball.  Mhd.

Danish Winter.  Bue Gls Hrs Hrv K&W JCM.

Dark Red Drumhead.  Fqr Wea.  For similar names see Red Drumhead.

Dark Red Dutch.  Van.  For similar names see Red Dutch.

Dark Red Erfurt.  Cle HrM MeK Neb Prt Ren.  For similar names see Red Erfurt.

Deep Head.  Dn Jns Loh Mau May OV Pmr Tpk Y&H.

Deep Head Brunswick.  Fqr.  For similar names see Fottler's Brunswick.

De Vertus Savoy.  Van.  For similar names see Vertus.

Diamond Winter.  Ggy J&S.

Dickmann-Dusard Seed Co.'s Giant Summer.  Entered as Giant Summer.

Dobbie's Red.  Gra.  For similar names see Early Dark Red.

Dreer's Crystal Summer Savoy.  Dreer's Early Drumhead, Dreer's Late Flat Dutch.  Entered as Crystal Summer Savoy, Early Drumhead, and Late Flat Dutch.

Drumhead.  Ebe Ewg Flg Gru Hnt RHJ Rtk.

Dutch Early Drumhead.  Bdg MeK.  For similar names see Early Drumhead.

Dutch Large Late Deep Red Drumhead.  Sim.

Similar names.  See Red Drumhead.
Dutch Red Drumhead. JMM Mhl Pg. For similar names see Red Drumhead.

Seedsmen's synonyms. Improved Red Dutch, Pg.


Dwarf Green Curled Savoy. Ger Vk. For similar names see Green Curled Savoy.

Dwarf Savoy. Bow.

Similar names. Early Dwarf Savoy.


Dwarf Ulm Savoy. Cur Hrv Mas May NJ Sim Tpk.

Similar names. See Early Dwarf Ulm Savoy.

Earliest. Ggy M&S Rm.


Earliest of All. Fas Hde Put. For similar names see Earliest.


Earliest Pointed. Kg.

Similar names. King's Earliest Pointed.

Earliest Round Head. Gng Loh. For similar names see Earliest.

Earliest White Giant. Mzy Vau. For similar names see Autumn Giant.

Early All Head. Anb Bak Bil Ber Bac Bar CE Cle Cols CF Crs CA Del Drr Eic RE Eyr Fmr Frd Frd Gls Gh Hn Hns Ham Hmr Hrs Hst Hbt H&'C Illm Hop H&P Low K&S Kg Kra Lnr Lur LB Liv JL Lob Mgd PM Mns Mau JCM JMM McK Mbl Mls Nol NK OV Old Pg JMP Put Rec Ren Rim Rim Roe Sal S&B Shw Shm Sil Sim Sox SB Stw S&H Ten Tex TB Thm Til Tpk Trm Vi Van Vk W&D Wer Wd Wdr WS Wyg Yng Y&H.

Similar names. See All Head.

Seedsmen's synonyms. Solid South, Crs Ham.

Early Bacalan. Bdg.

Seedsmen's synonyms. Early Nonpareil, Bdg. Early Jersey Wakefield, Bdg.

Early Blood Red. Brn H&P Kei Vk. For similar names see Early Dark Red.

Early Blood Red Dwarf Erfurt. Bui. For similar names see Red Erfurt.


Similar names. See Red Erfurt.

Seedsmen's synonyms. Dark Red Erfurt, Net Pnt.

Early Brunswick. Lan Yng. For similar names see Fottler's Brunswick.

Seedsmen's synonyms. Fottler's Improved Drumhead, Yng.

Early Cannon Ball. Bur Fst McM Pir Rec. For similar names see Cannon Ball.

Early Champion. Pg.

Similar names. Tait's Champion, Champion Late Flat Dutch.

Early Charleston Wakefield. Alx Del Rs Yng.

Similar names. See Early Jersey Wakefield.


Early Dark Red. Dlw Ebc.


Early Dark Red Dutch. RE Fqr Mgd SB. For similar names see Red Dutch.

Early Dark Red Erfurt. Gra Hde RHJ Kos. For similar names see Red Erfurt.

Early Deep Head. Cam Cle Dlw Ggy Kg Liv McM.

Similar names. See Deep Head.

Early Drumhead. Anb Ar Bak B1g Bn Bw Bgs Bui Cam Cox Crg Drr Dtn Fer Gdn Gh Grw TG Hde Hly Jae MWJ K6 Lam Lan JL May M&l Mbl M&S Pac Pks JMP Put Shw Spf Stk Tat Tex Tpk Wlt Wd WS.
SIMILAR NAMES. Early Dwarf Drumhead, Bolziano’s Early Drumhead, Buist’s Early Drumhead, Dreer’s Early Drumhead, Dutch Early Drumhead, Swiss Early Drumhead, Bloomsdale Early Drumhead, Improved Early Drumhead, Reedland’s Early Drumhead, McMillan’s Perfection Early Drumhead, Perfection Early Drumhead, St. John’s Day Early Drumhead. See also Drumhead, Large Late Drumhead, Premium Drumhead.

SEEDSMEN’S SYNONYMS. Buttersen, Tat. Fottler’s Brunswick, Bgs. John/day Drumhead, Bak.

Early Dwarf Dark Red Erfurt. SC. For similar names see Red Erfurt.


SIMILAR NAMES. See Early Flat Dutch.

Early Dwarf Savoy. Eie Mnd MV Sax Stk Thr VI.

SIMILAR NAMES. See Dwarf Savoy.


SIMILAR NAMES. Dwarf Ulm Savoy, Ulm Savoy, Early Ulm Savoy.


SIMILAR NAMES. See Early York.

Early Etampes. Anb Bkt Bel Bk Brn Bru Bui LB Bar Cam CE Crs CA Cyr Ewg Efr Fer Gra Grw To Hst Hbt RHJ J&S Koi Ken Lam Lan Ld JV Jt PM Mun May McK Nol Pg JMP Qkr Raw Rec Ren Rec Roc S&O Sox Ten Tum Van Vin.

SIMILAR NAMES. Extra Early Etampes, Etampes.

Early Eureka. Shw. For similar names see Eureka.

Early Express. Ar Chl Cle D&H Jns Lan Man Sax Vin Wat II II.

SIMILAR NAMES. See Express.

Early Favorite Savoy. SB. For similar names see Savoy.

Early Flat Brunswick. M&S. For similar names see Fottler’s Brunswick.

Early Flat Dutch. Alx Bak Brl Bon Bdg Brl Brn Brn Bui Bui Cam CE CF Crg Crs Cur CA Ebe Ehr Eic Emr Evr GH Grw TG Hde Hrn Hlm Hnt H&P Jac MWJ J&S Jns Kg Koe Kra Lan LB JL Mgd Mns Man McM Moe Mhl MV Mzy Nol NI Pac Pir Pmt Ptt Por Raw Rec RP Sal S&R Shw S&O Sox Spn Stk SB S&W Tex Thr Tpk Tum VI Van Wat Webb Wer Wtt Wd WS.

SIMILAR NAMES. Early Dwarf Flat Dutch, Bloomsdale Early Dwarf Flat Dutch, Improved Early Dwarf Flat Dutch, Bolziano’s Early Flat Dutch, Buist’s Early Flat Dutch, Manue’s Early Flat Dutch, Stein’s Early Flat Dutch, Newark Early Flat Dutch, Newark Flat Dutch, Improved Early Flat Dutch, McMillan’s Improved Early Flat Dutch. See also Flat Dutch, Premium Flat Dutch, Large Late Flat Dutch.

SEEDSMEN’S SYNONYMS. Early Summer, Bdg.

Early Flat Head. Thn.

Early French. Tat. For similar names see Early French Ox Heart.

Early French Ox Heart. Ber Bdg CE C&B Drr Ebe Ken Rec Shm Sim SB.

SIMILAR NAMES. Early French, French Ox Heart, Ox Heart, Early Ox Heart, Large Early Ox Heart, Large Ox Heart.

Early Gem. M&S.

SIMILAR NAMES. Mooré & Simon’s Early Gem.

Early German Brunswick. Sim. For similar names see Fottler’s Brunswick.

Early Giant. Evr. For similar names see Autumn Giant.

Early Green Curled Savoy. Mhl Wat.

SIMILAR NAMES. See Green Curled Savoy.

Early Harvest. Hop. For similar names see Harvest Home.

Similar names. Extra Early Jersey Wakefield, Brunning's Early Jersey Wakefield, Hawkins' Early Jersey Wakefield, Johnson & Stokes' Early Jersey Wakefield, Jones' Early Jersey Wakefield, Olds' Early Jersey Wakefield, Rice's Early Jersey Wakefield, Tait's Early Jersey Wakefield, Wood's Early Jersey Wakefield, Wood, Stubb's & Co.'s Early Jersey Wakefield, Improved Jersey Wakefield, Improved Early Jersey Wakefield, Hammond's Improved Early Jersey Wakefield, McMillan's Improved Jersey Wakefield, Holmes' Jersey Wakefield, Shumway's Jersey Wakefield, Salzer's Jersey Wakefield, Jersey Wakefield, Large Jersey Wakefield, Large Early Jersey Wakefield, Large Wakefield, Harden's Large Wakefield, Improved Large Wakefield, Bell's Mammoth Wakefield, Mammoth Wakefield, Large Early Wakefield, Early Wakefield, Currie's Early Wakefield, Maule's Prize Wakefield, Prize Wakefield, Early Long Island Wakefield, Washington Wakefield, Charleston Wakefield, Early Charleston Wakefield, Large Early Charleston Wakefield, Large Charleston Wakefield, Early Washington Wakefield.


Similar names. See Early York.

Seedsmen's synonyms. Early Nonpareil, Bdg. Early Bucanen, Bdg.

Early Long Island Wakefield.  Chl. For similar names see Early Jersey Wakefield.

Early Louisville.  JMM. For similar names see Louisville Drumhead.

Early Maine.  Hm.

Similar names. Harmon's Early Maine.

Early Market.  Chr. For similar names see Extra Early Market.

Early May.  Bdg.

Seedsmen's synonyms. Early York, Bdg. Early Royal Dwarf, Bdg.

Early Ox Heart.  Bdg Crg Ggy RJH Mas May Vin.

Similar names. See Early French Ox Heart.

Seedsmen's synonyms. French Heart Shaped, Bdg.

Early Paris Market.  Gra. For similar names see Paris Market.

Early Paris Savoy.  Fst Liv. For similar names see Paris Market.

Early Peerless. Hly Pot Roc Shm. For similar names see Peerless.

Early Premium Flat Dutch.  Sim. For similar names see Premium Flat Dutch.

Early Quedlinburg Winningstadt.  Thm.

Similar names. See Early Winningstadt.

Early Red Dutch.  Anb Ger Ncl. For similar names see Red Dutch.

Early Red Dutch Erfurt.  Drr JMM M&S Wca. For similar names see Red Erfurt.

Early Red Erfurt. Ggy Hrs Sox. For similar names see Red Erfurt.

Early Schweinfurt. Vin. For similar names see Schweinfurt Quital.

Early Schweinfurt Quital. Kei Sim. For similar names see Schweinfurt Quital.

Early Small York. RIJ. For similar names see Early York.

Similar names. Cox's Early Spring, Henderson's Early Spring, King's Early Spring, Extra Early Spring.

Seedsmen's synonyms. Flat Peruvian, Cpr.


Early Succession. Btg JMP. For similar names see Succession.

Early Sugar Loaf. Eic Min SB Thr. For similar names see Sugar Loaf.


Similar names. Henderson's Early Summer, Rawson's Early Summer, New York Early Summer, Henderson's Summer, Dickmann-Dusard Seed Co.'s Giant Summer, Giant Summer, Large Early Summer, Improved Early Summer.

Seedsmen's synonyms. Early Flat Dutch, Bdg. Excelsior, Ebr.

Early Summer Flat Head. Dwl Lmn SW Thm 17.

Similar names. Landreth's Early Summer Flat Head, Brunning's Early Flat Head.

Early Sure Crop. Mbs. For similar names see Sure Crop.

Early Surprise. May OV TpK.

Similar names. May's Early Surprise.

Early Um Savoy. Ggy RHJ Thr Van.

Similar names. Early Dwarf Um Savoy.

Early Victoria Savoy. SB. For similar names see Victoria Savoy.

Early Vienna Savoy. Thr. For similar names see Savoy.

Early Wakefield. Buc Cur Ken. For similar names see Early Jersey Wakefield.

Early Washington Wakefield. LB.

Similar names. Early Jersey Wakefield.


Similar names. Rice's Early Winningstadt, Improved Early Winningstadt, Early Quedlinburg Winningstadt, Extra Early Winningstadt, Winningstadt, Hawkins' Winningstadt, Mante's Winningstadt.

Seedsmen's synonyms. Early Cow, Bdg.
Early Wyman. Bgs.
Early Yellow Curled Blumenthaler. Dw.
  Similar names. Buist’s Early York, Large Early York, Extra Early York, Early Small York, Early Dwarf York, Large York, Early Large York, Bolgino’s Early Large York, Buist’s Early Large York, Late York.
Seedsmen’s synonyms. Early May, Bdg. Early Royal Dwarf, Bdg.

  Similar names. Currie’s Eclipse.

Eichling’s Early All Head, Eichling’s Flat Dutch, Eichling’s Solid South, Large Late Flat Dutch. Entered as Early All Head, Flat Dutch, Solid South, and Large Late Flat Dutch.

Emerald King. Hst. For similar names see Autumn King.

Emperor. Raw. For similar names see Solid Emperor.

Seedsmen’s synonyms. Ball Head, OY. Export, OV. Hollander, OY.

English Curled Savoy. Brk Emr Raw &S&F.
  Similar names. See Green Curled Savoy.
  Seedsmen’s synonyms. Globe Savoy, Brk.

Erfurt Large Red Drumhead. Pri. For similar names see Red Drumhead.

Etampes. Drr Emr Hrs Mnd JMM MV Mzy Sox Thm.
  Similar names. See Early Etampes.

Eureka. Brd D&H Hrs Iml No1.
  Similar names. Brill’s Eureka, Early Eureka, Extra Early Eureka, Brill’s Extra Early Eureka.

Evans’ Improved Savoy. Entered as Evans’ Savoy.

Evans’ Savoy. RE. For similar names see Savoy.

Everitt’s Earliest. Evr. For similar names see Earliest.

Everitt’s Early Giant, Everitt’s Large Late Flat Dutch, Everitt’s Late White Dutch, Everitt’s Short Stem Drumhead. Entered as Early Giant, Large Late Flat Dutch, Late White Dutch, and Short Stem Drumhead.

  Similar names. Chase’s Excelsior, Van Namen’s Excelsior, Excelsior Flat Dutch, Excelsior Large Flat Dutch, Excelsior Late Flat Dutch, Alneer’s Excelsior Large Late Flat Dutch, Excelsior White Dutch, Van Namen’s Excelsior Early White Dutch, Excelsior Early White Dutch.
  Seedsmen’s synonyms. Improved Early Summer, Ebr. Large Late Flat Dutch, Bdg. Premium Flat Dutch, Bdg.

Excelsior Early White Dutch. Joo. For similar names see Excelsior.

Excelsior Flat Dutch. Elt TG Neb Pir Rt Tpk W&D.
  Similar names. See Excelsior.

Excelsior Large Flat Dutch. C&J Chi Del Frd Hrs.
  Similar names. See Excelsior.

Excelsior Large Late Flat Dutch. Shm.
  Similar names. See Large Late Flat Dutch.

Excelsior Late Flat Dutch. Bng CE Gra Ree Til.
  Similar names. See Excelsior.

Excelsior White Dutch. Ebe. For similar names see Excelsior.

Express. Anb Bkt Bru Cur D&H Drr Ggy Kei MV, Mzy Neb NK Poo Sor Thr Trm.
SOURCES OF NAMES. Harris's Early Express, Early Express, Maule's Early Express, Extra Early Express, Hammond's Extra Early Express, Lightning Express, Lightning, Salzer's Lightning.

SEEDSMEN'S SYNONYMS. Extra Early Etampes, Ebr.

Extra Early Alpha. Shw. For similar names see Alpha.

Extra Early Blood Red Drumhead. McK.

SIMILAR NAMES. See Red Drumhead.

Extra Early Blood Red Erfurt. Qkr Raw. For similar names see Red Erfurt.

Extra Early Cocoanut. M&S.

SIMILAR NAMES. Moore & Simon's Extra Early Cocoanut.

Extra Early Dark Red Erfurt. Drm Fnr HP Van.

SIMILAR NAMES. See Red Erfurt.

Extra Early Drumhead. Cam. For similar names see Early Drumhead.

Extra Early Etampes. Brl Cle Crs RE Fnr Hns May OV Shm Sim SB Tpk Vk.

SIMILAR NAMES. See Early Etampes.

SEEDSMEN'S SYNONYMS. Express, Ebr.

Extra Early Eureka. Col Ebe Frd Pot Wer. For similar names see Eureka.


SIMILAR NAMES. See Express.

Extra Early Ideal. Nol. For similar names see Ideal Winter.

Extra Early Jersey Wakefield. Brt Bkt Brt Cam Hrn Pg Por Pug S&R Soc Spf Tat TB Thr Y&H.

SIMILAR NAMES. See Early Jersey Wakefield.

Extra Early Large Queen. Buc. For similar names see Market Queen.

Extra Early Market. Alx.

SIMILAR NAMES. Currie's Early Market, Salzer's Improved Market, Early Market.

Extra Early Pilot. Tat.

SIMILAR NAMES. Tait's Early Pilot.

Extra Early Queen. Roc. For similar names see Market Queen.

Extra Early Red Dutch Erfurt. Sim. For similar names see Red Erfurt.

Extra Early Spring. C&J Ebr. For similar names see Early Spring.

Extra Early Winningstadt. Buc Rce Shm.

SIMILAR NAMES. See Early Winningstadt.

Extra Early York. Web. For similar names see Early York.

Extra Flat Dutch. Blg Brw. For similar names see Flat Dutch.

Extra Large Flat Dutch. Blg. For similar names see Large Late Flat Dutch.

Farmer Seed Co.'s Earliest. Fnr.

Faultless. Buc Lnf Roc Shm Shn Van Wg.

SIMILAR NAMES. Buckbee's Faultless, Leonard's Faultless, Shumway's Faultless.

Faust's Earliest of All. Fst. For similar names see Earliest.

Faust's Prize Head Late Flat Dutch. Entered as Prize Head Late Flat Dutch.

Ferry's Late Premium Drumhead, Ferry's Late Premium Flat Dutch. Entered as Late Premium Drumhead and Late Premium Flat Dutch.

Filderkraut. Bdg Bgs Brn Brn Bur C E Col Crs Dlv Drm Ebe Fnr Fnr Fat Fer Fle Gt Ggy Jns Lam Liv Mns Mau McK MV Mzy Ren Rce Rce Rce RP S&O Shm Sim Soe SB Thr Til Van Wng W&D.

SIMILAR NAMES. German Filderkraut.

SEEDSMEN'S SYNONYMS. Filder, Rce, Pomeranian, Bdg Ren. Pomeranian Painted Head, Mzy Thr.
First and Best. McK.
First Early. Mau. For similar names see Archibald's Early Bailey.
First in the Market. Ms.
Similar names. Mill's First in the Market.
Flat Brunswick. Drt. For similar names see Fottler's Brunswick.
Flat Dutch. Brw Cox Elc Elc Gng H&G McMich Poo W&D.
Similar names. Burwell's Flat Dutch, Burwell's Extra Flat Dutch, Extra Flat Dutch, Cox's Flat Dutch, Eichling's Flat Dutch, Boss Flat Dutch, Bristol Flat Dutch, Imperial Flat Dutch, McMillan's Improved Flat Dutch, Crescent City Flat Dutch, Long Island Medium Flat Dutch, Northern Giant Flat Dutch, Ohio Medium Flat Dutch, Salzer's Giant Flat Dutch, Giant Flat Dutch, Tait's Victor Flat Dutch, Victor Flat Dutch, Thorburn's Market Gardener's Flat Dutch, Market Gardener's Private Stock Flat Dutch. See also Early Flat Dutch, Premium Flat Dutch, Large Late Flat Dutch.
Flat Intermediate. Law.
Flat Parisian. Cur McK Mzy. For similar names see Paris Market.
Seedsmen's synonyms. Early Spring, Cur.
Flat Standard. Law.
Florida Drumhead. Hst. For similar names see Drumhead.
Florida Header. Bon Bui Cam Gdn Jac. For similar names see Hard Heading.
Foremost German. J& S Wea. For similar names see German Export.
Fottler's Blue Brunswick. Fur Lnr. For similar names see Fottler's Brunswick.
Similar names. Fottler's Blue Brunswick, Fottler's Early Brunswick, Fottler's Improved Early Brunswick, Fottler's Improved Brunswick, Fottler's Improved Flat Brunswick, Fottler's Flat Brunswick, Fottler's Improved Short Stem Brunswick, Fottler's Short Stem Brunswick, Fottler's Drumhead, Fottler's Early Drumhead, Fottler's Improved Drumhead, Fottler's Large Drumhead, Fottler's Large Improved Drumhead, Short Stem Brunswick, Large Short Stem Brunswick, Brunswick, Early Brunswick, Early Brunswick, Improved Brunswick, Flat Brunswick, Improved Flat Brunswick, Large Flat Brunswick, Large Late Brunswick, Perry's Premium Brunswick, Premium Brunswick, Bals's Short Stem Brunswick, Giant Brunswick, Simon's Netted Savoy Brunswick, Deep Head Brunswick, Simmers' Early German Brunswick, Improved White Brunswick, Bloomshale Brunswick, White Brunswick, Early German Brunswick.
Seedsmen's synonyms. Early Drumhead, Bgs. Fottler's Early Drumhead, Ger. Large Late Brunswick, Bdg. Short Stem Drumhead, Frd.
Similar names. See Fottler's Brunswick.
Fottler's Early Brunswick. Brw CF Eas Ggy Haw Jns Lnr Thl Til Yng.
Similar names. See Fottler's Brunswick.
CABBAGE.

Fottler’s Early Drumhead. Fer Ger Hry H&C Lam Loh Min Min Pks HP.

Similar names: See Fottler’s Brunswick.

Seedsmen’s synonyms: Brunswick Short Stem, Fer Loh HP Pks. Fottler’s Brunswick, Ger.

Fottler’s Flat Brunswick. J&S. For similar names see Fottler’s Brunswick.

Fottler’s Large Drumhead. RE. For similar names see Fottler’s Brunswick.

Fottler’s Short Stem Brunswick. Brl Brn Gdn RHJ Liv Shm Sie.

Similar names: See Fottler’s Brunswick.

French Market. Stk. For similar names see Late French Market.

French Ox Heart. Ren. For similar names see Early French Ox Heart.

Frotscher’s Large Late Flat Dutch. Frotscher’s Late Flat Dutch. Entered as Large Late Flat Dutch and Late Flat Dutch.

George Blue’s Treasure. Fvr.

Georgia Trucker. Wlt.

German Drumhead. For similar names see German Export.

German Export. Bri Cle Fmr GH J&S M&S Rec Rs Shm Ten Wdr.

Similar names: German Drumhead, Large German Drumhead, Foremost German.

Seedsmen’s synonyms: Cannon Ball, Wdr. Danish Ball Head, Col Fer Eic Liv Ten Wdr. Dutch Cabbage, Fer. Dutch Winter, Col Eic Liv. Holland, Cle Fer Eic J&S Liv Rs, etc. Improved Late Drumhead, Fmr. Solid Emperor, Fer Liv Ten Wdr.

German Filderkraut. Bow For Pag S&R Vin. For similar names see Filderkraut.

German Magdeburger. S&c.


Giant Blood Red Erfurt. D&H. For similar names see Red Erfurt.

Giant Brunswick. McK Ren. For similar names see Fottler’s Brunswick.

Giant Flat Dutch. Sal. For similar names see Flat Dutch.

Giant Late Flat Dutch. Mls. For similar names see Large Late Flat Dutch.

Giant Red Dutch. Sal. For similar names see Red Dutch.

Giant Red Erfurt. Van. For similar names see Red Erfurt.

Giant Summer. DD. For similar names see Early Summer.

Globe Savoy. Brk Bui Else. For similar names see Green Globe Savoy.

Seedsmen’s synonyms: English Curled Savoy, Brk.

Golden Winter. Drr.

Grand Duke. Tat.

Similar names: Tait’s Grand Duke.

Great Dane. Buc Roc.

Similar names: Buckbee’s Great Dane.

Gregory’s All Seasons, Gregory’s Deep Head, Gregory’s Hard Heading. Entered as All Seasons, Deep Head, and Hard Heading.

Green Curled Savoy. Bui Cam Ewg Gdn GH TG MWJ Kei Ken Lan JMM Stw Tat Til.

Similar names: Early Green Curled Savoy, Late Green Curled Savoy, Dwarf Green Curled Savoy, English Curled Savoy, Curled Savoy.

Green Glazed. Aix Bon Bur CF Crs Fst For Ggy GH Hst MWJ Lan Jag McM Shw Tat Thr Wlt Wd.

Similar names: Southern Green Glazed.

Green Glazed American. RIJJ.

Green Globe Savoy. Bow CE Crs Eic RHJ Kos Lnr Ree Sal Stk.

Similar names: Globe Savoy, Curled Globe Savoy, Mammoth Globe Savoy.

Seedsmen’s synonyms: Dwarf Savoy, Bow.

Gregory’s Twiss. Entered as Twiss. For similar names see Twiss.

Griffing’s Succession. Entered as Succession.
Haines' Perfection Late Beauty. Entered as Perfection Late Beauty.

Hammond’s Danish Ball Head, Hammond’s Extra Early Express, Hammond’s Get-There-Eli, Hammond’s Improved Early Jersey Wakefield. Entered as Danish Ball Head, Extra Early Express, Get-There-Eli, Early Jersey Wakefield.

Harnden’s Large Late Premium Drumhead, Harnden’s Large Late Premium Flat Dutch, Harnden’s Large Wakefield. Entered as Large Late Premium Drumhead, Large Late Premium Flat Dutch, and Large Wakefield.

Hard Head Hollander. Nef VI. For similar names see Hollander.


Seedsmen’s synonyms. Luxembourg, Ggy Neb Fur Frd Kra Rs Vau.

Hard Heading Savoy. J&S. For similar names see Hard Heading.

Hard Head Luxemburg. Iow. For similar names see Luxemburg.

Hard Head Savoy. M&S. For similar names see Hard Heading.

Harmon’s Early Maine. Entered as Early Maine.

Harris’ Short Stem. Hrs.

Harvest Home. CE Fur LB ΝK.

Similar names. Lilly, Bogardus & Co.’s Harvest Home, Early Harvest.

Hastings’ Centennial Late Flat Dutch, Hastings’ All Head Early, Hastings’ Emerald King, Hastings’ Florida Drumhead, Hastings’ Premier Brand, Hastings’ Sure Crop. Entered as All Head Early, Centennial Late Flat Dutch, Emerald King, Florida Drumhead, Premier Brand, and Sure Crop.

Hawkins’ Early Jersey Wakefield, Hawkins’ Large Late Premium Flat Dutch, Hawkins’ Sure Head, Hawkins’ Winningstadt. Entered as Early Jersey Wakefield, Large Late Premium Flat Dutch, Sure Head, and Winningstadt.

Henderson’s Autumn King, Henderson’s Early Spring, Henderson’s Early Succession, Henderson’s Early Summer, Henderson’s Express, Henderson’s Late Flat Dutch, Henderson’s Succession. Entered as Autumn King, Early Spring, Early Succession, Early Summer, Express, Late Flat Dutch, and Succession.

Henderson’s Summer. Cur Fld R111 K&F. For similar names see Early Summer.


Seedsmen’s synonyms. Amager, Bui Fqr. Ball Head, OV, Roc. Danish, C&J CCM. Danish Ball Head, Bkt Bil Bow Bow Brr Drr Fqr, etc. Danish Ball Head Winter, Thr. Dutch Cabbage, Fer. Dutch Winter, Bue Eic Gls Liv Mgd Tem, etc. Emperor, OV. Export, OV. German Erfurt, Cle Col Eic Fer GH Liv, etc. Improved Danish Ball Head, Inl. Solid Emperor, Brr Fqr Fer Liv.

Holmes-Houser. Bgg Hlm Mhl.

Holmes’ Jersey Wakefield, Holmes’s Perfection Large Late Flat Dutch. Entered as Jersey Wakefield, Perfection Large Late Flat Dutch.

Housman Drumhead. Bow. For similar names see Drumhead.

Housman Late Flat Dutch. Fer Fle Rec.

Similar names. See Large Late Flat Dutch.

Houser. Air CE Err Fqr Ggy Man S&W Thr Wra.
CABBAGE.

Hundred Weight.  Exx Fmr May OV.

Ideal.  Sal.  For similar names see Ideal Winter.

Ideal Winter.  D&H Iml Liv.

Imperial Drumhead Savoy.  Mens Min Pac Vin.

Imperial Flat Dutch.  Gg. For similar names see Flat Dutch.

Improved All Seasons, Improved American Drumhead, Improved American Savoy, Improved Autumn King, Improved Brunswick, Improved Danish Ball Head, Improved Drumhead Savoy, Improved Early Drumhead, Improved Early Dwarf Flat Dutch, Improved Early Flat Dutch, Improved Early Jersey Wakefield, Improved Early Summer, Improved Early Winningstadt, Improved Flat Brunswick, Improved Jersey Wakefield, Improved Large American Drumhead, Improved Large Late Drumhead, Improved Large Late Flat Dutch, Improved Large Wakefield, Improved Late Drumhead, Improved Late Premium Flat Dutch, Improved Long Keeping, Improved Red Drumhead, Improved Red Dutch, Improved Red Dutch Erfurt, Improved Red Stone Head, Improved Savoy, Improved Stone Mason, Improved Succession, Improved Sure Head, Improved Vandergav, Improved Large Drumhead, Improved White Brunswick, Improved Bristol. Entered as All Seasons, American Drumhead, American Savoy, Autumn King, Brunswick, Danish Ball Head, etc.

Iowa Seed Co.'s Short Stem Drumhead. Entered as Short Stem Drumhead.

Iron Head.  Vau.

Jersey Wakefield.  Amb Bt Big Cle D&H Drw Ewr Ewg GH Jst Hbt Hlm MWJ Kei Kg Koe Man McM Nef Rim SaK Stk Tex Tpk Yng.

Similar names. See Early Jersey Wakefield.

Seedsmen's synonyms. Charleston Wakefield, D&H.

Johnson's Early Large Prize Head. MWJ.

Similar names. See Large Late Flat Dutch.

Johnson's Wonderful.  Bgs. For similar names see Wonderful.

Johnson & Stokes' Earliest.  Erd J&S. For similar names see Earliest.

Johnson & Stokes' Hard Heading Savoy, Johnson & Stokes' Market Gardener's No. 2, Johnson & Stokes' Matchless Late Flat Dutch. Entered as Hard Heading Savoy, Market Gardener's No. 2, and Matchless Late Flat Dutch.

Jones' Early Jersey Wakefield, Jones' Late Flat Dutch. Entered as Early Jersey Wakefield, and Late Flat Dutch.

King's Earliest Pointed, King's Early Spring, King's Market Gardener's Late Flat Dutch. Entered as Earliest Pointed, Early Spring, Market Gardener's Late Flat Dutch.

Koss' Short Stem Drumhead. Entered as Short Stem Drumhead.

Kramer's Premium Flat Dutch. Entered as Premium Flat Dutch.

Kraut King.  Sal.

Landreth's All the Year Round, Landreth's Early Summer Flat Dutch, Landreth's Flat Standard, Landreth's Flat Intermediate, Large Late Mountain. Entered as All the Year Round, Flat Standard, Early Summer Flat Dutch, Large Late Mountain, and Flat Intermediate.

Landreth's Earliest.  Lan Stw. For similar names see Earliest.

Large American Drumhead. Liv Pitt Sim Wdr.

Similar names. See American Drumhead.

Large American Premium Flat Dutch. RE.

Similar names. See Premium Flat Dutch.
Large Auber Savoy.  Ebe.  

**Similar names.** Large Aubervilliers.  

Large Aubervilliers.  Ewg Gra.  For similar names see Large Auber Savoy.  

Large Blood Red.  Dw.  For similar names see Early Dark Red.  

Large Bridgeport.  Shr.  

**Similar names.** Price & Knickerbocker’s Large Bristol.  

Large Charleston Wakefield.  Brn Cox Cur Fst Fer H&C Ilse Lan Mgr MhI Rec S&O Wat.  

**Similar names.** See Early Jersey Wakefield.  

Large Dark Red Drumhead.  Ebe.  For similar names see Red Drumhead.  

Large Drumhead.  Crg JL Pac Ren Tpk.  

**Similar names.** See Large Late Drumhead.  

Large Drumhead Savoy.  Bui Kg JMP.  For similar names see Drumhead Savoy.  

Seedsmen’s synonyms.  Large Globe Savoy, Bdg.  

Large Early Charleston Wakefield.  M&S.  

**Similar names.** See Early Jersey Wakefield.  

Large Early Jersey Wakefield.  Y&H.  

**Similar names.** See Early Jersey Wakefield.  

Seedsmen’s synonyms.  Charleston, C&J MWJ.  

Large Early Ox Heart.  M&S Nol Stk.  

**Similar names.** See Early French Ox Heart.  

Large Early Schweinfurt.  Bdg.  For similar names see Schweinfurt Quintal.  

Large Early Summer.  G&T.  For similar names see Early Summer.  

Large Early Wakefield.  Crs CA Pir Tat.  

**Similar names.** See Early Jersey Wakefield.  

Seedsmen’s synonyms.  Charleston Wakefield, CA.  Charleston, Pir.  

Large Early York.  Bur Drn Hst Koi Thr Teo.  For similar names see Early York.  

Large Flat Brunswick.  Eie Stk.  For similar names see Fottler’s Brunswick.  

Large Flat Dutch.  Brs Crs PM Pac.  For similar names see Large Late Flat Dutch.  

Large French Drumhead.  Sim.  For similar names see Drumhead.  

Large German Drumhead.  DkH Sim.  For similar names see German Export.  

Large Jersey Wakefield.  Brt Bkt Bri Bui Brw C&J CF Hlb Gig Hlr Hrs MWJ Kra LB Pri Qkr Shw Vnn.  

**Similar names.** See Early Jersey Wakefield.  

Seedsmen’s synonyms.  Charleston, Brt Bkt Bri Bui Eie Shw, etc.  

Large Late Bridgeport Drumhead.  H&P.  

**Similar names.** See Bridgeport Drumhead.  

Large Late Brunswick.  Eie.  For similar names see Fottler’s Brunswick.  

Seedsmen’s synonyms.  Large Late Drumhead, Bdg.  Fottler’s Brunswick, Bdg.  

Large Late Drumhead.  All Arb Ar Bal Btl Bkt Big Bon Bdg Bur Brs CE Cle Col CF Cox Crs Cur CA Drv Eic Elt Emer RE Fre Ger Gdn GH Gil G&T Grw TG Hns Hld Hrv Hst Jae RHJ JAS Jns Kei Ken Kg Kos Lam Lea Lnr MgO Man PM Mns May JCM JMM MCM Mel Mic Mhl Ms May Xex XI NK Pac JMP Prn Pnt Pot Pri Rec Roe RP SC Shw Sim Sim Spf Stk SB Stw SW Tat Tem TB Thm Thr Thb Thn Trn T&B Van Vl Vw W&I Wer Wd WS Wyz.  

**Similar names.** Belgiano’s Large Late Drumhead, Bloomsdale Large Late Drumhead, Market Gardener’s Large Late Drumhead, Market Gardener’s Late Drumhead, Philipp’s Toledo Large Late Drumhead, Toledo Large Late Drumhead, Improved Large Late Drumhead, Buist’s Large Late Drumhead, Buist’s Improved Large Late Drumhead, McMillan’s Improved Large Late Drumhead, Shumway’s Improved Large Late Drumhead, Large Drumhead, Late Drumhead, Champion Late Drumhead, Improved Late Drumhead, Mammoth Late Drumhead.  See also Drumhead, Premium Drumhead, Early Drumhead.  

Seedsmen’s synonyms.  Large Late Brunswick, Bdg.  Fottler’s Brunswick, Bdg.
Large Late Flat Dutch.  Anb Brt Bkt Bon Bur Cam Cle CA D&C Eic Evr Fmr Gdn Gfn GI Hgf Haw Imq Jac Kei Kg Liv Mns May Mic Myz Qkr Ree Rim.  Roe S&B Sw Shk Stk S&W TB Thil Til Wd.

Similar names.  Acme Large Late Flat Dutch, Acme Flat Dutch, Burpee's Large Late Flat Dutch, Everitt's Large Late Flat Dutch, Froatscher's Large Late Flat Dutch, Bloomsdale Large Late Flat Dutch, Holmes's Perfection Large Late Flat Dutch, Shumway's Excelsior Large Late Flat Dutch, Long Island Large Late Flat Dutch, Market Gardener's Large Late Flat Dutch, Toledo Market Gardener's Large Late Flat Dutch, Improved Large Late Flat Dutch, Buist's Large Late Flat Dutch, Buist's Improved Large Late Flat Dutch, Large Flat Dutch, Burpee's Large Flat Dutch, Burr's Large Flat Dutch, Extra Large Flat Dutch, Late Flat Dutch, Dreer's Late Flat Dutch, Froatscher's Late Flat Dutch, Henderson's Late Flat Dutch, Housman's Late Flat Dutch, Jones's Late Flat Dutch, Northrup, King & Co.'s Late Flat Dutch, Schisler-Corneli Late Flat Dutch, Bristol Improved Late Flat Dutch, Bristol Late Flat Dutch, Bruning's Excelsior Late Flat Dutch, Crescent City Late Flat Dutch, Centennial Late Flat Dutch, Hastings' Centennial Late Flat Dutch, McMillan's Improved Late Flat Dutch, Mammoth Late Flat Dutch, Vincent's Improved Late Flat Dutch, Mill's Giant Late Flat Dutch, Giant Late Flat Dutch, Superior Late Flat Dutch, Matchless Late Flat Dutch, Noil's Matchless Late Flat Dutch, Johnson & Stokes' Matchless Late Flat Dutch, Eichling's Large Late Flat Dutch, Simmers' Matchless Flat Dutch, Matchless Flat Dutch, Prize Head Late Flat Dutch, Faust's Prize Head Late Flat Dutch, Wood's Prize Head Late Flat Dutch, Prize Head Late Flat Dutch, Buist's Prize Medal Flat Dutch, Prize Medal Flat Dutch, Maule's Prize Flat Dutch, Prize Flat Dutch, Johnson's Early Large Prize Head.  See also Flat Dutch, Early Flat Dutch, Premium Flat Dutch, Lilly, Bagardus & Co.'s Late Flat Dutch.

Seedsmen's synonyms.  Premium Flat Dutch, Bdg.  Excelsior, Bdg.

Large Late French Quintal.  Sim.  For similar names see Schweinfurt Quintal.

Large Late Mountain.  Lun.

Similar names.  Landreth's Large Late Mountain.

Large Late Premium Drumhead.  Brd Bui Hrn.

Similar names.  See Premium Drumhead.

Large Late Premium Flat Dutch.  Ar Bui G&T TG Hrn H&P J&M Lea Min HP Spf Thm.

Similar names.  Premium Flat Dutch.

Large Lupton.  Gra.  For similar names see Lupton.

Large Luxemburg.  MV Nor.  For similar names see Luxemburg.

Large Ox Heart.  Eic Ewg Gra.  For similar names see Early French Ox Heart.

Large Perfection Drumhead Savoy.  Shn.

Similar names.  See Perfection Drumhead Savoy.

Large Premium Drumhead.  Min.  For similar names see Premium Drumhead.

Large Red Drumhead.  Bdg Bru Bur Bng Col Fax Fie GfH Gra RHJ Pks Raw Rt W&D.

Similar names.  See Red Drumhead.

Seedsmen's synonyms.  Improved Red Dutch, Bui.

Large Red Pickling.  Cur.  For similar names see Pickling.

Large St. Denis.  RE SB.  For similar names see St. Denis.

Large Short Stem Brunswick.  Ewg Gra Pac.

Similar names.  See Southern's Brunswick.

Large Vertus Savoy.  RHJ.  For similar names see Vertus.

American Varieties of Vegetables.

Similar names. See Early Jersey Wakefield.

Seedsman's synonyms. Charleston, Spl Bkg Buc Bar Drr Fer, etc. Charleston
Wakefield, Cts GH Liv Nol Wd WS Wea.

Large York. Crg Drr Erc Gcr Hlm Mel Mzy Stk Vin Wd WS.
Similar names. See Early York.

Late American Drumhead. Frd AGT.
Similar names. See American Drumhead.

Late American Savoy. Neb. For similar names see American Savoy.

Late Drumhead. Bri Ewg Fnr H&C May Poo.
Similar names. See Large Late Drumhead.

Late Drumhead Savoy. Bdg. For similar names see Drumhead Savoy.

Late Flat Dutch. Brd Bri Bng Buc LB C&B Cur Dlw Drr Dwr RE Ewg Fer Ham
Hen Hse RJH Jns Kg Lon MeM Mel Mic Mhl NK OV Pug Rtk Roc SC Sim Spf
SB AGT Tpk Vin.
Similar names. See Large Late Flat Dutch.

Late French Market. DD.
Similar names. Steckler's French Market.

Late French St. Denis. Sim. For similar names see St. Denis.

Late Green Curled Savoy. Dlw. For similar names see Green Curled Savoy.

Late Mammoth Rock Red. Ar. For similar names see Mammoth Rock Red.

Late Marblehead Mammoth. Sim. For similar names see Marblehead Mammoth.

Late Perfection Drumhead Savoy. LB.

Similar names. See Perfection Drumhead Savoy.

Late Premium Drumhead. Alx Bow Fer Loh Neb Tex Wlt.
Similar names. See Premium Drumhead.

Late Premium Flat Dutch. Alx Bak Btl Bow CE EBC Fer Fle GH Gra Hns
Hde Hst Hop RJH Ken K&F Lam LB Loh PM May MV Neb Nl Pq Pnt Rec
Roc RP SC S&O Snm Sox Tlh Tpk VI Vk Web Wlt.

Similar names. See Premium Flat Dutch.

Late Red Dutch. Anb CF XI Wer. For similar names see Red Dutch.

Late Stoneball. Mhl.

Late Stonehead. Bur.

Late White Dutch. Evr.

Similar names. Everett's Late White Dutch.

Late York. Ele. For similar names see Early York.

Lauderback's All Year Round. Entered as All the Year Round.

Lightning. Sal. For similar names see Express.

Lightning Express. GN. For similar names see Express.

Lilly, Bogardus & Co.'s Harvest Home. Entered as Harvest Home.

Lilly, Bogardus & Co.'s Late Flat Dutch. Entered as Late Flat Dutch.

Limited Mail. Hlm.

Livingston's Blue Boom, Livingston's Ideal Winter, Livingston's Premium Flat
Dutch. Entered as Blte Boom, Ideal Winter, and Premium Flat Dutch.

Lohrman Seed Co.'s Earliest Round Head. Entered as Earliest Round Head.

Long Island. Chl TB.

Similar names. Long Island Large Late Flat Dutch, Long Island Medium
Flat Dutch, Brill's Second Early Long Island, Long Island Market Savoy, Long
Island Colossal Savoy, Second Early Long Island.

Long Island Colossal Savoy. J&S Van. For similar names see Long Island.

Long Island Large Late Flat Dutch. Lan.

Similar names. See Large Late Flat Dutch, Long Island.

Long Island Market Savoy. Shw.
CABBAGE.

Long Island Medium Flat Dutch.  Lnm.
  Similar names.  See Flat Dutch, Long Island.

Long Island Second Early.  Brg.  For similar names see Long Island.

Long-Keeping.  Cnr Dlw Kos May.
  Similar names.  Improved Long-Keeping, Currie’s Long-Keeping, May’s Long-Keeping.

Louisville Drumhead.  Bui Bar CE ERC Cle CF Cpg Cro Dsp Frr Frd Glt H&T
  Hrn H&l Hf Mly McM Qkr Rce SC Tat Tu Vl Vk Wat WS Wyg.
  Similar names.  Louisville Early Drumhead, Louisville Short Stem Drumhead,
  McCullough’s Early Louisville, Early Louisville.

Louisville Early Drumhead.  Ann Cam CA Evr H&P J&S Lan Lea Liv JCM Nol
  Shw.
  Similar names.  See Louisville Drumhead.

Louisville Short Stem Drumhead.  Trm.
  Similar names.  See Louisville Drumhead.

Low Dutch.  Lnm.

Lupton.  Alr Brd Bkt Btg Bgs Brr Bru Bue Bar C&J Col Crs CA D&H Drr Frr
  Fmr Fqr Fle Frd Glt Gnt G&T TG Hrs Hlm Hse H&P MWJ J&S Kra Liv JL
  Mns Pmn Mck Ms Nebl Ug HP Ptt Pri Raw Ren Rec Roc Sal Shm Sic Sim Spj
  SB Tnm Tm Yn Vk Yr.
  Similar names.  Large Lupton.
  Seedsmen’s synonyms.  Improved Vondervog, D&H DD.

Leonard’s Faultless, Leonard’s Improved Bridgeport Drumhead, Leonard’s Lux-
  emburg.  Entered as Faultless, Bridgeport Drumhead, and Luxemburg.
  Similar names.  Leonard’s Luxemburg, Large Luxemburg, Hard Head Lux-
  emburg.
  Seedsmen’s synonyms.  Hard Heading, Col Cle Fmr Frd Kra Rs, etc.  Gregory’s
  Hard Heading, Ggy.

McCullough’s Early Louisville, McCullough’s Premium Flat Dutch.  Entered as
  Early Louisville and Premium Flat Dutch.

McKenzie’s Northern Favorite.  Entered as Northern Favorite.

McMillan’s All Head, McMillan’s Improved Early Flat Dutch, McMillan’s Improved
  Flat Dutch, McMillan’s Improved Large Late Drumhead, McMillan’s Improved
  Late Flat Dutch, McMillan’s Improved Jersey Wakefield, McMillan’s Perfection
  Drumhead Savoy, McMillan’s Perfection Early Drumhead.  Entered as
  All Head, Early Flat Dutch, Flat Dutch, Large Late Drumhead, Late Flat Dutch,
  Jersey Wakefield, Perfection Drumhead Savoy, and Perfection Early Drumhead.

Magdeburg.  Dlw.

Mammoth Bridgeport Drumhead.  Sal.
  Similar names.  See Bridgeport Drumhead.

Mammoth Dark Red.  Hde.

Mammoth Globe Savoy.  Sal.  For similar names see Green Globe Savoy.

Mammoth Late Bridgeport Drumhead.  Buc Roc.
  Similar names.  See Bridgeport Drumhead.

Mammoth Late Drumhead.  Hic.  For similar names see Large Late Drumhead.

Mammoth Late Flat Dutch.  Roc.  For similar names see Large Late Flat Dutch.

Mammoth Red.  Gls.  For similar names see Mammoth Rock Red.

Mammoth Red Drumhead.  Spf.  For similar names see Red Drumhead.

Mammoth Red Dutch.  Bkg.  For similar names see Red Dutch.

Mammoth Rock Red.  Alr Bak Brd Btl Bkt Btg Bgs Brn Bru Bug Bue Bui
  Brb Bur Brr Brw Cam CE Cle C&B Col CF Crs Cur CA Dlw Del Drr Dun Elt RE
  Frr Fqr Fle Frd Gdn GH Gra Gnz GN Ggy Gry Grw TG Hns Hrs Haw Hen H&G
AMERICAN VARIETIES OF VEGETABLES.

Hlm Hop Hse H&P Low Inl Jer J&S Jns K&W Ken Kg Kos Kra Lam Lan LR Liv JL Loh Mgd Man Mns Man May JLM McK Mic MV Neb Nef No1 Old Pac Pg Pks HP Prn Pne Ptt Poo Por Pri Pug Qkr Raw Ren Roc Rs S&R SC S&O Shm Sie Sim Sox SB S&H S&W Tem Thb Thh Til T&B VI Van Vk Wn W&D Wer Wdr WS Yng.

Similar names. Rock Red, Late Mammoth Rock Red, Mammoth Red.

Mammoth Vertus. RII. For similar names see Vertus.

Mammoth Wakefield. Bel. For similar names see Early Jersey Wakefield.

Mann's Columbia. Entered as Columbia.

Marblehead Mammoth. Yng. For similar names see Marblehead Mammoth.


Similar names. Late Marblehead Mammoth, Marblehead Mammoth Drumhead, Marblehead Drumhead.


Similar names. See Marblehead Mammoth.

Market Gardener's. HP.

Market Gardener's All Year Round. Bri.

Similar names. See All the Year Round.

Market Gardener's Flat Dutch. Thr. For similar names see Flat Dutch.

Market Gardener's Late Drumhead. Vl.

Similar names. See Large Late Drumhead.

Market Gardener's Large Late Drumhead. Lan Stw.

Similar names. See Large Late Drumhead.

Market Gardener's Large Late Flat Dutch. H&P Lan Lea Stw.

Similar names. See Large Late Flat Dutch.

Market Gardener's Late Flat Dutch. Kg.

Similar names. See Market Gardener's.


Similar names. See Market Gardener's.


Similar names. See Drumhead Savoy.

Market Gardener's Private Stock Flat Dutch. Ebe Thr.

Similar names. See Flat Dutch.

Market Queen. May OV Tpk.

Similar names. Extra Early Queen, Buckbee's Extra Early Large Queen, Tait's May Queen, Extra Early Large Queen, May Queen.

Marvin's Improved Savoy. Entered as Marvin's Savoy.

Marvin's Large Savoy. Liv. For similar names see Marvin's Savoy.

Marvin's Savoy. Brw Chl Frd Shw Van.

Similar names. Marvin's Large Savoy, Marvin's Improved Savoy.

Matchless. Chl.

Matchless Flat Dutch. Sim. For similar names see Large Late Flat Dutch.

Matchless Late Flat Dutch. J&S M&S No1 Shw.

Similar names. See Large Late Flat Dutch.

Maule's Early Express, Maule's Early Flat Dutch, Maule's First Early, Maule's Prize Flat Dutch, Maule's Prize Short Stem Drumhead, Maule's Prize Wakefield, Maule's Sure Head, Maule's Winningstadt. Entered as Early Express, Early Flat Dutch, First Early, Prize Flat Dutch, Prize Short Stem Drumhead, etc.

Maule's Prize Midsummer.  Fgr Maun Raw.

May Queen.  Tat.  For similar names see Market Queen.

May's Early Surprise, May's Hundredweight, May's Long-Keeping.  Entered as Early Surprise, Hundredweight, and Long-Keeping.

Midsummer.  Bui Bur Shm.

Mills' Early All Head, Mills' First in the Market, Mills' Giant Late Flat Dutch, Mills' Short Stem Drumhead, Mills' Sure Head.  Entered as Early All Head, First in the Market, Giant Late Flat Dutch, Short Stem Drumhead, and Sure Head.

Minnesota Earliest.  Fnr May OV Tpk.  For similar names see Earliest.

Model Summer.  M&S.


Nebraska Seed Co.'s Late Premium Flat Dutch.  Entered as Late Premium Flat Dutch.

Netted Savoy.  Hen McK Neb HP Fir Poo For Ren S&R AGT.
    Similar names.  See Savoy.

Netted Savoy Brunswick.  M&S.  For similar names see Futter's Brunswick.

Newark Early Flat Dutch.  Can CE Chl TG Nol Pri Rec Shm Tem TB Yk W&D Y&H.
    Similar names.  See Early Flat Dutch.

Newark Flat Dutch.  Can Fat Y&H.  For similar names see Early Flat Dutch.

New York Early Summer.  Lan Stw.  For similar names see Early Summer.

Niggerhead.  Eit Neb Thr.

Noll's Extra Early Ideal, Noll's Matchless Late Flat Dutch, Noll's Perfection Heading Savoy.  Entered as Extra Early Ideal, Matchless Late Flat Dutch, and Perfection Heading Savoy.

Noneuch.  Brn Del RE Ext MWJ TB.
    Similar names.  Brill's Noneuch.

Nonpareil.  D&H.

North Carolina.  1st Wd.
    Seedsmen's synonyms.  Runcome, H-t Wlt Wd.

Northern Favorite.  MCK.

Northern Giant Flat Dutch.  GN.  For similar names see Flat Dutch.

Northrup, King & Co.'s Late Flat Dutch.  Entered as Late Flat Dutch.

Number Ninety-One.  GN.

Number Seventy-Six.  Bur.

Ohio Medium Flat Dutch.  EBC.  For similar names see Flat Dutch.

Olds' Bridgeport Drumhead, Olds' Early Jersey Wakefield.  Entered as Bridgeport Drumhead and Early Jersey Wakefield.

Oregon.  GN.

Oxheart.  Kei May.  For similar names see Early French Oxheart.

Paris Market.  RIJ McK.
    Similar names.  Early Paris Market, Early Paris Savoy, Flat Parisian.

Pearce's Fifty Pound.  D&H.

Pearce's Second Crop.  D&H.

Peerless.  Cle.
    Similar names.  Early Peerless, Shumway's Early Peerless.

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Similar names. Large Perfection Drumhead Savoy, Late Perfection Drumhead Savoy, Curled Perfection Drumhead Savoy, McMillan’s Perfection Drumhead Savoy, Simmers’ Perfection Drumhead Savoy.

Perfection Early Drumhead. McM. For similar names see Early Drumhead.

Perfection Hard-Heading Savoy. Nol. For similar names see Hard-Heading.

Perfection Large Late Flat Dutch. Hlm.

Similar names. See Large Late Flat Dutch.

Perfection Late Beauty. M&N.

Perry’s Premium Brunswick, Perry’s Premium Flat Dutch. Entered as Premium Brunswick and Premium Flat Dutch.

Pe Tsai. Alx Fqr Tat Thr Van Vin.

Seedmen’s synonyms. Chinese Cabbage, Alx Fqr Tat Thr Van Vin.

Philipps’ Improved Succession, Philipps’ Large Late Premium Flat Dutch, Philipps’ Toledo Large Late Drumhead. Entered as Succession, Large Late Premium Flat Dutch, and Toledo Large Late Drumhead.

Plant Seed Co.’s Late Premium Flat Dutch, Plant Seed Co.’s St. Louis Late Market. Entered as Late Premium Flat Dutch and St. Louis Late Market.

Pickling. Brk Bdg Roc.

Similar names. Red Pickling, Large Red Pickling.

Seedmen’s synonyms. Red Dutch, Bdg Buc Brk Nub Roc.

Pomeranian. Bdg Ren.

Similar names. Pomeranian Pointed-Head.

Seedmen’s synonyms. Fibberkraut, Bdg Ren.

Pomeranian Pointed-Head. Mzy Thr. For similar names see Pomeranian.

Seedmen’s synonyms. Fibberkraut, Mzy Thr.

Poole’s Cannon Ball. Poe. For similar names see Cannon Ball.

Premier. Sim.

Similar names. Simmers’ Premier.

Premier Brand. Hst.

Premium Brunswick. Ebe. For similar names see Essler’s Brunswick.

Premium Drumhead. Bak Brk Fer Pks Pri S&R.

Similar names. Price & Reed’s Premium Drumhead, Large Premium Drumhead, Late Premium Drumhead, Large Late Premium Drumhead, Perry’s Late Premium Drumhead, Improved Late Premium Drumhead, Harnden’s Large Late Premium Drumhead. See also Drumhead, Early Drumhead, and Large Late Drumhead.

Premium Drumhead Savoy. Man.


Similar names. Alheer’s Premium Flat Dutch, Currie’s Premium Flat Dutch, Kramer’s Premium Flat Dutch, Livingston’s Premium Flat Dutch, McCullough’s Premium Flat Dutch, Perry’s Premium Flat Dutch, Vaughan’s Premium Flat Dutch, Will’s Premium Flat Dutch, Early Premium Flat Dutch, Late Premium Flat Dutch, Improved Late Premium Flat Dutch, Perry’s Premium Flat Dutch, Nebraska Seed Co.’s Late Premium Flat Dutch, Plant Seed Co.’s Late Premium...
CABBAGE.

Flat Dutch, Rice's Late Premium Flat Dutch, Large Late Premium Flat Dutch, Harnden's Large Late Premium Flat Dutch, Hawkins' Large Late Premium Flat Dutch, Phillips' Large Late Premium Flat Dutch, Large American Premium Flat Dutch. See also Flat Dutch, Early Flat Dutch, Large Late Flat Dutch.

SEEDSMEN'S SYNONYMS. Large Late Flat Dutch, Bdg. Late Flat Dutch, SB. Excelsior, Bdg. Superior Late Flat Dutch, OV.

Price & Knickerbocker's Large Bristol. Entered as Large Bristol.

Price & Reed's Premium Drumhead. Entered as Premium Drumhead.

Pride of Erfurt. Not.

Pride of the South. Pat Stk.

Prize Flat Dutch. Man. For similar names see Large Late Flat Dutch.

Prize Hard Head. Red. For similar names see Hard-Heading.

Prize Head Late Flat Dutch. Fast Wd WS.

SIMILAR NAMES. See Large Late Flat Dutch.

Prize Medal Drumhead. Blue. For similar names see Drumhead.

Prize Medal Flat Dutch. Blue. For similar names see Large Late Flat Dutch.

Prize Short Stem Drumhead. Man. For similar names see Short Stem Drumhead.

Prize Wakefield. Man. For similar names see Early Jersey Wakefield.

Queen Victoria. Bdg. For similar names see Victoria Savoy.

Quincy Market. Fax.

Quintal Drumhead. RE. For similar names see Schervinfort Quintal.

Race Horse. Brg. Roe. For similar names see Buckbee's Race Horse.


Red Dutch. Ax Bi Bdl Brt Brw Bsc Bw Bui Bfr Brr CE Chl C&B Crs Dfr Eas Fea Elw Ewg Gh Gra Hm Hn Hm MwJ Kei Ken Koe Lan Min Mns Mau May Jcm Mcm Min MV Neb Pg Pks Jmp Pri Ree Reo Rs Rp Sal S&K Shw S&O Sox Sfp Stk Sww Swf Thl Tob TpK Vn Wd Wd Wng.

SEEDSMEN'S SYNONYMS. Large Red Drumhead, Bur. Red Dutch Drumhead, Pg.

Pickling, Bdg Bk Buc Neb Ree.

Red Dutch Erfurt. Ede GH J&S. For similar names see Red Erfurt.

Red Dutch Pickling. Cle Gry Grw Tg Pir Shm Vl.

SIMILAR NAMES. See Red Dutch.

Red Erfurt. CE Ree Sie.


Red Hollander. Cur. For similar names see Hollander.

Red Perfection. Brk.

Red Pickling. Cur Neb. For similar names see Pickling.

Red Polish Short-Stemmed. Man.

Red Stone Head. CE Dlw Mzy Thr.

SIMILAR NAMES. Improved Red Stone Head, Thorburn Improved Red Stone Head, Rock Head.
Reedland Early Drumhead. Lan Mic Stw
Similar names. See Early Drumhead.

Rennie’s Prize Hard Head. Entered as Prize Hard Head.
Rice’s Early Jersey Wakefield, Rice’s Early Winningstadt, Rice’s Late Premium Flat Dutch, Rice’s Premium Flat Dutch, Rice’s Sure Head. Entered as Early Jersey Wakefield, Early Winningstadt, Late Premium Flat Dutch, Premium Flat Dutch, and Sure Head.

Rockford Market. Buc Roc.
Similar names. Buckbee’s Rockford Market.

Rock Head. Frd J&S M&S. For similar names see Red Stone Head.

Rock Red. CE Hrn NK Ree. For similar names see Mammoth Rock Red.

Rosedale Savoy. D&H.

Round Sugar Erfurt. Fnr Gigy. For similar names see Red Erfurt.

Russian Round Giant. M&S. For similar names see Autumn Giant.

Russian Round Head. Nj.

Safe Crop. Alr Bar Hnm Mau.
Similar names. Alnecr’s Safe Crop, Burpee’s Safe Crop.

St. Denis. Brit Egw Gra Kei Lan Ren Stk.
Similar names. Large St. Denis, Late French St. Denis.

Seedsman’s synonyms. Chow Bonnwell, Stk.

St. John’s Day Early Drumhead. Hen Kg.
Similar names. See Early Drumhead.

St. Louis Late Market. K&F Litb Ncb Pnt SC Spi Stw.
Similar names. See St. Louis Market.

St. Louis Market. Buc Ebr Trm.
Similar names. St. Louis Late Market, Plant Seed Co.’s St. Louis Late Market.

St. Malo. Vin.

Salzer’s Earliest. Sal. For similar names see Earliest.

Salzer’s Giant Flat Dutch, Salzer’s Ideal, Salzer’s Improved Market, Salzer’s Jersey Wakefield, Salzer’s Kraut King, Salzer’s Lightning. Entered as Giant Flat Dutch, Ideal, Salzer’s Market, Jersey Wakefield, Kraut King, and Lightning.

Salzer’s Market. Sal. For similar names see Extra Early Market.

Savoy. Hnt Pg.
Similar names. Improved Savoy, Bolgiano’s Savoy, Bolgiano’s Improved Savoy, Evans’ Improved Savoy, Evans’ Savoy, Steele-Briggs’ Chester Savoy, Chester Savoy, Dreer’s Crystal Summer Savoy, Crystal Summer Savoy, Early Favorite Savoy, Netted Savoy, Early Vienna Savoy.

Schisler-Cornell Late Flat Dutch. Entered as Late Flat Dutch.

Schweinfurt Quintal. RHJ.
Similar names. Early Schweinfurt Quintal, Early Schweinfurt, Large Early Schweinfurt, Quintal Drumhead, Large Late French Quintal, Auvergne Quintal.

Schwill’s Matchless Late Flat Dutch. Entered as Matchless Late Flat Dutch.

Sensation. D1.

Short Stem Brunswick. Bow Bui Fer Kei Mns Pks HP.
Similar names. See Fottler’s Brunswick.

Similar names. Burpee’s Short Stem Drumhead, Everitt’s Short Stem Drumhead, Iowa Seed Co.’s Short Stem Drumhead, Koss’ Short Stem Drumhead, Mills’ Short Stem Drumhead, Maule’s Prize Short Stem Drumhead, Prize Short Stem Drumhead.

Seedsman’s synonyms. Fottler’s Improved Brunswick, Frd.
Shumway's Early Peerless, Shumway's Excel-lor Large Late Flat Dutch, Shumway's Faultless, Shumway's Improved Large Late Drumhead, Shumway's Improved Sure Head, Shumway's Jersey Wakefield. Entered as Early Peerless, Excel-lor Large Late Flat Dutch, Faultless, Large Late Drumhead, Sure Head, and Jersey Wakefield.

Shumway's Midsummer Market. Shm. For similar names see Midsummer.

Silverleaf Drumhead. Koi. For similar names see Drumhead.

Simmers' Early German Brunswick, Simmers' Matchless Flat Dutch, Simmers' Per-fec-tion Drumhead Savoy, Simmers' Premier. Entered as Early German Brunswick, Matchless Flat Dutch, Per-fec-tion Drumhead Savoy, and Premier.

Simon'sNetted Savoy Brunswick. Entered as Netted Savoy Brunswick.

Small Bellville. Bur. For similar names see Bellville.

Small Early Savoy. Liv Van.

Solid Emperor. Frd Gyy Hrs Rec Tem Wdr. Similar names: Emperor.


Solid South. Cle Cgy Crs Eic Hst Kg May OV Roe Shw Shm Stk Wd WS. Similar names: Eichling's Solid South.

Southern Green Glazed. Bui Gdn. For similar names see Green Glazed.

Springfield Seed Co.'s Late Flat Dutch. Entered as Late Flat Dutch. Similar names: See Large Late Flat Dutch.


Steele-Briggs' Chester King, Steele-Briggs' Chester Savoy. Entered as Chester King and Chester Savoy.

Stein's Drumhead. May. For similar names see Drumhead.

Stein's Early Flat Dutch. Entered as Early Flat Dutch.


Stone Mason Marblehead Mammoth. Vin. For similar names see Stone Mason.


Seedsmen's Synonyms. All Seasons, Ebr Lam Por S&R AGT Vin.
Sugar Loaf. Fle Kei.

**similar names.** Early Sugar Loaf.

Summer Ball Head. May. For similar names see Danish Ball Head.

Summer Danish Ball Head. Guy May. For similar names see Danish Ball Head.

Sunproof. Jr.

Sure Crop. Hst. For similar names see Hastings’ Sure Crop, Early Sure Crop.


**similar names.** Bell’s Sure Head, Barpec’s Sure Head, Hawkins’ Sure Head, Manic’s Sure Head, Mills’ Sure Head, Rice’s Sure Head, Shumway’s Improved Sure Head, Improved Sure Head, Willett’s All Seasons Sure Head.

Seedsman’s synonyms. All Seasons, Eic K&F SC.

Sutton’s Earliest. SB. For similar names see Earliest.

Taber’s Nonpareil. Entered as Nonpareil.

Tait’s Champion. Tat. For similar names see Early Champion.

Tait’s Early Jersey Wakefield, Tait’s Extra Early Pilot, Tait’s Grand Duke, Tait’s May Queen, Tait’s Victor Flat Dutch. Entered as Early Jersey Wakefield, Extra Early Pilot, Grand Duke, May Queen, and Victor Flat Dutch.

Tait’s Extra Early. Tat. For similar names see Archibald Extrait Early.

Thompson’s Flat Head Early. Entered as Early Flat Head.

Thorburn’s Colossal, Thorburn's Improved Red Stone Head, Thorburn’s Market Gardener’s Flat Dutch. Entered as Colossal, Red Stone Head, and Market Gardener’s Flat Dutch.

Thorburn’s Drumhead Savoy. Thr. For similar names see Drumhead Savoy.

Toledo Large Late Drumhead. HP.

**similar names.** See Large Late Drumhead.

Toledo Market Gardener’s Large Late Flat Dutch. HP.

**similar names.** See Large Late Flat Dutch.

Twentytieth Century. Brd Vn Vm.

**similar names.** Twentieth Century No. 1, Twentieth Century No. 2, Twentieth Century No. 3.

Twentytieth Century No. 1. Thl. For similar names see Twentieth Century.

Twentytieth Century No. 2. Thl. For similar names see Twentieth Century.

Twentytieth Century No. 3. Thl. For similar names see Twentieth Century.

Twiss. Pg.

**similar names.** Twiss Early Drumhead, Twiss Stone Mason, Gregory’s Twiss.

Twiss Early Drumhead. Guy. For similar names see Early Drumhead.

Twiss Stone Mason. S&F. For similar names see Stone Mason.

Ulm Savoy. Lan Vf. For similar names see Early Drumhead Ulm Savoy.

Vail’s Early Flat Summer. Entered as Early Summer Flat Head.


**similar names.** Vaughan’s Vandergaw, Improved Vandergaw, Vandergaw Mid-summer, Vandergaw Early Drumhead, Vandergaw All Seasons, Vandergaw Flat Dutch, Vandergaw Quick-Growing Flat Dutch.
CABBAGE.

SEEDSMEN’S SYNONYMS. Lapton, D&H D&. Chicago Market, Ltr. All Seasons, Brt Bkt Ggy Iow J&S Pitt, etc. Midsummer, Bui Bur Buc Raw.

Vandergaw Early Drumhead. Ltr. For similar names see Vandergaw.
Vandergaw Flat Dutch. Mgy. For similar names see Vandergaw.
Vandergaw Midsummer. RE & H. For similar names see Vandergaw.
Vandergaw Quick-Growing Flat Dutch. Pri. For similar names see Vandergaw.
Van Namen’s Excelsior, Van Namen’s Excelsior Early White Dutch. Entered as 
Excelsior and Excelsior Early White Dutch.

Variegated. Chl.
Vaughan’s Bridgeport Drumhead, Vaughan’s Hollander, Vaughan’s Premium Flat Dutch, Vaughan’s Vandergaw. Entered as Bridgeport Drumhead, Hollander, Premium Flat Dutch, and Vandergaw.

Vertus. Dw.
Similar names. De Vertus Savoy, Drumhead Vertus Savoy, Large Vertu Savoy, Mammoth Vertus.

Very Early Etampes. Fgr Fer Liv JCM Vin.
SEEDSMEN’S SYNONYMS. Earliest of All, Fer. Wonderful, Fer.

Very Early French. Tat.
Vick’s Improved Danish Ball Head. Entered as Danish Ball Head.
Victor Flat Dutch. Tat. For similar names see Flat Dutch.

Victoria Savoy. D&H Ebc.
Similar names. Early Victoria Savoy, Queen Victoria.

Vincent’s Improved Late Flat Dutch. Entered as Late Flat Dutch.
Volunteer. Raw. For similar names see Rawson’s Volunteer.
Warren. Fer Ggy Ms HP. For similar names see Stone Mason.
SEEDSMEN’S SYNONYMS. Improved Stone Mason, Fer HP. Stone Mason, Ms.
Warren Stone Mason, Ggy.


Similar names. See Stone Mason.
SEEDSMEN’S SYNONYMS. Warren, Ggy.

Washington Wakefield. CE Fmr Iow NK Rtk TB.

Similar names. See Early Jersey Wakefield.
White Brunswick. Put SC. For similar names see Fotlicher’s Brunswick.
Willie’s All Seasons Sure Head. Entered as All Seasons Sure Head.
Will’s Premium Flat Dutch. Entered as Premium Flat Dutch.

Winningstadt. Cam Chl Ebe Fgr Gls Haw Hrs Hbt I&P Iow MWJ RJH J&M Kei Lan Mau McM For Pot Pri Pug S&R S&F SB S&H T7 Wea W&D Wd WS.

Similar names. See Early Winningstadt.

Winter Danish Ball Head. Brl Ebr Fst M&S Sie Thr.

Similar names. See Danish Ball Head.
SEEDSMEN’S SYNONYMS. Hollander, Thr.

Winter King. Alr. For similar names see Autumn King.
Wonderful. J&S Sal.

Similar names. Johnson’s Wonderful.
SEEDSMEN’S SYNONYMS. Earliest of All, Fer. Very Early Etampes, Fer.

Wood’s Early Jersey Wakefield, Wood’s Prize Head Late Flat Dutch. Entered as
Early Jersey Wakefield and Prize Head Late Flat Dutch.

Wood’s Extra Early. WD. For similar names see Archib’s Extra Early.
Wood, Stubbs & Co.’s Early Jersey Wakefield. Entered as Early Jersey Wakefield.

World Beater. Alx Bkt Bel Bri Bru Bui Brb Bur Chl Cle Col CA D&H Del Ebr RE Frd GH G&T TG H&C Hlm Hse Hml MWJ J&S Kg Lam Man PM Mau McK McM Xol Pri Qkr Raw Rec S&O Sie Tem Wk.

Similar names. Burpee’s World Beater.
SEEDSMEN’S SYNONYMS. Autumn King, Alx Bui Bur Liv Mau Raw, etc.
American Varieties of Vegetables.

Cardoon. MWJ Lan Mhl Roc Sal Vau.

Large Smooth. Raw.
Large Smooth Solid. Drr Ewg Gra.
Large Smooth Spanish. Brk.
Large Solid. Bdg DD Emr Lur Mnd Tat Thr Vin W&D.
Large Spanish. Buc C&B Fqr Hen Kei M&S Put Ptt Pot SC Sim.

Carrot. Agricultural Wonder. Mls.
  Similar names. Mills' Agricultural Wonder.
Alneer's Beauty. Atr. For similar names see American Beauty.
Alneer’s Intermediate. Atr. For similar names see Intermediate.
Altringham. Bdg Bru Cle Drr Ebe Emr Ger RE Mnd HP Sim Wat.
  Seedmen’s synonyms. Long Orange, Bdg. Long Scarlet, Bdg. Surry, Bdg.
Altringham Forcing. Del GH. For similar names see Altringham.
  Similar names. Shumway’s American Beauty, Alneer’s Beauty.
American Luc Half Long. M&S. For similar names see Luc.
American Red Altringham. M&S. For similar names see Altringham.
Barnard’s Improved Danvers. Entered as Danvers.
Beith’s Mammoth White. Cle Man. For similar names see Mammoth White.
Belgian. Cox.
  Seedmen’s synonyms. Long White, Cox.
Bellot. Thr.
Blunt-Rooted Horn. Lan. For similar names see Early Scarlet Horn.
  Similar names. See Improved Intermediate White.
Buckbee’s Danvers, Buckbee’s Improved Short White, Buckbee’s Majestic, Buckbee’s Victoria. Entered as Danvers, Short White, Majestic, and Victoria.
Buckbee’s Earliest Forcing. Buc. For similar names see French Forcing.
Buist’s Improved. Bui.
  Seedmen’s synonyms. Prize Long Orange, Bui.
Burpee’s Improved Long Orange. Entered as Long Orange.
California Mammoth. Sal.
Carentan. Bri Cle Elt Lan Mzy Pnr Roc Thr.
Carter’s Gatepost Orange, Carter’s Orange Giant. Entered as Gatepost Orange and Orange Giant.
Champion Feeder. Mfd.

Similar Names. Ontario Champion.


Seedsmen's Synonyms. Half Long Scarlet Stump-Rooted, Ken. Model, Brw Bar DD Frd Pac Roe, etc. Peavey's Scarlet Model, D&H.

Chantenay Stump-Rooted. Bri Hall Loh Mic Vk.

Similar Names. See Chantenay.

Cooper's Yellow Intermediate. Ren. For similar names see Intermediate.

Cowboy Field. Sal. For similar names see White Field.

Cox's Improved Long Orange. Entered as Long Orange.

Creery. Vin.


Danvers Intermediate. Eic Hst Stk. For similar names see Intermediate.

Danvers Orange Intermediate. Bdg. For similar names see Danvers.

Danvers Pointed. M&S Y&H. For similar names see Danvers.

Dreer's Perfect Forcing. Entered as Perfect Forcing.

Dutch Horn. RHJ. For similar names see Early Scarlet Horn.

Earliest Forcing. Roe. For similar names see French Forcing.


Similar Names. See French Forcing.

Earliest French Short Horn. Lam. For similar names see Early Scarlet Horn.

Earliest Red Horn. Hde. For similar names see Early Scarlet Horn.

Seedsmen's Synonyms. French Forcing, Hde.

Earliest Scarlet Forcing. C&J. For similar names see French Forcing.

Earliest Scarlet French Forcing. Fqr. For similar names see French Forcing.

Earliest Short Horn. Drf Fer Min Pg SB.

Similar Names. See Early Scarlet Horn.


Early Chantenay. Bue Old Van Yng. For similar names see Chantenay.
Early English Horn.  Brn Gng.  For similar names see Early Scarlet Horn.
Early Favorite.  Hrn.
Early Forcing.  Btl Mud Rec Thr.  For similar names see French Forcing.
Early French Forcing.  Alr Amh Blyg Bug Buc Bui CE Cle C&B CF Cox Cur Evr
        Fst GH TG Hrn Hen Hcrt Hm H&P RHJ J&M K&W Kos Lnr LB Mas
        JCM MV May NK NV Poe Prn Phc Pot Roc Rt Sox S&W Tpk Trm T&B Vin
        We&D Wer Wdr Yng.
 Similar names.  See French Forcing.
Early French Forcing Horn.  Bel Bow Brr Ger.
 Similar names.  See Early Scarlet Horn.
Early French Horn.  Bel Kei.  For similar names see Early Scarlet Horn.
Early French Short Horn.  Hrs H&P Jns Vl.
 Similar names.  See Early Scarlet Horn.
Early Gem.  McK Ren.
Early Guerande Half Long.  Brn.  For similar names see Guerande.
Early Half Long.  DD.  For similar names see Half Long.
Early Half Long Carentan.  Drr Hrn Lam Spl.  For similar names see Carentan.
Early Half Long Danvers.  Pir Vl.  For similar names see Danvers.
Early Half Long Nantes.  Bgl Vau.  For similar names see Nantes.
Early Half Long Scarlet.  Bon Bui C&B CF DD Drr For Hrn Hen Jac J&S Lam
        Mau Mhl Min Nol Raw SC Spl Sh&W Vin.
 Similar names.  See Half Long Scarlet.
 Similar names.  See Carentan.
 Similar names.  See Chantenay.
 Similar names.  See Nantes.
Early Half Long Scarlet Pointed.  GH M&S.
 Similar names.  See Half Long Scarlet.
Early Half Long Scarlet Striped.  GH.
 Similar names.  See Half Long Scarlet.
 Similar names.  See Half Long Scarlet.
Early Horn.  Btl Ebe Ewag H&C K&W Mns MV Mrs Pri Pug S&F Sox AGT Wll.
 Similar names.  See Early Scarlet Horn.
Early Long Forcing.  Roe Shm.  For similar names see French Forcing.
Early Long Scarlet.  DD.  For similar names see Half Long Scarlet.
Early Market Favorite.  Roe Shm.
 Similar names.  See Livingston's Early Market.
Early Orange Horn.  Bdg.  For similar names see Early Scarlet Horn.
Early Oxheart.  Bak Bgl Bow Bui Del Jae Pug.  For similar names see Oxheart.
 Seedsmen's synonyms.  Guerande, Bow Bui Bak Jae Pug.
Early Round Forcing.  Pnt.
Early Round Parisian.  GH Mzy Thr.
Early Rubicon.  Bgl.  For similar names see Rubicon.
Early Scarlet.  Drrn Fur Lb Nk.  For similar names see Half Long Scarlet.
Early Scarlet Dutch Horn.  Bui.  For similar names see Early Scarlet Horn.
Early Scarlet English Horn.  D&H Sim.
 Similar names.  See Early Scarlet Horn.
 Seedsmen's synonyms.  Half Long Scarlet Horn, Sim.
Early Scarlet Forcing.  Bkl S&F Vau.  For similar names see French Forcing.
Early Scarlet French Forcing Horn.  Gng.
 Similar names.  See Early Scarlet Horn.
Early Scarlet French Horn.  Bru.  For similar names see Early Scarlet Horn.

Similar names.  Earliest Red Horn, Early Orange Horn, Scarlet Horn, Early Horn, Short Horn, Extra Early Horn, Earliest Short Horn, Early Short Horn, Early Short Horn Stump-Rooted, Early Scarlet Horn, Early Scarlet Horn Pointed, Early Scarlet Horn Blunt-Rooted, Scarlet Short Horn, Blunt-Rooted Horn, Point-Rooted Horn, Dutch Horn, Early Scarlet; Dutch Horn, Early Scarlet English Horn, Early English Horn, Early French Horn, French Short Horn, French Horn, French Forcing Horn, Early French Forcing, Early French Short Horn, Earliest French Short Horn, Extra Early French Short Horn, Early Scarlet French Horn, Early Scarlet French Forcing Horn.

Seedsmen's synonyms.  Short Horn, Bur Fst Fur LB NK Pac Wdr.

Similar names.  See Early Scarlet Horn.
Early Scarlet Horn Pointed.  Lan Stw.  For similar names see Early Scarlet Horn.


Similar names.  See Early Scarlet Horn.

Similar names.  See Early Scarlet Horn.
Early Scarlet Stump-Rooted.  Pks.  For similar names see Half Long Scarlet.

Similar names.  See Early Scarlet Horn.
Early Short Horn Stump-Rooted.  Pac Put SC T&B.

Similar names.  See Early Scarlet Horn.
Early Short Scarlet.  Bur Eas RE Ggy Kva Ren Sim Vau.

Similar names.  See Half Long Scarlet.
Seedsmen's synonyms.  French Forcing, RE.


Seedsmen's synonyms.  Earliest Short Horn, Bar.  French Forcing, Ren.

Golden Ball, Bur Sim.

English.  Pks.

Seedsmen's synonyms.  French Horn, Pks.
Extra Early Forcing.  Bdg DD Hns Koe Lan Mic Put.

Similar names.  See French Forcing.
Seedsmen's synonyms.  Orange Turnip Rooted, Bdg.

Similar names.  See French Forcing.
Extra Early French Short Horn.  Pri.  For similar names see Early Scarlet Horn.
Extra Early Horn.  Ewg MWJ.  For similar names see Early Scarlet Horn.
Extra Early Parisian Forcing.  W&D.
Extra Early Short Forcing.  Btl.  For similar names see French Forcing.
Farmer Seed Co.'s Market.  Fur.

Similar names.  See Livingston's Early Market.
Ferry's Improved Short White.  Entered as Short White.
First of All.  Sal.  

Similar names.  Salzer’s First of All.

French.  Man.  


French Forcing Horn.  CE Gra S&O Y&H.

Similar names.  See Early Scarlet Horn.

French Horn.  Mrs Pks.  For similar names see Early Scarlet Horn.

Seedsmen’s synonyms.  English Horn, Pks.

French Intermediate.  Brn.  For similar names see Intermediate.


French Red Forcing.  M&S.  For similar names see French Forcing.

French Short Horn.  Eas Hrv.  For similar names see Early Scarlet Horn.

Gatepost Orange.  Kei.  For similar names see Long Orange.

Giants Short White.  Mls JMM Sim.  For similar names see Short White.

Giants Short White Vosges.  Gra.  For similar names see Vosges.

Giants Victoria.  Evr.  For similar names see Victoria.

Giants White Australian.  M&S.

Giants White Belgian.  Brn GIs Vl.  For similar names see Belgian.

Giants White Vosges.  Ren.  For similar names see Vosges.

Golden Ball.  Drr Frd Man Sim.

Similar names.  Scarlet Golden Ball.


Golden Rod.  Man.

Green Top Orthe.  Ewg.

Similar names.  Improved White Green Top Orthe, White Green Top Orthe.


Seedsmen’s synonyms.  Early Gem, Ren.  Early Oxheart, Bak Bow Bui Jac Png.  Half Short Oxheart, Thr.  Oxheart, Bur Drr Fpr Fen Hen Lam, etc.  Oxheart Orange, Bgs S&O.

Half Long.  Gdn Gg Gi S&O Tpk.

CARROT.


SEEDSMEN'S SYNONYMS. Early Scarlet English Horn, Sim.

Half Long Carentan. CE Gra Gng RIJ Mnd Tat Til.

SIMILAR NAMES. See Carentan.


SIMILAR NAMES. See Chantenay.

Half Long Coreless. H&P Lan Rim Tat. For similar names see Red Coreless.


SIMILAR NAMES. See Danvers.


SIMILAR NAMES. See Guerande.

SEEDSMEN'S SYNONYMS. Oxheart, Ewg Gra Hde J&S Por S&R, etc.

Half Long Intermediate. Mrs. For similar names see Intermediate.

Half Long Luc. Bkt Ebe Eic Kei Rec Sph SB. For similar names see Luc.


SIMILAR NAMES. See Nantes.

Half Long Orange. Agn Brg Cx Fld Hul Ms.

SIMILAR NAMES. See Long Orange.

SEEDSMEN'S SYNONYMS. Danvers, Agn Cox.


SIMILAR NAMES. See Danvers.

Half Long Orange Rubicon. J&S. For similar names see Rubicon.

Half Long Point-Rooted. Bkt Bri Ebr Ewg Mzy Thr.

SIMILAR NAMES. See Half Long.

Half Long Pointed Danvers. Grw PM Rec. For similar names see Danvers.

Half Long Red. Brg (C&B Cox Cur Hen. For similar names see Half Long.

Half Long Red Danvers. Gng. For similar names see Danvers.

Half Long Red Nantes. Alr. For similar names see Nantes.

Half Long Red Orange. Brg. For similar names see Long Orange.


SIMILAR NAMES. See Half Long.

Half Long Red Stump-Rooted Nantes. Crs. For similar names see Nantes.


SIMILAR NAMES. See Rubicon.

Half Long Scarlet. Bni Crs Eie Fqr Hst XI Pir Shw Wd WS.


Half Long Scarlet Carentan. Cur. For similar names see Carentan.

Similar names. See Chantenay.

Half Long Scarlet Danvers. Ar Bui Jac Tex. For similar names see Danvers.

Half Long Scarlet French. Eiv Sk.

Similar names. See Half Long Scarlet, French.

Half Long Scarlet Luc. McK Ren. For similar names see Luc.

Seedsmen’s synonyms. Danvers, McK Ren.


Similar names. See Nantes.


Similar names. See Half Long Scarlet.

Half Long Scarlet Stump-Rooted. Bui Bui D&H Hlm H&P Jns Lea McM Pac Pot Por Pug S&R 17 W&D.

Similar names. See Half Long Scarlet.

Seedsmen’s synonyms. Chantenay, Ken.


Similar names. See Chantenay.

Half Long Scarlet Stump-Rooted Nantes. May Vk.

 Similar names. See Nantes.


Similar names. See Half Long.

Half Long Stump-Rooted Carentan. Ken MV Pac Sec S&W T&B.

Similar names. See Carentan.

Half Long Stump-Rooted Chantenay. Gng MV Sec S&W Thr T&B.

Similar names. See Chantenay.


Similar names. See Danvers.


Similar names. See Guerande.

Seedsmen’s synonyms. Oxheart, Ggy.

Half Long Stump-Rooted Luc. Thr W&D. For similar names see Luc.


Similar names. See Nantes.

Half Short Oxheart. Thr. For similar names see Oxheart.

Seedsmen’s synonyms. Guerande, Thr.

Hammond’s Chantenay, Hammond’s Improved Danvers, Hammond’s Early Favorite, Hammond’s Midseasons, Hammond’s Mammoth. Entered as Chantenay, Danvers, Early Favorite, Midseasons, and Mammoth.

Handsome. Jns.

Harris’ Half Long. Hrs. For similar names see Half Long.

Harris’ Perfected Half Long. Entered as Harris’ Half Long.

Henderson’s Intermediate. Big Hen Ren Rs. For similar names see Intermediate.

Henderson’s Intermediate Red. Rs. For similar names see Intermediate.


Holstein Mammoth White. May. For similar names see Mammoth White.


Similar names. See Intermediate.

James' Intermediate Scarlet. CE Ewg Gra Idle Kei Ree.

Similar names. See Intermediate.

Large Belgian. Del. For similar names see Belgian.

Similar names. See Intermediate.

Large Orange. Crs. For similar names see Orange.

Large Orange Belgian. Ken Liv Van. For similar names see Belgian.

Large Red Altringham. Bar Hlm Sim. For similar names see Altringham.

Large Red Belgian. M & S. For similar names see Belgian.

Large Scarlet Stump-Rooted. Ken. For similar names see Half Long Scarlet.

Seedsmen's synonyms. Orheart, Ken.

Large White. Brk.


Similar names. See Belgian.

Seedsmen's synonyms. Long White, Bdg.

Large White Green Top Belgian. Gls. For similar names see Belgian.

Large White Vosges. Bru Buc Bar Col Ebc Fst Gh Hl Mau Mc K Mns Pks Ree.

Similar names. See Vosges.

Large Yellow. Brk.


Similar names. See Belgian.

Light Yellow. Hrs. For similar names see Long Yellow Stump-Rooted.

Lilly, Bogardus & Co.'s Mastodon, Lilly, Bogardus & Co.'s Victoria. Entered as Mastodon and Victoria.

Livingston's Early Market. Liv.


Long Meaux. Ebc. For similar names see Red Meaux.

Long Nantes Stump-Rooted. M & S. For similar names see Nantes.

Long Orange. Alx Alr Anb Ar Bli Bak Brl Brt Bt Bt Bkt Bk Bkg Brk Bdg Bgs Bri Bru Bnu Bng Buc Bui Brb Bar Brr Brw C & J Cam CE Chl
EBC Cle C&B Col CE Cok Cox Crz Crs Cur CA Dlw D&H Del JD D&C Drv Drm Dun Eas Ebe Ebr Eic Eit Emt ER Evt Ewz Fmr For Fst Fex For Fle Frd Ger Gls Glh GLG Gra Grng GN Ggy Gry Cfg G&T Grw TG Hns Hde Hrn Hrn Hrs Hrv Hst Haw Hen H&C Hly Hln Hop Hse Hnt H&P Idk How Jae MWJ RHJ J&M J&S Jns Kei K&W Ken Kg Koe Kos Kra Lam Lan Lea Lnr LB Liv JL Loh Mnd Mgd Man PM Mns Mas May Man JCM JMW McM Mel Mic Mkl Mls Min MV M&K Mrs Mzy Nbr Nfr Nrl XI XK Ov Pgc Pgs Pks HP JMP Pir Pmn Pnc Pnt Ptt Poo For Pot Pri Puy Qkr Raw Ree Rec Roe Rs RP Sal &R SC &F Shw S&O Shm Sdr Sim Sox Spf Stk S&H S&W Tat Tem Tex TB Thm Thr Tbl A&T Tbl Til Tpk Trm T&B I'F Van Vn Vin Wat Wea Web W&O Wer Wll Wlt Wd Wdr WS Wyg Yng Y&H.


Seedsman’s synonyms. Altringham, Bdg. Long Scarlet, Bdg. Red Surry, SB.


Long Orange Belgian. Brn Old. For similar names see Belgian.

Long Red. Fld.

Similar names. Long Red Stump-Rooted.


Seedsman’s synonyms. Intermediate, D&H.

Long Red Stump-Rooted. Ewg Gra Spf. For similar names see Long Red.

Long Red Surry. Bue M&S Nol Roc. For similar names see Surry.

Long Scarlet. Bdg. For similar names see Half Long Scarlet.

Seedsman’s synonyms. Altringham, Bdg. Long Orange, Bdg. Surry, Bdg.

Long Scarlet Altringham. Bra Fle Hde Ken SC SB. Similar names. See Altringham.

Long Scarlet Exhibition. Mud.

Long Scarlet Intermediate. Thr. For similar names see Intermediate.

Long Nantes. M&S. For similar names see Nantes.

Long White. Cox Mnd Thr.

Similar names. Long White Green Top.

Seedsman’s synonyms. Belgian, Cox. Large White Belgian, Bdg.

Long White Belgian. Bel Bow Dun Fmr RHJ Pac Pks Pri Sal Shm Tem Thm Tri Vin Wer. Similar names. See Belgian.

Long White Green Top. Liv. For similar names see Long White.

Long White Green Top Belgian. Van. For similar names see Belgian.

Long Yellow Belgian. Pks SB. For similar names see Belgian.

Seedsman’s synonyms. Orange Belgian, SB.

Long Yellow Stump-Rooted. Bur Chl Ren.

Similar names. Yellow Giant, Light Yellow, Yellow.

Luc. LF.

**CARROT.**

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Similar names. Early Oxheart, Michael's Oxheart, Oxheart Orange, Half Short Oxheart, White Oxheart.


Oxheart Guernande. Hm. For similar names see Guernande, Oxheart.

Oxheart Orange. Bgs S&O. For similar names see Oxheart.

Seedsmen's synonyms. Guernande, Bgs S&O.

Paris Exposition. Thr.

Pearce's Half Long White. D&H. For similar names see Intermediate.

Pearce's Improved Half Long White. Entered as Pearce's Half Long White.

Pearce's Scarlet Model. D&H. For similar names see Model.

Seedsmen's synonyms. Chantenay, D&H.

Peer of All. D&H.

Perfect Forcing. Drr. For similar names see French Forcing.

Perfection Rubicon. M&S. For similar names see Rubicon.

Seedsmen's synonyms. Model, M&S.

Pointed Intermediate. Brn Ken. For similar names see Intermediate.

Point-Roofed Horn. Lan. For similar names see Early Scarlet Horn.

Pride of the Market. Blg. For similar names see Livingston's Early Market.

Prize Long Orange. Bui. For similar names see Long Orange.

Seedsmen's synonyms. Barstow's Improved, Bui.

Red Coreless. Min.

Similar names. Long Red Coreless, Half Long Coreless.

Red Intermediate. Cle C&H Efr Liv Spf Wdr. For similar names see Intermediate.

Red Meaux. Brr Mbs. For similar names see Long Meaux.

Red Parisian Forcing. J&S. For similar names see French Forcing.

Red St. Valery. Efr GH Man Mbs. For similar names see St. Valery.

Red Surry. Kei McK Ren. For similar names see Surry.

Seedsmen's synonyms. Long Orange, SB.

Rennie's Market Garden. Ren. For similar names see Livingston's Early Market.

Rubicon. Bri Dfr Frd Hse H&P JMJ J&S Mrs Rec Rs S&O Th I/.x.


St. James Half Long. Ehe. For similar names see Half Long.


St. Valery Half Long. Ewg. For similar names see St. Valery.
St. Valery Half Long Scarlet. Bui. For similar names see St. Valery.

St. Valery Intermediate. Bkt. For similar names see St. Valery.

Salzer’s Forcer. Sal. For similar names see French Forcing

Scarlet Carentan. Bdg. For similar names see Carentan.

Scarlet Chantenay Stump-Rooted. Hde. For similar names see Chantenay.

Salzer’s First of All, Salzer’s French Forcing, Salzer’s Improved Long Orange, Salzer’s Midsummer. Entered as First of All, French Forcing, Long Orange, and Midsummer.

Scarlet Golden Ball. Bar Hbt. For similar names see Golden Ball.

Scarlet Horn. Brr Cox Car Grw Mrs Sal Wea Wdr.

Scarlet Intermediate. Bgy Bgr Brg Rf Man McK Pks Ren Sim S&B Wd WS.

Scarlet Model. DkH.

Scarlet Nantes. Cox Mgr Mrs Sal. For similar names see Nantes.

Scarlet Perfection. Rcg Shn.

Scarlet Short Horn. Alx Cle Xl. For similar names see Early Scarlet Horn.

Scarlet Stump-Rooted. S&R. For similar names see Half Long Scarlet.

Short Horn. Bui Bur Fnr Fst Ggy Hbt LB NK Pae.


French Forcing, Bui.

Short Thick White. RIJ. For similar names see Short White.

Short White. Bow Buc Brh Bar CE Drm Fer Fle Ggy Gry Hry Hop Hse Lam Lar Loh Man Mrs Old Pk Pks For Ren Rce Rcc S&R A&G Ttb.

Short White. Bow Buc Brh Bar CE Drm Fer Fle Ggy Gry Hry Hop Hse Lam Lar Loh Man Mrs Old Pk Pks For Ren Rce Rcc S&R A&G Ttb.


Shumway’s Red Intermediate. Shm. For similar names see Intermediate.

Simmers’ Improved Giant Short White. Entered as Giant Short White.

Small French Forcing. Pir. For similar names see French Forcing.


Surry. Bdg Sml.

Surry. Bdg Sml.

Table Queen. May OV Tpk.

Vaughan’s Danvers. Entered as Danvers.

Very Early Scarlet. Drm.

Very Early Scarlet. Drm.

Very Early Short Horn Scarlet. Mhl Nol.

Victoria. Alt Ber Buc Cox DD Fnr GH Hum Iow LB May Mrs NK Roc.

Victoria. Alt Ber Buc Cox DD Fnr GH Hum Iow LB May Mrs NK Roc.

Vincent’s Intermediate. Vin. For similar names see Intermediate.

Vosges. May OV Tpk.

Vosges. May OV Tpk.

Similar names. See Belgian.

White Field. Gw TG.

Similar names. Cowboy Field.

White Giant. SB.

Seedsmen's synonyms. White Vosges, SB.

White Giant Green Top. Ewg Ptt.

White Green Top Orthe. D&II. For similar names see Green Top Orthe.

White Intermediate. RIJJ.

White Mastodon. Crs TB. For similar names see Mastodon.

White Oxheart. RIJJ. For similar names see Oxheart.

White Vosges. Cle Cox RIJJ Kei Mgd M&S Put Shn Thr Wat.

Similar names. See Vosges.

Seedsmen's synonyms. Giant, SB.


Yellow. Sim. For similar names see Long Yellow Stump-Rooted.


Similar names. See Belgian.

Yellow Danvers. Sal. For similar names see Danvers.

Yellow Giant. May. For similar names see Long Yellow Stump-Rooted.

Yellow Intermediate. Ewg RIJJ. For similar names see Intermediate.

Yellow Victoria. TB Wlt. For similar names see Victoria.

CAULIFLOWER.

Abbyssinian. Ewg.


American Beauty. Chl. For similar names see Beauty.

American Late Beauty. M&S. For similar names see Beauty.

Autumnal Early Giant. LB. For similar names see Autumn Giant.

Autumnal Late Giant. Ggy Ptt. For similar names see Autumn Giant.

Autumn Giant. Bai Brd Bdg Bri Bru CE Chl RE Fmr Ger GIH Gra Hns Ham Hrn Hst J&M Ken Kg Lar Man Man May NK Pac Sal Sim Spf Tat Thm Thr Til Van Wer.

Similar names. Veitch's Autumn Giant, Autumnal Early Giant, Autumnal Late Giant.

Seedsmen's synonyms. Italian, Bdg. Late Italian, Sim.

Autumn King. Bru.

Barnard's Early Snowball. Entered as Early Snowball.

Beauty. Tat.

Similar names. American Beauty, American Late Beauty, Long Island Beauty, Price's Danish Beauty, Bell's White Beauty, Danish Beauty.

Beckert's Early Snowball. Entered as Early Snowball.

Bell's Early Surehead. Bel. For similar names see Salzer's Surehead.

Bell's White Beauty. Entered as White Beauty.

Berlin Dwarf. Ggy. For similar names see Extra Early Dwarf.

Best Early. D&C Hst MWJ.

Similar names. Burpee's Best Early, Sandahl's Best Early.

Best of All. D&H.

Blue Ribbon. Sal.

Similar names. Salzer's Blue Ribbon.
CAULIFLOWER.

Breck's White Bouquet. Entered as White Bouquet.
Bruce's Early Dwarf Erfurt, Bruce's Autumn King. Entered as Early Dwarf Erfurt and Autumn King.
Buckbee's Early Favorite, Buckbee's Extra Early Chief. Entered as Early Favorite and Extra Early Chief.
Buist's Early Snowball. Entered as Early Snowball.
Burpee's Best Early. Bur Neb. For similar names see Best Early.
Burpee's Dry Weather. Entered as Dry Weather.
California Mammoth Market. J&M Thm. For similar names see California Wonder.
California Wonder. Cox Pac.
  Similar names. Cox's California Wonder, California Mammoth Market.
Carrara Rock. Bdg Elt Kei W&D.
Carter's Defiance, Carter's Dwarf Mammoth. Entered as Defiance and Dwarf Mammoth.
Champion Erfurt. S&F.
Copenhagen. H&P J&S.
  Similar names. Extra Early Copenhagen.
  Seedsmen's synonyms. Denmark, J&S. Dry Weather, J&S.
Cox's California Wonder. Entered as California Wonder.
Danish Beauty. Pri.
Danish Drought-Resisting. Run. For similar names see Early Dwarf Danish.
Danish Early Snowball. Btl Gls.
Danish Giant. Gra. For similar names see Early Dwarf Danish.
Danish Snowball. Btl Dw Hns Kra LB Van. For similar names see Snowball.
  Seedsmen's synonyms. Sandahl's Best Early, Pug.
Darch & Hunter's Eureka. Entered as Eureka.
Defiance. Ggy.
  Similar names. Carter's Defiance.
Demi-Dur. RE Kei Ren.
  Similar names. Early Demi-Dur.
Denmark. Brl C&B Fbr J&S Shv Thr.
  Seedsmen's synonyms. Copenhagen, J&S. Dry Weather, J&S.
Dreer's Dwarf Erfurt, Dreer's Earliest Snowstorm. Entered as Dwarf Erfurt and Earliest Snowstorm.
Dry Weather. Bar Hbt Man M&K Sim Wat.
  Similar names. Burpee's Dry Weather.
  Seedsmen's synonyms. Copenhagen, J&S. Denmark, J&S.
Dutch. Bdg Crs Pac.
  Similar names. Early Dutch, Large Late Dutch.
Dwarf Erfurt. CE Dk/H Drr Ggy Hrv JMM Mhl S&O Tat Tex.
  Similar names. See Early Dwarf Erfurt.
Dwarf Erfurt Small-Leaved. Bgs. For similar names see Early Dwarf Erfurt.
Dwarf Mammoth. K&W.
  Similar names. Carter's Dwarf Mammoth.
  Similar names. See Early Dwarf Erfurt.
Earliest Erfurt. Lmr. For similar names see Early Dwarf Erfurt.
Earliest Snowball. Mr Fst SB Wer Wd WS. For similar names see Snowball.
Earliest Snowstorm. Drr Mhl M&S. For similar names see Snowstorm.
Early Alabaster. J&S M&S.
  Similar names. Improved Early Alabaster.
Early Boston.  Fax.

Similar names:  Faxon's Early Boston.

Early Demi-Dur.  Sim.  For similar names see Demi-Dur.

Seedmen's synonyms:  Half Early Paris, Sim.

Early Dutch.  Ggy Rn.  For similar names see Dutch.


Early Dwarf Danish.  Brk For Gry S&F.

Similar names:  Extra Early Danish, Danish Drought-Resisting, Large Danish, Danish Giant.

Seedmen's synonyms:  Sea Foam, S&F.

Early Dwarf Erfurt.  Alr Bel Bow Brn Bui Bar CE Cte Col CA Del Drr Eic RE Ewg Ger GH Gng G&T Hrs Lan Man Mag McM Mls M&S Neb Nef Nl Pcs JMP Pnc Pri Qtr Rec Sal SC &F SIE Sim Tel T&B W&D.


Seedmen's synonyms:  Snowball, Etc.

Early Dwarf Erfurt Small-Leaved.  Pnt.

Similar names:  See Early Dwarf Erfurt.

Early Dwarf Snowball.  Bdg.  For similar names see Snowball.


Similar names:  See Early Dwarf Erfurt.

Early Favorite.  Bow Bnc Brb CE Fer Frd Hlm Lam Mls Pnc Rce Rcg Shm Til.

Similar names:  Buckbee's Early Favorite, La Crosse Early Favorite, Mills' Early Favorite, Shumway's Early Favorite, Improved Early Favorite, Gardener's Favorite, Favorite.

Early Gilt-Edge Snowball.  Bri J&$S.  For similar names see Snowball.

Early Italian Giant.  Eic Ggy.  For similar names see Italian.

Early London.  Bai Bow Brk Bdg Cte C&B Crs Elt Ewg Fer GH Hly Hen RHJ LB Man Man Mag Mzy Pcs Pkt Ptt Pug Rec S&O Shm Sox Thr T&B Vin.


Seedmen's synonyms:  Early Dutch, Crs Bdg.

Early London Market.  Ggy.  For similar names see Early London.

Early Padilla.  Fnr Ggy AGT.


Seedmen's synonyms:  Nonpareil, Fer SB Vw Wfa.

Early Paris Forcing.  S&O.  For similar names see Early Paris.
Early Paris White. Cam Tat. For similar names see Eearly Paris.

Early Snowball. Alb Anb Ar Bai Bak Brd Btr Bt Bt Bw Bw Bw Brk Bru Bng Cuc Cuc L.B. Brb Brw Brw CE Cle CKB Col CF Cok Cox Gys Cur CA Dhw &D Bw Alb Drr Drr Dwn Ebr Eir Elv Exx Evg Fm ...
AMERICAN VARIETIES OF VEGETABLES.

Faust's Earliest Snowball. Entered as Earliest Snowball.
Favorite. 
   Seedsmen's synonyms. Early Dutch, Ren.
Faxon's Early Boston. Entered as Early Boston.
First and Best. W&D.
First Crop. Mbl.
   Similar names. Sutton's First Crop.
Ford's Extra Early Dwarf Erfurt. Entered as Extra Early Dwarf Erfurt.
Fottler's Champion Erfurt. Entered as Champion Erfurt.
Gardener's Favorite. Entered as Favorite.
German Erfurt. D&H. For similar names see Early Dwarf Erfurt.
Giant White Pearl. D&H.
Gilt-Edge. Poo Weel.
   Similar names. Thorburn's Gilt-Edge, Simmers' Gilt-Edge.
Gilt-Edge Extra Early Dwarf Erfurt. M&S.
   Similar names. See Early Dwarf Erfurt.
   Similar names. See Snowball.
Haage's Dwarf Early. Dw. For similar names see Extra Early Dwarf.
Half Early. McK Ren. For similar names see Half Early Paris.
Half Early French. Lan. For similar names see Half Early Paris.
Half Early Large French. GH. For similar names see Half Early Paris.
Half Early Paris Nonpareil. Bdg Bri. For similar names see Half Early Paris.
Henderson's Early Snowball, Henderson's Extra Early Snowball, Henderson's Snowball. Entered as Early Snowball, Extra Early Snowball, and Snowball.
Holmes' Improved Early Snowball. Entered as Early Snowball.
Hot Weather. Ms.
Ideal. Vk.
   Similar names. Vick's Ideal.
Italian. Bdg.
   Similar names. Late Italian, Large Late Italian Giant, Early Italian Giant.
   Seedsmen's synonyms. Autumn Giant, Bdg.
Italian Giant Early Surehead. M&S.
   Similar names. See Salzer's Surehead.
Imperial. Gig Lan Pue.
Improved Earliest Snowstorm, Improved Early Alabaster, Improved Early Dwarf Erfurt, Improved Early Favorite, Improved Early Paris, Improved Early Snowball, Improved Snowball, Improved Algiers. Entered as Earliest Snowstorm, Early Alabaster, etc.
Kronk's Perfection Dwarf Erfurt. Entered as Perfection Dwarf Erfurt.
La Crosse Early Favorite. Sd. For similar names see Early Favorite.
Landreth's Early Snowball. Entered as Early Snowball.
Landreth's Reliable. Lan.
Large Algiers. Bow Bdg Bng C&J Crs Eic Elt Fer Ger Gls Hrs Ltr Mnd Neb Nol NI Pac Pks Pug Thr.
CAULIFLOWER.

Similar names. Large Algiers, Late Algiers, Large Late Algiers, Improved Algiers, Eichling's Improved Large Algiers. See also Algiers.

Large Danish. DD. For similar names see Early Dwarf Danish.

Large Early Dwarf Erfurt. MV Mzy Sox Thr.

Similar names. See Early Dwarf Erfurt.

Large Early Erfurt. GH JMM Van Will.

Similar names. See Early Dwarf Erfurt.

Large Erfurt. Bai Bdr Mic Old. For similar names see Early Dwarf Erfurt.

Large French. Bai.

Large Late Algiers. Bai CE C&B DD Frd Gls GH Hrn Hst Hen Hop Lam Liv Loh Ma Mie HP Poo For Rec S&R Sim Vl Y&H.

Similar names. See Algiers.

Large Late Asiatic. Cox SC.

Large Late Dutch. Lam. For similar names see Dutch.

Large Late Italian Giant. Eic. For similar names see Italian.

Large Late Le Normand. Sim Sim. For similar names see Le Normand.

Large Late Stadtholder. Bdg.

Large Late Walcheren. Sim. For similar names see Walcheren.

Large Le Normand Short Stem. Hrs SB. For similar names see Le Normand.

Large Walcheren. Bru. For similar names see Walcheren.

Late Algiers. Drw Ggy Sox. For similar names see Algiers.

Late Erfurt Market. Sim. For similar names see Early Dwarf Erfurt.

Late Italian. Sim. For similar names see Italian.

Seedsmen’s synonyms. Autumn Giant, Sim.

Late Utrecht. Tat.

Le Normand. Ewg low Lam JCM McK Trn.

Similar names. Le Normand’s Short Stem, Le Normand’s Mammoth, Le Normand’s Short Stem Mammoth, Large Le Normand’s Short Stem, Large Late Le Normand.

Le Normand’s Mammoth. D&H. For similar names see Le Normand.


Similar names. See Le Normand.

Seedsmen’s synonyms. Carter’s Extra Dwarf Mammoth, Bdg.

Le Normand’s Short Stem Mammoth. Ger Ggy Pac Pt D Wdr.

Similar names. See Le Normand.


Leonard’s Short Stem. Mhl Min.

Lilly, Bogardus & Co.’s Earliest Dwarf Erfurt. Entered as Earliest Dwarf Erfurt.

Livingston’s Earliest. Liv JL. For similar names see Extra Early.

Long Island Beauty. Ggy. For similar names see Beauty.

McCullough’s Earliest Dwarf Erfurt. Entered as Earliest Dwarf Erfurt.

McKenzie’s Early Snow Cap. Entered as Early Snow Cap.


Similar names. Van Namen’s Mammoth Autumn Snow White.

Matador. Sce.

Maule’s Prize Earliest. Entered as Prize Earliest.

Michell’s Erfurt. Entered as Erfurt.

Midsummer. Sal.

Similar names. Salzer’s Midsummer.
Mills’ Early Favorite. Entered as Early Favorite.

Model. GH NK.

Moore & Simon’s Italian Giant Early Surehead. Entered as Italian Giant Early Surehead.


Midsummer. Sal.

Noll’s Extra Early. Nol. For similar names see Extra Early.

Similar names. Noll’s Extra Early, Livingston’s Earliest, Maule’s Prize Earliest.


Northern Early Snowball. GN. For similar names see Snowball.

Padilla. Tih.

Perfection Dwarf Erfurt. Fqr.

Plant Seed Co.’s Earliest Dwarf Erfurt. Entered as Earliest Dwarf Erfurt.

Price’s Danish Beauty. Entered as Danish Beauty.

Prize Earliest. Mau.

Similar names. Maule’s Prize Earliest.

Queen of the Danes. Ewg.


Rennie’s Earliest Dwarf Erfurt. Entered as Earliest Dwarf Erfurt.

Salzer’s Blue Ribbon, Salzer’s Midsummer. Entered as Blue Ribbon and Midsummer.

Salzer’s Surehead. Sal.

Similar names. Bell’s Early Surehead, Moore & Simon’s Italian Giant Early Surehead, Italian Giant Early Surehead.

Sandahl’s Best Early. Pug. For similar names see Best Early.

Seedsmen’s synonyms. Danish Snowball, Pug.


Sea Foam. Raw.

Similar names. Rawson’s Sea Foam.

Seedsmen’s synonyms. Early Dwarf Danish, S&F.

Second Erfurt. Vau. For similar names see Early Dwarf Erfurt.

Shumway’s Early Favorite. Entered as Early Favorite.

Simmers’ Early Dwarf Erfurt. Entered as Early Dwarf Erfurt.

Simmers’ Gilt-Edge. Sim. For similar names see Gilt-Edge.

Small-Leaved Erfurt. Spl. For similar names see Early Dwarf Erfurt.


Similar names. Ebeling’s Snowball, Eichling's Snowball, Henderson’s Snowball, Danish Snowball, Extra Early Danish Snowball, Early Snowball, Early Snowball Forcing, Barnard’s Early Snowball, Beckert’s Early Snowball, Buist’s Early Snowball, Henderson’s Early Snowball, Landreth’s Early Snowball, Weaver’s Early Snowball, Earliest Snowball, Faust’s Earliest Snowball, Wood’s Earliest Snowball, Extra Early Snowball, Thorburn’s Extra Early Snowball, Henderson’s Extra Early Snowball, Improved Snowball, Improved Early Snowball, Holmes’ Improved Early Snowball, Gilt-Edge Snowball, Early Gilt-Edge Snowball, World’s Best Snowball, Northern Early Snowball, Early Dwarf Snowball.

Seedsmen’s synonyms. Early Dwarf Erfurt, Eic.
Snowstorm. May.

Similar names. Earliest Snowstorm, Dreer's Earliest Snowstorm, Improved Earliest Snowstorm.

Steele-Brigg's Extra Early Whitehead. Entered as Extra Early Whitehead.
Steele's Whitehead. Entered as Whitehead.
Sutton's First Crop. Entered as First Crop.
Thorburn's Extra Early Snowball. Entered as Extra Early Snowball.
Thorburn's Gilt-Edge. Bt Ebr Ggy Thr. For similar names see Gilt-Edge.
Thorburn's Large Early. Thr.


Vaughan's Earliest Dwarf Erfurt. Entered as Earliest Dwarf Erfurt.
Similar names. See Autumn Giant.

Vick's Ideal. Entered as Ideal.
Walcheren. Bai Bel Bui Emr GH Hrs NK Pac Ren Thr W&D.
Similar names. Walcheren White, Large Walcheren, Large Late Walcheren.
Walcheren White. SB. For similar names see Walcheren.
Weaver's Earliest Dwarf Erfurt, Weaver's Early Snowball. Entered as Earliest Dwarf Erfurt and Early Snowball.
Wernich's Earliest Dwarf. Wer. For similar names see Extra Early Dwarf.

White Beauty. Bel.
Similar names. Bell's White Beauty.

Similar names. Breck's White Bouquet.

White Excelsior. Pg.

Whitehead. Gng.

Wood's Earliest Snowball. Entered as Earliest Snowball.

World Beater. Del Gra.

World's Best Snowball. McK Ren. For similar names see Snowball.

CAULIFLOWER.

CELERIAC.

(Also called Turnip Rooted Celery and German Celery.)


Similar names. Thorburn's Giant.

Early Erfurt. Bdg. For similar names see Large Erfurt.

Erfurt. Kos Pnt Thr. For similar names see Large Erfurt.

Extra Large Erfurt. Brd. For similar names see Large Erfurt.

Giant. Bgs Chl.

Seedsmen's synonyms. Large Smooth Prague, Bgs.
**AMERICAN VARIETIES OF VEGETABLES.**

**Giant Erfurt.** DLW Fqr Hen Sim. For similar names see Large Erfurt.

**Giant Prague.** Bkt Bri CE DD LB JL Mas HP Put Pri Sie Van.

**Giant Smooth Prague.** Drr Liv Mrs For S&R. Similar names. See Large Smooth Prague.

**Giant Early Erfurt.** CE Hrs Rce Sie. For similar names see Large Erfurt.

**Improved.** Gry.


**Large Erfurt.** Cle Cur DD Fmr Fri Ken JMM May NK Spf W&D Wer. Similar names. Extra Large Erfurt, Large Early Erfurt, Early Erfurt, Large White Erfurt, Giant Erfurt, Improved Erfurt.

**Large Paris.** DD. For similar names see Large Smooth Prague.

**Large Prague.** Iml Pir Ptt. For similar names see Large Smooth Prague.

**Large Smooth.** Mns.

**Large Smooth Paris.** Ken Raw.

**Large White Erfurt.** SC. For similar names see Large Erfurt.

**Ne Plus Ultra.** M&S.

**Paris.** C&J. For similar names see Large Smooth Prague.

**Prague.** M&S Mzy. For similar names see Large Smooth Prague.

**Smooth Prague.** Jns Lnr. For similar names see Large Smooth Prairie.

**Thorburn's Giant.** Thr. For similar names see Barnard's Giant.

**CELERY.**

**Alexander's White Plume.** Entered as White Plume.

**American Triumph.** Thb.

**American White Solid.** Grw May. For similar names see Giant White Solid.

**Beckert's Hardy Winter.** Beckert's Perfection Winter, Beckert's Silver Spray. Entered as Hardy Winter, Perfection Winter, and Silver Spray.


** Similar names.** Improved Boston Market, Dwarf Boston Market.

**Breck's Christmas.** Entered as Christmas.

**Broad-Ribbed.** M&S.

**Broad-Ribbed Kalamazoo.** CF Cox Evr GH Hrn H&P Pac JMP Ptt Pri. Similar names. See Kalamazoo.

**Bruce's Hamilton Red.** Entered as Hamilton Red.

**Buckbee's Golden Heart.** Buckbee's Perfected Kalamazoo. Entered as Golden Heart and Kalamazoo.

Burpee's Giant White Solid. Entered as Giant White Solid.

California Golden Self-Blanching. Vk.

Carter's Crimson. Ren S&F.


Carter's Dwarf Crimson. Brk Fqr Ger MrK Ren.

Carter's Incomparable Dwarf Crimson. Kei Sim.

Cooper's Branching. Mhl. For similar names see Cooper's Cutting.

Cooper's Cutting. Mhl Mrs Thr.

Cooper's Improved Branching. Cooper's Improved Cutting, Cooper's Improved Branching.

Cooper's Improved Branching and Cooper's Cutting. Entered as Cooper's Branching and Cooper's Cutting.

Covent Garden Red. S&W.

Cove Garden Rose. Mzy. For similar names see Covent Garden Red.


Crawford's Half Dwarf. Golden Heart, Elt Thr. Henderson's Half Dwarf, J&S.

Christmas. Brk.

Cremona. J&S.

Crimson. Sal. For similar names see Carter's Crimson.

Cutting. Buc Fer Wdr. For similar names see Cooper's Cutting.

Dobbie's Invincible White. Ewg. For similar names see Red.

Doree's Monarch. Entered as Monarch.

Dwarf Boston Market. Ewg Gra Mnd Shm. For similar names see Boston Market.

Dwarf Crimson. Gry Hrv Man. For similar names see Carter's Crimson.


Dwarf Golden Heart. See Golden Heart.

Dwarf Golden Self-Blanching. CE Hse J&M Nef Rec S&O.


Dwarf Rose. Drr Mnd JMM SB. For similar names see Rose.

Dwarf White. Anb Blt Bon Drh Hns Hnt Mnd Stw Trw W&D.
Similar names. Henderson's Dwarf White, Henderson's Dwarf, Simmers' Dwarf White Winter, Improved Dwarf White, Dwarf Large Ribbed, Simmers' Large-Ribbed Dwarf White Winter, Incomparable Dwarf White, Early Dwarf White, Prince of Wales Dwarf White.

**Dwarf White Golden Heart.** Pri. For similar names see *Golden Heart*.

**Dwarf White Kalamazoo.** Tl. For similar names see *Kalamazoo*.

**Dwarf White Solid.** Bow Brn Fer GIs Inl Liv Sal SB Thm.

Similar names. See *Giants White Solid*.


**Dwarf White Solid Kalamazoo.** Bgs C'E Loh Rec.

Similar names. See *Kalamazoo*, *Giants White Solid*.

**Early Arlington.** Drn Fqr Fax Gry Lnr.

**Early Dwarf Red.** Bdg. For similar names see *Red*.


**Early Dwarf White.** Bdg. For similar names see *Dwarf White*.

Seedsmen's synonyms. *Incomparable Dwarf*, Bdg.

**Early White Plume.** Bdg RE. For similar names see *White Plume*.

**English White Solid.** Pks. For similar names see *Giant White Solid*.

**Eureka.** Evr May.

**Evans' Triumph.** Entered as *Triumph*.

**Far Superior.** Mrs.

**Far Superior Many Heart.** J&S Rim Vum.

**Fin de Sicle.** Bdg Dlw Ebr Hlm J&S Lan Mhl Mzy Mns Rol Rim Sie Thr W&D.

Similar names. Thorburn's *Fin de Sicle*.

**French Dwarf.** RE.

**French Golden Self-Blanching.** Bdg Mns Nol.

Similar names. See *Golden Self-Blanching*.

**French's Success.** Hrs.

**French Golden White Solid.** RHJ. For similar names see *Giant White Solid*.

**Giant Dwarf Golden Heart.** Sim. For similar names see *Golden Heart*.

**Giant Golden Heart.** Brd Brg Brg Brb Brw Gm CE Hr D&H Frd G&T Grw TG Hay J&S Kna Lnr LB Liv Mnd PM Mns Mau Mns Pst Rec Sal Shw Shm Ten Vum Wr.

Similar names. See *Golden Heart*.

**Giant Pascal.** Agn Alx Alr Anb Ar Bai Brd Brt Btl Bkt Bld Brg Bow Brk Bldg Bgs Brf Brn Bng Buc Brn Brv Cm CE Chl Cle Ck& B Col CE Cok Cox Crs Cur Dlw D&H Del DD D&C Drr Drw Fas Ebr Efr Eic Eln RE Evr Fmr Fqr Fst Fer Fic Fid Ger Gls Gdn GH Grr Gyy Gry G&T Grw TG Haus Hm Hde Hrnn Hrs Hrv Hst Hen Htt H&C Hlm Hop Hse Hnt H&P Iml Low Jac J&M J&J Jns Kei K&W Ken K&F Kg Kos Kra Lrm Lan Lan Lnr LB Liv JL Lm Mnd Mgd Mnn Mns Mns Mau Mny JCM JMM McK McM Pel Mel Mhl Mls MV Mrs Mzy Nbr Xol XK Ov Old Pac Pk Psd HP JMP Pfr Prn Put Ptt Poo Pve Pot Pri Qkr Raw Rev Rnc Rnc Rm Rm Rm Rr Rs S&R S&F Shw S&O Shm Sim Sim Sox Spf Stk SB Stw S&H S&W Tat Tem Tex Thm Thr Thl Til Tkp Trm T&R Ul Van Vr Vin Wat Wea Web W&D Wer Wd Wr Ws Yng Y&H.


**Giant Red.** Raw Shm. For similar names see *Red*.

**Giant White.** Brg Ebe Mck. For similar names see *Giant White Solid*.

**Giant White Pascal.** Brn Btt Ewg SC. For similar names see *Giant Pascal*.

**Giant White Plume.** Gm Jac. For similar names see *White Plume*.

**Giant White Solid.** Alr Ar Brd Brw CE Cle CA Del Emr GH TG Haw Hen Hlm
CELEY.

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Iml J&S K&F Lam LB Liv JCM JMM Min MV Mrs HP Prn Ptj For Pri Qkr Ren Rec RP S&R Sox Spf Ten TR Trm Web W&D.


SEEDSMEN’S SYNONYMS. Kalamazoo, Ren.

Golden Dwarf. Bug Bui C&F CF Crs Cur CA Fer Gdn Lw J&S Kl Lam Lam Mnd Mrs Neb Pac Prn Raw Roe SB Stw JS W&D Wd WS.

SIMILAR NAMES. Henderson’s Golden Dwarf.

SEEDSMEN’S SYNONYMS. Golden Heart, Bue CA Crs For Lam WS, etc.


SEEDSMEN’S SYNONYMS. Golden Heart, Nef.

Golden Half Dwarf. Drr. For similar names see Half Dwarf.


SEEDSMEN’S SYNONYMS. Crawford’s Half Dwarf, Eit Thr. Golden Dwarf, Crs CA Fer J&S Neb Wd, etc. Golden Dwarf Self-Blanching, Nef.

Golden Jewel. Y&H.


SIMILAR NAMES. Buis’ts Golden Market.

Golden Rose. Btk Bir Brm Col Crs Gs Gzy Liv JL Mns Mrs Pg W&D Wd WS.

SIMILAR NAMES. See Rose.


Golden Rose Self-Blanching. Ber Drr Ger JMM.


Seedsman's synonyms. Golden Yellow Large Solid, Buc For Lam Iml HP Loh, etc. Paris Golden, Mrs.

Golden Yellow Self-Blanching. Gls. For similar names see Golden Self-Blanching.
Goodwin's White Solid. Bgs. For similar names see Giant White Solid.

Half Dwarf. Bak Btl Ber C&B Emr Lam Mnd Mrs Pnu RP Sw W&D.


Half Dwarf Golden Heart. Bdg Ebe Ptt. For similar names see Golden Heart.
Half Dwarf Large-Ribbed. Eic. For similar names see Half Dwarf.
Half Dwarf Solid. Min. For similar names see Half Dwarf.
Half Dwarf White. Crs Eas. For similar names see Half Dwarf.

Hamilton Red. Bru. For similar names see Red.
Hamilton Rose. RE. For similar names see Rose.

Hammond's Improved White Plume. Entered as White Plume.

Hardy Winter. Bri.

Similar names. Beckert's Hardy Winter.


Henderson's Dwarf White. Gra Hen Lea XI VK.

Similar names. See Dwarf White.

Henderson's Golden Dwarf. Hen. For similar names see Golden Dwarf.

Henderson's Golden Rose. Hen. For similar names see Rose.


Similar names. See Half Dwarf.

Seedsman's synonyms. Crawford's Half Dwarf, J&S.

Henderson's Half Dwarf White. CE Fqr Rec. For similar names see Half Dwarf.

Henderson's Rose. Alr Hen Kei JMP Pfr Shm. For similar names see Rose.

Holmes' White Plume. Entered as White Plume.

Incomparable Dwarf Crimson. CE Kos Rec.

Similar names. See Carter's Crimson.

Incomparable Dwarf Red. Tat. For similar names see Red.

Incomparable Dwarf White. Crs. For similar names see Dwarf White.

Imperial. Sim.

Similar names. Simmers' Imperial, Imperial Dwarf Large-Ribbed.

Imperial Dwarf Large-Ribbed. Bur.

Improved Boston Market, Improved Dwarf Golden Heart, Improved Dwarf White, Improved Giant Pascal, Improved Golden Heart, Improved Golden Self-Blanching, Improved Half Dwarf, Improved Large White Solid, Improved Pink Plume, Improved White Plume. Entered as Boston Market, Dwarf Golden Heart, Dwarf White, Giant Pascal, Golden Heart, Golden Self-Blanching, etc.

Johnson and Stokes' Cremona. Entered as Cremona.


Similar names. Dwarf White Kalamazoo, Dwarf White Solid Kalamazoo, Buckbee's Perfected Kalamazoo, Large-Ribbed Kalamazoo, Broad-Ribbed Kalamazoo.

Seedsman's synonyms. Dwarf White Solid, Fer Iml Lam. Giant White Solid, Ren. Large-Ribbed Kalamazoo, Fer. Solid Ivory, D&H LB.

Keppler's Long Island. Brk S&W.
Laing's Mammoth Red.  VK.  For similar names see Red.
Large-Ribbed Kalamazoo.  Agn Del J&S MV Mzy Sor Tat Thr.
Similar names.  See Kalamazoo.
Large-Ribbed Red.  Bur Ms.  For similar names see Red.
Large Solid Golden Self-Blanching.  Bgs.
Similar names.  See Golden Self-Blanching.
Large Solid Golden Yellow.  Buc LB Fer Fle Haw Iml Lam Loh Roc.
Similar names.  See Golden Self-Blanching.
Seedsmen's synonyms.  Golden Self-Blanching, Buc Fer Fle Iml Loh IIP, etc.
Similar names.  See Golden Self-Blanching.
Large White.  Rom Hill Stw Fl.
Large White Plume.  Stk.  For similar names see White Plume.
Large White Solid.  Ax Aub Btl Bkt Bow Bui Dfr Eic Ewg Ger Gra Ken Mau
Mhl Pac JMP Roc Shw Stk Tpk Wd WS.
Similar names.  See Giant White Solid.
London Large Red.  Big.  For similar names see London Red.
London Market Red.  Gng.  For similar names see London Red.
London Prize Red.  McK SB Thr.  For similar names see London Red.
London Red.  Bkt Brr Cpr Hen S&W W&D.
Long-Keeping.  Pri.
Similar names.  Price & Reed's Long-Keeping.
Major Clark's Pink.  Crs Mnd W&D.  For similar names see Pink Plume.
Mammoth Red.  Hns.  For similar names see Red.
Mammoth White Solid.  Bui Gdn.  For similar names see Giant White Solid.
Manchester Prize Red.  D&H.  For similar names see Red.
Many Heart.  JMM Mhl.
Similar names.  Michell's Many Heart.
Matchless Giant Perfection Long-Keeping Golden Heart.  M&S.
Matchless Red Solid.  Min.  For similar names see Red Solid.
Mexican Solid.  Cam Hst.
Monarch.  Drf.
Similar names.  Dreer's Monarch.
Michell's Many Heart.  Entered as Many Heart.
Moore & Simon's Matchless Giant Perfection Long-Keeping Golden Heart,
Moore & Simon's White Walnut.  Entered as Matchless Giant Perfection Long-
Keeping Golden Heart and White Walnut.
Noll's White Plume.  Entered as White Plume.
Pacific Pink.  Bai.  For similar names see Pink Plume.
Similar names.  See Golden Self-Blanching.
Paris Golden.  Brk G&T TG Mrs Wdr.  For similar names see Golden Self-Blanching.
Seedsmen's synonyms.  Golden Self-Blanching, Mrs.
Wea.
Similar names.  See Golden Self-Blanching.
Paris Golden Yellow.  Bgs Cle D&H Ebe Ewg Gra Lan JCM JMM McK Raw Ren
S&F Sim Stw.
Similar names.  See Golden Self-Blanching.

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Paris Large Solid Golden Yellow. Bru RE Ggy SB.

Similar names. See Golden Self-Blanching.

Paris Market White Solid. Frq. For similar names see Giant White Solid.


Similar names. See Rose.

SEEDSMEN'S SYNONYMS. Golden Rose, Wd WS. Pink Plume, Drw.

Paris Self-Blanching. Brr. For similar names see Golden Self-Blanching.


Perfection Heartwell. Alr Bai Brd Bkt Big Bow Bdg Bru Bug Bui Bru Bur Brw

Cnu CE CF Gx Crs Cur Del DD Drf Ehe Ehr Elt Evt Fst Fer Gls TG Ham Hrs Hrv Hmn J&S Jns Kos Kra Lan Lnr LB Loh Mund Man May JMM Mhl Mrs May Nol XI NK Pae Pn Pnt Prt For Pri Prf Rim Roc S&K S&R Shm S&H Stk Stw S&W Tat Tem Thr Til Vk Wat Wea W&D Wd WS Y&H.

Similar names. Thorburn's Perfection Heartwell.

Perfection Winter. Bkt.

Similar names. Beckert's Perfection Winter.

Perle La Grand. Bkt Big Bri Bru Fnd Ggy G&T Ham Hlm J&S Kei LB Liv Mns Man Mhl Mrs Roc Thr Wdr W&S.

Pink. Hnt Lan Pac HP Stw. For similar names see Pink Plume.


Pink Aromatic. Iow. For similar names see Pink Plume.

Pink Beauty. Put.

Pink Plume. A1x Alr Btr Btld Bdg Bow Brr Bsh Brn Bru Buc Bui Bru Bur Brw C&J CE Cle CKB Col CF Go Crs Cur DD Drf Ehe Eic Elt Ewg Fnr Frq Frl Gls Grn Gry G&T Gw TG Hns Ham Hrn Hrs Hen Hbt Hpm Hl H&P Imp J&W J&M J&S Kei Kg Lm Ln Lnr LB Liv Jl Man May JMM Mcl McM Mhl Ms Mrs May Nol NK OV Pac Pkg Pks JMP Prn Pnt Pnt For Pri Raw Rce Rs S&R S&K Shw S&O Shm Sm Spd SB Stw S&H S&W Tat Tem Thr Thb Til Tpk T&B Van Vh Wm W&D Wer Wd Wdr WS Yng Y&H.

Similar names. Henderson's Pink Plume, Improved Pink Plume, Pink Plume Self-Blanching, Pink, Pink Aromatic, Pacific Pink, Major Clark's Pink.


Pink Plume Self-Blanching. Roc. For similar names see Pink Plume.

Price & Reed's Long-Keeping. Entered as Long-Keeping.

Prince of Wales Dwarf White. Kei Sim. For similar names see Dwarf White.

SEEDSMEN'S SYNONYMS. Sandringham, Kei Sim.

Red. Hnt Lan HP Stw.


SEEDSMEN'S SYNONYMS. Pink, Lan.

Red Solid. RJH Mhl.

Similar names. Matchless Red Solid.

SEEDSMEN'S SYNONYMS. Rose, Mhl.

Rennie's Giant White. Ren. For similar names see Giant White Solid.

Rose. Brd Bkt Brk 1ls Bri Buc Brr C&J CE Clc Clc CnL Crs Cur D&H Del Eas Elt Evt Ewg Fnr Frd Gra Gng Ggy Gry G&T Hrs Hlm Hop Hse H&J J&S Kei Kra Lnr LB Liv Mas M&K May Mhl Ms Mrs Pae Pnt Prt Roc Rte Rse Rye Rtt Sal Sim Tem Thm Thr Til T&B Vin W&D Wer Wll Wdr.
CELERY.


Rose Red. TG. For similar names see Rose, Red.

Rose Ribbed Golden Self-Blanching. J&S Lnr S&W Thr. For similar names see Rose.


Similar names. See Rose.


Similar names. See Rose.

Seedsmen's synonyms. Golden Rose, Brk Lnr.

Rose Ribbed Self-Blanching. Brk Brk Tg Tg Tg Mrs Mzy Pq Yng.

Similar names. See Rose.


Salzer's Giant. Sal. For similar names see Golden Self-Blanching.

Sandringham. Brk Cnr GJ S&F Sim.

Similar names. Sandringham Dwarf White.

Seedsmen's synonyms. Prince of Wales Dwarf White, Kei Sim.

Sandringham Dwarf White. Bgs Bnt Crs Cur Ebe Ger Gv Kei MV Mzy Nol Pac Rec Rec See Thr W&D.

Similar names. See Sandringham.

Savannah Market. 1st.

Schumacher. Bly Cle CF Drf Elt TG Hlm J&S Lan Lnr Man JMM Mrs Nol Ptt Pri Rec Rim Rec See Thr Van W&D Wdr.

Similar names. Thorburn's Schumacher.

Self-Blanching. May Min Nl Ov Sim Tpk.

Similar names. See Golden Self-Blanching.


Seymour's Giant White. Sim. For similar names see Giant White Solid.

Seymour's White. Sal Vin.

Seymour's White Solid. Bgs Fer Lnr. For similar names see Giant White Solid.

Silver Spray. Bkt Hrn.

Similar names. Beckert's Silver Spray.

Simmers' Dwarf White Winter. Sim. For similar names see Dwarf White.

Simmers' Imperial. Entered as Imperial.

Simmers' Large-Ribbed Dwarf White Winter. Sim.

Similar names. See Dwarf White.

Smallage. Wdr.

Seedsmen's synonyms. Cutting, Wdr.


Seedsmen's synonyms. Kalamazoo, D&H LB.

Soup. Brc Fer Man.

Sutton's A1. D&H Thr.


Sweet Nut. M&S.

Thorburn's Fin de Siecle, Thorburn's Perfection Heartwell, Thorburn's Schumacher. Entered as Fin de Siecle, Perfection Heartwell, and Schumacher.

Triumph. Brd Bow Brk Bri Bur Brw Col Cur Dlw Ebe RE Ewg Fer Gb Ggy TG
Vautier's White Vilmorin's Victory.

Vaughan’s Giant Golden Heart. Entered as Giant Golden Heart.

Vautier’s Giant Golden Heart, Vautier’s Golden Heart. Entered as Giant Golden Heart and Golden Heart.

Victory. Bg.


White Gem. Mhl.

Similar names. Sutton’s White Gem.


Seedsman’s synonyms. Self-Blanching, Etc.

White Solid. Col CF G&T Kei May Pr Sim S&W Tat T&B.

Similar names. See Giant White Solid.

White Triumph. Grl. For similar names see Triumph.


Similar names. Moore & Simon’s White Walnut.

Winter King. May. For similar names see Winter Queen.

Seedsman’s synonyms. Giant Pascal, May.

Winter Queen. Bri Bru Bui Bur Brw Drr Frd Ggy G&T TG Hlm J&S Lar Man JMM Mhl Mrs Rim Roc V7 WS.

Similar names. Winter King.

CHERVIL.

Chervil. Btl Cle Cox Cw Dv Ebe Fm Fqr Grw Hgt Hte Hst MJW J&S Ken Lam Man MV Mzy Neb HP Pnt Por Sal SC Sie Spf Stk Vin Wea.


Double. Bdg GH Mhl.

Double Curled. Gra Vau.

Fine Curled. S&F.

Italian Curled. M&S.

Plain. Bgs Etc Gra Thr.

Tuberous Rooted. Brk Bdg Bng Elt GH Lar Mnd Mzy Nol Thr W&D.
CHICORY.—COLLARDS.

CHICORY.

Chicory.    Ber Bar Cle Ewg Frd Frl Gra G&T Grw Ham RHJ Kei Man Mzy Pri Sal Spf AGT.

Asparagus.  Buc.


Common.     Drr Elt Ger GH J&M Pac Thm Thr Wea.

Curled.     Ken.

Improved Large-Leaved.   Ebe.

Large Magdeburg.   SB.

Large Red Magdeburg.  Brd.


Large-Rooted Brussels.   Pot Vau.

Large-Rooted Coffee.   GH Ggy.

Large-Rooted Magdeburg.  Bai Brt Bkt C&B GH Mnd MV OV HP Pot Ren Sim SWG T&B Vau Vin.

Long Large-Rooted Magdeburg.   Vk.

Magdeburg.   Cle.

Mammoth-Rooted.   M&S.

Wild.     Drr Elt Ger J&M Pac Thm Thr Wea.

Witloof.     Brk Ger Mod Pac Pot S&W Thr Vau W&D.

CHIVES.


CHUFAS.

(Also known as Earth Almonds and Grass Nuts.)


Seedsman's synonyms.  Earth Almonds and Grass Nuts.

Spanish.    MWJ Wd.

COLLARDS.

Blue Stem.    Cam Jac.

Similar names. Georgia Blue Stem, Long Blue Stem, North Carolina Blue Stem.

Buist's Cabbage.  Bui.  For similar names see Cabbage.

Buncombe.  Lan.

Cabbage.    CE CA Pnt.

Similar names. Buist's Cabbage, White Cabbage, Georgia White Cabbage.

Seedsman's synonyms. Georgia, CE. Improved White Georgia, Gg.

Creole.      Btl Cox Crs Drr Fmr Fer H&P Lan Lmr LB May McM Pnt SC Sim S&H Tex W&D.

Similar names. Southern Creole.

Seedsman's synonyms. Georgia, Btl Buc Cox Fer Frd Fmr, etc. Southern, Buc Btl Drr Fer May Sim, etc.
AMERICAN VARIETIES OF VEGETABLES.

Georgia. Btl Bel Bon Bow Brk Bdg Bgs Bur Brr Cam CE Cle C&B CF Cok Cox Crg Crs Del Eic Fnr Fst Fer Ger GH GN GxT Ham Hde Hrs Hst Hen Hlm Hmp H& P Iow Jac MWJ J&M J&S Kg Lam Lan Lnr LB Man Man May JMM MCM MV McS Mz Y D Kac Poo Pug Qkr Rec Ree Sal Shm Sim Sox S&H Tem Thm Thr Tmr T'Y Van Vk Vin Web W&D Wd WS.

Similar names. Improved White Georgia, Long Georgia, Georgia White Stem, Georgia Blue Stem, Georgia Southern, Georgia White Head.

Seedsman's synonyms. Cabbage Greens, CE. Creole, Bne Btl Cox Frd H& P Tcm, etc. Silver, Thm. Southern, Bow Btl Buc Hlm H&P Pug, etc. Southern Curled, M&S.

Georgia Blue Stem. Com Wlt. For similar names see Georgia, Blue Stem.

Georgia Southern. Evr Fer. For similar names see Georgia, Southern.

Georgia White Cabbage. Shw Wlt. For similar names see Georgia, Cabbage.

Georgia White Head. Cam Jac. For similar names see Georgia, White Head.

Georgia White Stem. Bui. For similar names see Georgia.

Improved White Georgia. Entered as White Georgia.

Landreth's Marrow. Lan.

Long Blue Stem. CA. For similar names see Blue Stem.

Long Georgia. Alx. For similar names see Georgia.

Mammoth Southern. Grw. For similar names see Southern.

Marrowfat. Sal.


North Carolina Buncombe. Shw.

Similar names. See North Carolina Short Stem.

North Carolina Short Stem. Hst Wd WS.


Pink Heart. MWJ Lan.

Rosette. Ren.

Silver. J&M Thm.

Seedsman's synonyms. Georgia, Thm.


Similar names. Georgia Southern, Mammoth Southern.

Seedsman's synonyms. Creole, Btl Buc Drr Fer LB May, etc. Georgia, Btl Bow Fer Lan Pug Sim, etc.

Southern Creole. GH. For similar names see Southern, Creole.

White Cabbage. Tat. For similar names see Cabbage.

White Georgia. Alx CA Gig Kg. For similar names see Georgia.

Seedsman's synonyms. Cabbageing, Gig.

White Head. Hst.

Similar names. Georgia White Head.

White-Leaved. MWJ.

CORN (FIELD CORN).

Alexander's Southern White Snowflake. Entered as Southern White Snowflake.

All Gold. Sal.

Similar names. Salter's All Gold.

American Pride Early Yellow Dent. Ham.

Similar names. Hammond's American Pride Early Yellow Dent.

Angel of Midnight. Brk Brn CSC Crs Cur D&H Ebe Emr RE Ewg Fqr Kei Kos May Pot Pri Raw Rob Sal Sim Thr Wer.
Armstrong’s Early Rose. Mic MV Sor. For similar names see Early Rose.

Atwell. Gls.

**Seedsmen’s Synonyms.** Dutton, Gls.

Austin’s Colossal Yellow Dent. J&S.

Bailey’s Favorite. D&H. For similar names see Farmer’s Favorite.

Barnard’s Early Yellow Dent. Brd. For similar names see Yellow Dent.

Battles’ Cuban Giant Dent. Hop. For similar names see Cuban Mammoth.

Bennett’s Yellow. Alr.

Black Hawk. DD.

**Bloody Butcher.** CE CSC Frd Gra Hrs Kg NK Pir.

**Seedsmen’s Synonyms.** Northwestern Dent, NK.

Blue Blazed. D&H. For similar names see Red Blazed.

Blunt’s Mammoth. Fqr. For similar names see Blunt’s Prolific.

Blunt’s Prolific. Brk C&J Cam CSC Eic Ggy G&T Hrn Hst J&S K&W Kg JMM McM Mzy Stk Tat Thm Thr Wd.

**Similar Names.** Blunt’s White Prolific, Blunt’s Mammoth.

**Seedsmen’s Synonyms.** Mammoth Ensilage, J&S.

Blunt’s White Prolific. Alx Bui Drr Frd Gdn Mdl Pnt.

**Similar Names.** See Blunt’s Prolific, White Prolific.

Bonanza White Dent. May. For similar names see White Dent.

Boone County Prolific. Roe.

**Similar Names.** Boone County White.

**Boone County White.** Eer Wyg. For similar names see Boone County Prolific.


**Similar Names.** Breck’s Boston Market.


Buckbee’s Early Gold Mine, Buckbee’s Early Klondike. Entered as Early Gold Mine and Early Klondike.

Buist’s Early Golden Dent. Bui. For similar names see Golden Dent.

Buist’s Improved Early Golden Dent, Buist’s Prize Medal Southern White Snowflake. Entered as Buist’s Early Golden Dent and Prize Medal Southern White Snowflake.


Butler Dent. Ggy. For similar names see Early Butler Dent.

Calico Dent. Hrn JL Pir.

**Similar Names.** Up-to-date Calico Dent, Robb’s Improved Calico Dent.

**Canadian Cap.** Rs.

**Canadian Dent.** D&H. For similar names see Early Eight-Rowed Yellow Canada.

Cary’s Klondike. Kg WS. For similar names see Klondike.

**Champion Early White Pearl.** Bak HP Pnt Shw Tex Yng.

**Similar Names.** See Champion White Pearl.

**Champion White Dent.** Alx. For similar names see Champion Yellow Dent.

**Champion White Flint.** May. For similar names see Champion Yellow Dent.

**Champion White Pearl.** Alx Alr Anb Ar Bai Bis Bow Bui CSC Cle CCo Col Cox DD Ebr Eic Ewg Fmr Ger Gll Gra Ham Hde Hrn Hst Iow MWJ J&M Kg Lam Ltr LB JL Mgd May JCM JMM Mls MV Mzy Old For Rob Sal S&K S&O Sox Spf Stk Thm Thn Trm Vin Vk Wer.

**Similar Names.** Champion Early White Pearl, Early White Pearl, Extra Early Pearl, Illinois White Pearl, Mammoth White Pearl, Powell’s Improved White Pearl, Sioux White Pearl, Wernich’s Sweet Pearl, Sweet Pearl.

**Champion Yellow Dent.** Alx Iml MWJ S&O Te TIl.

**Similar Names.** Early Champion, Yellow Dent, Champion White Dent, McCullough’s Champion White Dent, Champion White Flint.
American Varieties of Vegetables.

Chester County Mammoth Dent. 
Bui Bur CSC Drn Fst GH J&S Mns Man Mhl 
Min M& Mzy Nfl Nfl Ren Roc Sal Shw Sim Tpk W&D.

Chestnut Grove Yellow. 
G&T.

Chickasaw. 
Aih.

Clark's Cuban White Dent, Clark's Cuban Yellow Dent, Clark's Early Butler Dent, 
Clark's Early Mastodon, Clark's Early Yellow Mastodon, Clark's Extra Early 
Huron Dent, Clark's Mastodon. 
Entered as Cuban White Dent, Cuban Yellow 
Dent, Early Butler Dent, Early Mastodon, Early Yellow Mastodon, etc.

Cloud's Early Mammoth Dent. 
Bui. For similar names see Cloud's Yellow Dent.

Cloud's Early Yellow Dent. 
Bru D&H Ewg Mhl Ren SB. 
Similar names. See Cloud's Yellow Dent.

Cloud's Yellow Dent. 
Drr Wat. 
Similar names. Cloud's Early Yellow Dent, Cloud's Early Mammoth Dent.

Cocke's Prolific. 
Alx CA Hst Kg McM S&F WR Wd. 
Similar names. See White Prolific.

Cocke's White Prolific. 
MWJ. For similar names see White Prolific.

Compton's Early Yellow. 
CSC EBC C&B D&H RE Ewg Gra Hen Kei McK 
May Pri Ren Rob Sic Sim SB Thr. 
Similar names. Compton's Early Yellow Twelve-Rowed.

Compton's Early Yellow Twelve-Rowed. 
Bru. 
Similar names. See Compton's Early Yellow.

Connecticut White. 
Wer.

Conscience. 
MWJ Shw.

Copley's Pride. 
TB.

Cornucopia White Dent. 
Del JCM.

Crane's Prolific. 
Bgg. For similar names see White Prolific.

Cuban Giant Dent. 
Gra May. For similar names see Cuban Mammoth.

Cuban Giant White Dent. 
Bru RE Sim. For similar names see Cuban Mammoth.

Cuban Giant Yellow Dent. 
Ewg. For similar names see Cuban Mammoth.

Cuban Mammoth. 
Gng Kei Neb. 
Similar names. Cuban Mammoth White Dent, Cuban Mammoth Yellow 
Dent, Cuban Giant White Dent, Cuban Giant Yellow Dent, Cuban Giant Dent, 
Battles' Cuban Giant Dent, Clark's Cuban Yellow Dent, Clark's Cuban White 
Dent, Cuban Yellow Dent, Cuban White Dent.

Cuban Mammoth White Dent. 
CSC. For similar names see Cuban Mammoth.

Cuban Mammoth Yellow Dent. 
CSC D&H RE Kg Ren Sim SB. 
Similar names. See Cuban Mammoth.

Cuban White Dent. 
CSC. For similar names see Cuban Mammoth.

Cuban Yellow Dent. 
CSC. For similar names see Cuban Mammoth.

Currie's Earliest of All. 
Cur.

Dakota Dent. 
GH Hbt NK RP Wl. 
Similar names. Northrup, King & Co.'s Dakota Dent, Early Dakota Dent, 
Extra Early Dakota Dent, Will's Dakota Flint, North Dakota Flint, North 
Dakota White Flint, Salzer's North Dakota White Flint, North Dakota Yellow 
Flint, Salzer's North Dakota Yellow Flint, South Dakota Yellow Flint, Salzer's 
South Dakota Yellow Flint, Dakota Queen Yellow Dent, Extra Early Dakota 
Queen Yellow Dent.

Dakota Queen Yellow Dent. 
May. For similar names see Dakota Dent.

Dakota Flint. 
NK Wl. For similar names see Dakota Dent.

Delaware County Yellow Dent. 
J&S Koe.

Delaware Sheep Tooth. 
Y&H.

Duly's Hybrid. 
Kra MV Sox.

Dungan's White Prolific. 
Bak CSC H&C H&P '17. 
Similar names. See White Prolific.
Dutton.  Gls Pri.

Early Butler Dent.  Brw ECC&B Ebr Ewg Frd Gra Hen Kei Pri Ren Shr Sim.

Early Butler Yellow Dent.  CSC D&H DD RE Hrv Shr SB.

Early Canada.  Bur LB.

Early Champion Yellow Dent.  Shw.

Early Dakota Dent.  Pug.  For similar names see Dakota Dent.

Early Eclipse.  Bak.


Early Eight-Rowed Yellow Flint.  Bru Pac.

Early Giant White Dent.  D&H Shw.

Early Golden Beauty.  Bui Eie Hly.  For similar names see Golden Beauty.

Early Golden Dent.  Bgs CSC Eie Fer Gdn GH MWJ Koc LB Loh Pat Shr Sic.

Early Golden Dewdrop.  EBC.  For similar names see Golden Dewdrop.

Early Golden Kansas King.  M&S.  For similar names see Kansas King.

Early Golden Surprise.  Inl.  For similar names see Golden Surprise.

Early Gold Mine.  Bae HP Roc.  For similar names see Iowa Gold Mine.

Early Hickory King.  M&S.  For similar names see Hickory King.

Early Horse Tooth.  Hen.  For similar names see Southern Horse Tooth.

Early Huron Dent.  Enr May NK Ren Rob Sal.  For similar names see Huron Dent.

Early Imperial.  Ber.

Early Iowa Yellow Dent.  Til.  For similar names see Iowa Gold Mine.

Early Kansas King.  Hly.  For similar names see Kansas King.

Early King Philip.  EBC Mzy.  For similar names see King Philip.

Early Klondike.  Bae Roc.  For similar names see Klondike.

Early Large White Flint.  Alx Cox.  For similar names see Large White Flint.

Early Learning.  Blg Bui RE Gra G&T Hde Hnt Kei Mhl SB Thr.

Early Longfellow.  EBC Ewg Enr Gra Iow Pg.  For similar names see Longfellow.

Early Mammoth White Dent.  Msu.  For similar names see Mammoth White Dent.

Early Market.  Shw.

Early Mastodon.  Alx Alr Bak Bil Ber Big Bru Buc Bui Bur CSC Cle Col Cur D&H Drr Drm Ebr Emr RE Enr RE Frd GH Gra Tg Hm Hde Hrv Hen H&C Hmn Hnt Inl Iow J&S Kei Kel Kg Lnr Mgd Man May JMM Ms OV Pac Pg Pri Qkr Raw Rob Roc Rs Sic Sim S&H Tat Tex Tpk Vk Wer Wdr.

Early Minnesota King.  CSC.  For similar names see Minnesota King.

Early Northern White Dent.  CE CSC.  For similar names see Northern White Dent.

Early One Hundred Day Bristol.  Drr.  For similar names see One Hundred Day.
VARIETIES OF VEGETABLES.

Early Ontario. Ren.
Early Orange. Dym.
Early Pride of the North. Hnt. For similar names see Pride of the North.
Early Red Blazed. Bow Fer Gls L.B Loh. For similar names see Red Blazed.

SEEDSMEN'S SYNONYMS. Saint Rose, Fer.

Early Rose. Sox.
SIMILAR NAMES. Armstrong's Early Rose, Yellow Early Rose.

Early Sanford. Brt Brk Dun Emr Fqr Gry Hrn K&W Neb S&F.
SIMILAR NAMES. See Sanford.

Early Sheep Tooth. Elt Vk. For similar names see Sheep Tooth.

Early Vermont. Hop.

Early White Dawn. Liv Shw.

Early White Dent. CSC MWJ. For similar names see White Dent.

SIMILAR NAMES. See White Flint.

Early White Pearl. Hly. For similar names see Champion White Pearl.

Early White Surprise. Shw. For similar names see Golden Surprise.

Early Wisconsin White Dent. Ccr Sal.
SIMILAR NAMES. See Wisconsin White Dent.

Early Yellow Canada. Bui Drt Emr Fqr Gty J&S Raw Thr W&D.
SIMILAR NAMES. See Early Eight-Rowed Yellow Canada.

SEEDSMEN'S SYNONYMS. Early Yellow Flint, Mhl.

Early Yellow Clarage. HP. For similar names see Yellow Clarage.

Early Yellow Dent. TG.

Early Yellow Flint. Low Mhl Put. For similar names see Yellow Flint.

SEEDSMEN'S SYNONYMS. Early Yellow Canada, Mhl

Early Yellow Huron Dent. REGH NK. For similar names see Huron Dent.

Early Yellow Learning. Shw. For similar names see Learning.

Early Yellow Longfellow. Shm. For similar names see Longfellow.

Early Yellow Mastodon. Yng. For similar names see Mastodon.

Early Yellow Rose. S&O.

Eclipse. Btl Put Tmd.


SIMILAR NAMES. See Early Eight-Rowed Yellow Canada.

Eight-Rowed Yankee. Brn. For similar names see Yankee.

Eight-Rowed Yellow. Ebe. For similar names see Eight-Rowed Yellow Flint.

Eight-Rowed Yellow Canada. Lar Min.

SIMILAR NAMES. See Early Eight-Rowed Yellow Canada.

Eight-Rowed Yellow Flint. Bgs Lam.

SIMILAR NAMES. Large Eight-Rowed Yellow Flint, Improved Eight-Rowed Yellow Flint, Early Eight-Rowed Yellow Flint, Mammoth Early Eight-Rowed Yellow Flint, Mammoth Early Eight-Rowed Flint, Mills Mammoth Early Eight-Rowed Yellow Flint, Eight-Rowed Yellow, Mammoth Eight-Rowed Yellow.

Everitt's Mortgage Lifter. Evr. For similar names see Mortgage Lifter.

Expansion. Ber.

Extra Early Dakota Dent. Neb. For similar names see Dakota Dent.

Extra Early Dakota Queen Yellow Dent. OV Tpk.

SIMILAR NAMES. See Dakota Dent.


SIMILAR NAMES. See Huron Dent.

Extra Early Iowa Yellow Dent. Jl. For similar names see Iowa Gold Mine.

Extra Early King Philip. D&H HP Roc Shm.

SIMILAR NAMES. See King Philip.
Extra Early Large Yellow Yankee. Buc Roc. For similar names see Yankee.
Extra Early Learning. Tpk. For similar names see Learning.
Extra Early Pearl. Gdn. For similar names see Champion White Pearl.
Extra Early Squaw. Shm. For similar names see Squaw.
Extra Early Yellow Huron Dent. H&C. For similar names see Huron Dent.
Extra Early Yellow Summer Flint. Dlw.
Extra Early Yellow Yankee. Shm. For similar names see Yankee.
Farmer's Favorite. (CSC Cle GH J&S May Shw Thr W&D).
Similar names. Bailey's Favorite, Forsythe's Favorite, Munlock's Favorite, Riley's Favorite.
Farmer's Friend. 1rs.
Farmer's Interest. WS.
Farmer's Pride. Alix.
Farmer's Reliance. Iow.
Seedsmen's synonyms. O'Connell's Early, Sox.
Farmer's Surprise. Shw.
Farmer's Yellow Surprise. D&H. For similar names see Golden S risse.
First Crop. Sic.
Similar names. Siegel's First Crop.
Fitche's Antique Red Cob. Gdn. For similar names see Red Cob.
Florida Flint. Gag.
Similar names. Griffing's Florida Flint.
Ford's Sure Crop Yellow Dent. Frd. For similar names see Yellow Dent.
Forsythe's Favorite. Bt Thr. For similar names see Farmer's Favorite.
Fuller's Early Yellow. Ggy Pir.
Gehu Seventy Day. Van Wil.
Similar names. Will's Gehu Seventy Day.
Genesee Valley. Bgs Hrv Vl.
Gentry's Early Market. Kg Wd.
Giants Beauty Dent. J&S M&S. For similar names see Golden Beauty.
Giant Long Flint. Van.
Giant Mexican June. Iow. For similar names see Mexican June.
Giant Red. Ji.
Giant Southern White. Ewg Gra. For similar names see Southern White.
Giant White Normandy. DD.
Gilbert's White Flint. Gag. For similar names see White Flint.
Goddard's King of the Earliest. Entered as King of the Earliest.
Gold Coin. Bgs Hrn.
Similar names. Livingston's Gold Coin, Michell's Gold Coin.
Golden Beauty. Alx Anb Ar Bak Btl Bon Bow Brk Bdg Bur Cam CE CSC Cle C&B Cox Chm D&D Der Drm Ebr Eic Eum Est Ger Gdn Gry Hde Hrn Hen Hly Hlm Iow J&S Kg Kos Lan Lnr Mgd PM Mns Man May JMM McM Mhl Min Nef Nol Pac Ptt Rob Shw Spy Stk Tex Thr Trm Vl W&D WS Yng.
Golden Combination. Sal.
Similar names. Salzer's Golden Combination.
Golden Dent. Bou Buc Cam Cle CA Hst Kg Lan McM Roc Tat Wd WS.
Similar names. Improved Golden Dent, Early Golden Dent, Improved Early Golden Dent, Buist's Improved Early Golden Dent, Large Grain Golden
Dent, Late Golden Dent, Yellow 1XL Golden Dent, Yellow Golden Dent, Huntington & Page's Golden Dent, Murlock Golden Dent. See also Yellow Dent.

Seedsmen's synonyms. Improved Pride of the North, Buc Roe.

Golden Dewdrop.  CSC Ptt Pri Van W&D.
Similar names. Early Golden Dewdrop.

Golden Longfellow.  M&S. For similar names see Longfellow.

Golden Row Yellow Dent.  Lnr Neb Vau. For similar names see Yellow Dent.

Golden Superior.  Chl.
Similar names. Mills' Golden Superior.

Similar names. Early Golden Surprise, Livingston's Early Golden Surprise, Farmer's Yellow Surprise, White Surprise, Early White Surprise, Mammoth White Surprise.

Golden Triumph.  Ber Sal. For similar names see Triumph.

Gold King.  Alr.
Similar names. Silver King.

Gold Mine.  Hlm.  For similar names see Iowa Gold Mine.

Gold Standard Yellow.  Rtk.
Similar names. Ratekin's Gold Standard Yellow.

Gourd Seed Golden Dent.  Eic Stk.
Similar names. Gourd Seed Learning, Yellow Giant Gourd, Higdon's Mammoth Gourd Seed, Southern White Gourd.

Gourd Seed Learning.  Drr.
Similar names. See Gourd Seed Golden Dent, Learning.

Griffing's Florida Flint.  Entered as Florida Flint.

Similar names. New Century Wonder, Vail's New Wonder Golden Dent.

Guinea.  Lan.


Hammond's White Dent.  Ham. For similar names see White Dent.

Hanna White.  Shw.

Harnden Seed Co.'s White Perfection.  Entered as White Perfection.

Harris' Mammoth Yellow Flint.  Hrs.

Hastings' Six-Ear.  Hst.

Similar names. Person's Eureka.

Hickory King.  Alx Bak Blk Blq Bou Bour Cam CSC C&B CA DD Drr Drrm Eic Fst Ger Gdrn GH GC'T Hde Hrn Hst Hen Iow MWJ J&M J&S Kg PM Mns Mau May JCM JMM Mcl Mbl Mtt Pri Ptt Pri Qkr Roc Sal Sm Spf Stk S&H Tat Tex Thr Trm T&B Vin Wd.
Similar names. Improved Hickory King, White Hickory King, Steelman's Early Hickory King.

Similar names. See Gourd Seed Golden Dent.

Hogue's Yellow Dent.  Bak. For similar names see Yellow Dent.

Seedsmen's synonyms. Nebraska Yellow Prize, Bak.

Holmes' Yellow Dent.  Hlm. For similar names see Yellow Dent.

Holt's Early Mammoth.  Brn.

Holt's Strawberry.  Kg Wd.

Houghton's Silver White Flint.  Sal. For similar names see White Flint.

Huntington & Page's Golden Dent.  H&P. For similar names see Golden Dent.
Huron Dent. May.

Similar names. Early Huron Dent, Extra Early Huron Dent, Clark’s Extra Early Huron Dent, Extra Early Yellow Huron Dent, Early Yellow Huron Dent.

Illinois White Pearl. Shw. For similar names see Champion White Pearl.

Imperial. Btk.

Improved Early Golden Dent, Improved Early Horse Tooth, Improved Early Learning, Improved Early Mastodon, Improved Early Sheep Tooth, Improved Early Yellow Canada, Improved Eight-Rowed Yellow Flint, Improved Golden Beauty, Improved Golden Dent, Improved Hickory King, Improved King Philip, Improved Large White Flint, Improved Large Yellow Dent, Improved Learning, Improved Longfellow, Improved Maryland Yellow Dent, Improved Mortgage Lifter, Improved Ninety Days Learning, Improved Pride of the North, Improved Sanford, Improved Southern White Snowflake, Improved White Dent, Improved White Prolific, Improved Yellow Canada, Improved Yellow Flint, Improved Yellow Learning. Entered as Early Golden Dent, Early Horse Tooth, Early Learning, Early Mastodon, Early Sheep Tooth, Early Yellow Canada, etc.

Iowa Beauty. Shw. For similar names see Golden Beauty.

Iowa Gold Mine. Air Ar Bak Bred Btl Btg CE CSC Col Cur D&H Ebr Eyr F mr Fml Grw Ham Hde Iow Kg Kra Lar JL Mgd Mus Man May JCM JMM Mic MV NK OV Pac Pg Put Pri Rob Roe Sal Sww S&O Sox Spf Sww S&H Tex TB Thr Tpk Trm Vf Vn Vr.


Iowa Silver Mine. Air Ar Bak Bred Btl Btc CE CSC Col D&H DD Ebr Eyr Fmr Fml GH Ham Hde Iow Kg Kra Lar JL Mgd Mus Man May Mic MV Neb Old Pac Rtk Rob Roe Sal Sww S&O Shw Sox Spf Tex TB Thm Trm Vn Vr Vr.

Similar names. See Iowa Gold Mine.

Iowa Yellow Dent. Iow. For similar names see Iowa Gold Mine.

John’s Large Southern Bread. MWJ.

Johnson & Stokes’ Giant Beauty Dent. Entered as Giant Beauty Dent.

Jumbo King. Hrn.

Kansas King. Bai Hly.

Similar names. Early Kansas King, Early Golden Kansas King, White Kansas King, Kansas Sunflower Corn.

Kansas Sunflower Corn. Btl Hly. For similar names see Kansas King.

Kent White Prolific. Man. For similar names see White Prolific.


King of Illinois. Lnr Vnn.


Similar names. Goddard’s King of the Earliest, Salzer’s King of the Earliest.

King Philip. Amb Btd Blg CSC Drm Ger Hry Hen J&M Kei Kg Kra Lan Lar May JMM NK Por Pri Rob RP Sal S&R Sie Sim Thr Van Vin W&D Vr.

Similar names. Early King Philip, Extra Early King Philip, Improved King Philip, Red King Philip.

Klondike. 1st Man.

Similar names. Cary’s Klondike, Maule’s Klondike, Early Klondike.


Landreth’s Southern Prolific. Entered as Southern Prolific.

Large Early Rural White Flint. HP. For similar names see Rural White Flint.

Large Eight-Rowed Yellow Flint. Sie.

Similar names. See Eight-Rowed Yellow Flint.

Large Grain Golden Dent. Gdn. For similar names see Golden Dent.
Large Maryland White. Bui. For similar names see Maryland White.
Large Mastodon. Shm. For similar names see Mastodon.
Large Mexican June. Drn. For similar names see Mexican June.
Large Northern White Dent. Shm. For similar names see Northern White Dent.
Large White Canada. Gra. Similar names. See Early Eight-Rowed Yellow Canada.
Large White Dent. GI Pks.
Large White Flint. Bdg Bui Cam CSC EBC Erc RE Loh Mzy Neb Shw Stk SB.
Similar names. Long White Flint, Improved Large White Flint, Early Large White Flint.
Seedsmen’s synonyms. Sanford, EBC.
Large Yellow Dent. AR Ger GI Pks.
Large Yellow Flint. CSC EBC C&B Ger Hen Loh Mzy Nef Pri Shm W&D.
Large Yellow Learning. Shm. For similar names see Learning.
Late Golden Dent. CSC Shw. For similar names see Golden Dent.
Similar names. Improved Learning, Yellow Learning, Improved Yellow Learning, Improved Ninety Days Learning, Improved Early Learning, Early Learning, Extra Early Learning, Early Yellow Learning, Large Yellow Learning, Rennie’s Learning, Salzer’s Learning, Northrup, King & Co.’s Minnesota Learning, Minnesota Learning, Star Learning, Gourd Seed Learning.
Legal Tender. Ber Ebr Fnr Hde Iow JS&S Kra Lam JL Mgd Neb Rob S&O Shm Spf Stw Tcr Thr.
Lenocher’s Homestead. Iow.
Liberty. CSC Roe Shw.
Livingston’s Early Golden Surprise. JL. For similar names see Golden Surprise.
Livingston’s Gold Coin. Cle. For similar names see Gold Coin.
Longfellow. Btt Bgg Brk Bdg Bru C&J CSC C&B Crs Cur D&H Ebr Ett Fnr Fqr Fax Ggy Gry Hrn Haw Hen Hop Kei Kra Lam Lnr JL May JMM MeK Mls NK Old HP Ptt Pot Pri Raw Ren Rob Rs RP Sal S&F Shw Sm Tat Thr Vau Vk W&D Wer Wdr Y&H.
Similar names. Improved Longfellow, Longfellow Eight-Rowed Jersey, Early Longfellow, Yellow Longfellow, Early Yellow Longfellow, Golden Longfellow.
Longfellow Eight-Rowed Jersey. Bng. For similar names see Longfellow.
Long White Flint. Bdy Thr Wd. For similar names see Large White Flint.
Seedsmen’s synonyms. Rare Ripe, Wd.
McCullough’s Champion White Dent. JMM.
Similar names. See Champion Yellow Dent.
Mammoth Early Eight-Rowed Flint. D&H.
Similar names. See Eight-Rowed Yellow Flint.
Mammoth Eight-Rowed Yellow. Bru Sim.
Similar names. See Eight-Rowed Yellow Flint.
Mammoth Early Eight-Rowed Yellow Flint. Ham.
Similar names. See Eight-Rowed Yellow Flint.
Mammoth Golden Beauty. Blg. For similar names see Golden Beauty.
Mammoth White Columbian. Ar. For similar names see Pride of Columbia.
Mammoth White Dent. Liv Min Qkr Sal Trm Wer.
   Similar names. Early Mammoth White Dent.
Mammoth White Htt. WS.
Mammoth White Pearl. Mcl. For similar names see Champion White Pearl.
Mammoth White Surprise. Mlt. Mzy Thr.
   Similar names. See Golden Surprise.
Mammoth Yellow Field. MWJ Trm. For similar names see Yellow Field.
Marlboro’s Prolific. Alx. For similar names see White Prolific.
Marshfield Yellow Dent. Anb. For similar names see Yellow Dent.
Maryland White. Big G&T.
   Similar names. Large Maryland White, Improved Maryland Yellow Dent.
Maryland Yellow Dent. Grv. For similar names see Maryland White.
Mastodon. Brk Crs Chn Fmg MWJ J&M Mzy NK Sal Thm Thr Van Wd.
   Similar names. Clark’s Mastodon, Clark’s Early Mastodon, Clark’s Early Yellow Mastodon, Early Mastodon, Improved Early Mastodon, Maule’s Improved Early Mastodon, Large Mastodon, Early Yellow Mastodon.
Maule’s Improved Early Mastodon. Entered as Early Mastodon.
Maule’s Klondike. Ham. For similar names see Klondike.
Maumee Valley Extra Early Gilhouse. HP.
Merce. Fmr LB May NK Rob Sal Til.
   Similar names. Northrup, King & Co.’s Mercer.
Seedmen’s synonyms. Rideout Flint, Sal.
Mexican June. Alx Bak Eic Ggy Ggt Hde Hst Hgy Shw Sk Tex Thm Wlt Wd.
   Similar names. Large Mexican June, Giant Mexican June.
Michell’s Extra Early. D&H.
Michell’s Gold Coin. Mbl. For similar names see Gold Coin.
Mills’ Golden Superior. Ham Ms. For similar names see Golden Superior.
Mills’ Mammoth Early Eight-Rowed Yellow Flint. Ms.
   Similar names. See Eight-Rowed Yellow Flint.
Minnesota King. For Brn GH Hbt Iow J&M Lam Lar Mgd May NK OV Old Rob Sal Til Tpk Wlt.
   Similar names. Northrup, King & Co.’s Minnesota King, Early Minnesota King, Minnesota White Flint, Northrup, King & Co.’s Minnesota White Flint, Minnesota Number Thirteen.
Minnesota Learning. Fmr NK Old. For similar names see Learning.
Minnesota Number Thirteen. Fmr Mag. For similar names see Minnesota King.
Minnesota White Flint. Fmr NK Til. For similar names see Minnesota King.
Monarch Early White Dent. GH.
Moore & Simon’s Poor Man’s. M&S. For similar names see Poor Man’s.
Mortgage Lifter. Anb Ar Bly CSc Drm Mic Ms Shw Sox.
   Similar names. Everitt’s Mortgage Lifter, Improved Mortgage Lifter.
Mosby’s Prolific. Eic MWJ Shw Sk Sk Wd. For similar names see White Prolific.
Murdock’s Favorite. Put. For similar names see Farmer’s Favorite.
Murdock’s Golden Dent. Fmr. For similar names see Golden Dent.
Murdock’s Ninety Day. DD. For similar names see Ninety Day.
Nebraska Gold Mine. Neb. For similar names see Iowa Gold Mine.
Nebraska White Prize. Bak Grw Neb.
   Similar names. Nebraska Yellow Prize.
Nebraska Yellow Prize. Bak Grw. For similar names see Nebraska White Prize.
Seedmen’s synonyms. Hogue’s Yellow Dent, Bak.
Nelson’s Yellow Field. Ggy. For similar names see Yellow Field.
New Century Wonder. Iow. For similar names see Griswold’s Wonder.
Ninety Day. G&T Ms.
   Similar names. Ninety Day Yellow, Murdock’s Ninety Day.
Ninety Day Yellow. G&T. For similar names see Ninety Day.
Ninety Days Leanining. Neb. For similar names see Leanining.
Norfolk Market. Tat.
Similar names. Tait's Norfolk Market.
Normandy. Vat.
North Carolina White Prolific. Shw. For similar names see White Prolific.
North Dakota Extra Early Prize Taker. M&S.
North Dakota Flint. Rob. For similar names see Dakota Dent.
North Dakota White Flint. D&H Ewg Gra NK McK Ren Sal Sim SB.
Similar names. See Dakota Dent.
North Dakota Yellow Flint. D&H Gra McK NK Sal.
Similar names. See Dakota Dent.
Northern Prolific. Ren. For similar names see White Prolific.
Northern White Dent. WS.
Similar names. Early Northern White Dent, Large Northern White Dent, Northwestern Dent, Will's Northwestern Dent.
Northrup, King & Co.'s Dakota Dent, Northrup, King & Co.'s Mercer, Northrup, King & Co.'s Minnesota Dent, Northrup, King & Co.'s Minnesota Learning, Northrup, King & Co.'s Minnesota White Flint. Entered as Dakota Dent, Mercer, Minnesota King, Minnesota Learning, and Minnesota White Flint.
North Star Yellow Dent. Lar.
Northwestern Dent. May NK Wll. For similar names see Northern White Dent.
Seedsmen's synonyms. Bloody Butcher, NK.
O'Connell's Early. Sox.
Seedsmen's synonyms. Farmer's Reliance, Sox.
Ohio Early Gold Mine. HP. For similar names see Iowa Gold Mine.
Old Cabin Home. Lan.
Oldham County Yellow. WS.
Old Virginia. Frd. For similar names see Virginia White Dent.
One Hundred Day. D&H.
Similar names. Early One Hundred Day Bristol, One Hundred Day Bristol.
One Hundred Day Bristol. Frt G&T Htn J&S Mhl M&S.
Similar names. See One Hundred Day.
Owen's Red Cob. Gdn. For similar names see Red Cob.
Oxblood Red Dent. Sal.
Paragon. Gra.
Pearce's Early Prolific. McK. For similar names see Pearce's Prolific.
Pearce's Prolific. D&H.
Similar names. Pearce's Early Prolific.
Peerless White Dent. H&P. For similar names see White Dent.
Pennsylvania Eight-Rowed Early Yellow Flint. Bui.
Similar names. See Pennsylvania White Dent.
Pennsylvania Long Early Yellow Flint. Lan.
Similar names. See Pennsylvania White Dent.
Pennsylvania White Dent. Wlt.
Similar names. Pennsylvania Yellow Dent, Pennsylvania Long Early Yellow Flint, Pennsylvania Eight-Rowed Early Yellow Flint.
Pennsylvania Yellow Dent. Wlt. For similar names see Pennsylvania White Dent.
Philipps' Pere. JMP.
Pierson's Eureka. Prn. For similar names see Henderson's Eureka.
Poor Land. Gig. For similar names see Poor Man's.
CORN, FIELD.

Poor Man's.  Aix.
Similar names.  Moore & Simon's Poor Man's, Poor Land.

Powell's Improved White Pearl.  Entered as White Pearl.

Prehistoric.  Brk Del Evr Frd Iow MWJ JL Vk.

Prince of Canada.  May.  For similar names see Early Eight-Rowed Yellow Canada.

Pride of Columbia.  Rde.
Similar names.  Mammoth White Columbian.

Pride of Nishna.  Rde Rs Tex.
Similar names.  Ratekin's Queen of Nishna, Queen of Nishna.

Pride of the North.  Air Anb Bai Bak Bvd Btl Bkr Bow Brk Bgs Bri Brn Bng
Bue Bur Col Crs Car Dlw DD Ebc Ebr Ewg Fmr Eqr For Frd GH Grw Ham
Hrn Hrv Iow J&M Kel Kg Kos Kra Lam Lnr LB Liv JL May Mic MV Mzy NK
OV Old Pae Pj JP Ptt Prr Pri Qkr Ren Roc RP Sal Shw S&O Shn Sng Sim
Son Sw S&H TB Thr Til Tpk Trn Vau Vk Vin Wfr Wdr Ye Hl.
Similar names.  Sibley's Pride of the North, Early Pride of the North.

Seedsmen's synonyms.  Golden Dent, Buc Roc.  Early Golden Dent, Bgs Fer
LB. Improved Early Golden Dent, Koe.  Queen of the Prairie, Fmr Pitt S&H
Wdr.  Yellow Dent, Lam Vin.

Prince Charles White.  Shw.  For similar names see St. Charles.

Prize Medal Southern White Snowflake.  Bui.
Similar names.  See Southern White Snowflake.

Profit.  Fmr Iow Syp.
Prosperity.  Fmr.
Pure Gold.  Anb.

Queen of the Field.  Lnr Vau.
Queen of Nishna.  Rde.  For similar names see Pride of Nishna.
Queen of the North.  Sal Wdr.  For similar names see Queen of the Prairie.
Queen of the Prairie.  Rdg Bng CSC EBC C&B Fmr Hen Pitt Raw S&H W&D
Wdr.

Similar names.  Queen of the North.

Queen of the Yellows.  WS.

Race Horse Yellow Dent.  Ham.

Rare Ripe.  Kg Wd.

Seedsmen's synonyms.  Long White Flint, Wd.

Ratekin's Gold Standard Yellow, Ratekin's Queen of Nishna.  Entered as Gold
Standard Yellow and Queen of Nishna.

Similar names.  Early Red Blazed, Yellow Blazed, Blue Blazed.

Red Cob.  Drr Ewg Frd J&S Mns Man JMM Til.
Similar names.  Owen's Red Cob, Fitche's Antique Red Cob, Red Cob Mam-
moth White Dent.

Red Cob Mammoth White Dent.  HS.

Red Driver.  WS.

Red King Philip.  CSC.  For similar names see King Philip.

Reid's Yellow Dent.  Iow Old.  For similar names see Yellow Dent.

Reliance Yellow Dent.  Old.  For similar names see Yellow Dent.

Rennie's B. B.  Ren.

Rennie's Early Giant White Dent.  Ren.
Similar names.  See Early Giant White Dent.

Rennie's Learning.  Entered as Learning.

Rhode Island White Cap Flint.  Brt Pot.
Similar names.  See White Cap Yellow Dent.

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Rideout. Sal Til.

Seedsman's synonyms. Mercer, Sal.


Similar names. See Farmer's Favorite.

Robb's Improved Calico Dent. Entered as Calico Dent.

Rural White Flint. CSC Hrv Hen low Kei Ren Sin W&D Wdr.

Similar names. Large Early Rural White Flint.

Rustler. GH NK.

St. Charles. Eic Gdn.


St. Charles White. Ar DD Pnt S&O Sk Tpk.

Similar names. See St. Charles.

Salzer's All Gold, Salzer's Golden Combination, Salzer's King of the Earliest, Salzer's Leaming, Salzer's North Dakota White Flint, Salzer's North Dakota Yellow Flint, Salzer's South Dakota Yellow Flint. Entered as All Gold, Golden Combination, King of the Earliest, Leaming, North Dakota White Flint, etc.

Salzer's Early Giant White Dent. Sal.

Similar names. See Early Giant White Dent.

Sanford. CSC ERC Chm Elt Ewg Gya Gyi Mck Ptt Raw Rob Thr Wdr.

Similar names. Early Sanford, Improved Sanford, White Sanford.

Seedsman's synonyms. Large White Flint, ERC.

Shaker's Early Yellow Dent. CSC. For similar names see Yellow Dent.

Shannon's Early Extra Prolific. MWJ. For similar names see White Prolific.

Shannon's Large Early. MWJ.

Shaw's Improved. ACH CA MWJ McM.

Sheep Tooth. Chm Dlw.

Similar names. Improved Early Sheep Tooth, White Sheep Tooth, Southern White Sheep Tooth.

Seedsman's synonyms. Southern fodder, Drr.

Sibley's Pride of the Market. Entered as Pride of the Market.

Siegel's First Crop. Entered as First Crop.

Silver King. Kg. For similar names see Gold King.

Silver Mine. Ber Hly NK. For similar names see Iowa Gold Mine.

Silver Triumph. Ber. For similar names see Triumph.

Sioux White Pearl. Sox. For similar names see Champion White Pearl.

Sixty Day Flint. Han.

Similar names. Hammond's Sixty Day Flint.

Smut Nose. D&H Fmr Hly NK.


Snowflake. Bee Gdn Show. For similar names see Southern White Snowflake.

Snow White Dent. Avc CSC D&H Mau Py Yau.

Similar names. See White Dent.

South Dakota Yellow Flint. D&H Ren Sal. For similar names see Dakota Dent.

Southern Horse Tooth. Bng C&B GH Hen J&G Mzy W&D.

Similar names. Virginia Horse Tooth, White Horse Tooth, Yellow Horse Tooth, Improved Early Horse Tooth.

Southern Prolific. Lan. For similar names see White Prolific.

Southern Sweet Mammoth. Ren.

Southern White. Brk Fqr Gry Pri Rs Y&H.

Similar names. Southern White Gourd, Giant Southern White.

Southern White Gourd. Lan.

Similar names. See Southern White, Gourd Seed Golden Dent.

Southern White Sheep Tooth. Drr Ree. For similar names see Sheep Tooth.
Southern White Snowflake.  Ax Cap Eic G&T 1st Jac Patt Wd.

Similar names.  Alexander's Southern White Snowflake, Buist's Prize Medal Southern White Snowflake, Improved Southern White Snowflake, White Snowflake, Snowflake, Prize Medal Southern White Snowflake.

Squaw.  Fe NK.

Similar names.  Extra Early Squaw.

Star Learning.  D&H Iow.  For similar names see Learning.

Steelman's Early Hickory King.  Entered as Early Hickory King.

Sturgeon's White.  WS.

Sweet Pearl.  Wer.  For similar names see Champion White Pearl.

Tait's Norfolk Market.  Entered as Norfolk Market.

Tennessee Mammoth White.  Shr.

Tennessee Mammoth Yellow.  Shw.

Three-Eared Corn of 1900.  Sal.

Three Thousand Dollar Corn.  Sal.

Towl's Sea Island Prolific.  Alc.

Triple Income Corn.  Sal.

Triumph.  Fmr LB May NK Old Wll.

Similar names.  Silver Triumph, Golden Triumph.

Twelve-Rowed Early Yellow Canada.  C&J.

Similar names.  See Early Eight-Rowed Yellow Canada.

University Number Thirteen.  NK.

Up-to-Date Calico Dent.  Ber.  For similar names see Calico Dent.

Vail's New Wonder Golden Dent.  T&B.

Similar names.  See Griswold's Wonder.

Virginia Horse Tooth.  Thr.

Similar names.  See Virginia White Dent, Southern Horse Tooth.

Virginia Mammoth White.  Raw.

Virginia White Dent.  Kg Wd.

Similar names.  Old Virginia, Virginia Horse Tooth.

Walker White Dent.  Alc.

Walker Yellow Dent.  H&P Wd.  For similar names see Yellow Dent.

Washakum Yellow Flint.  Sal.

Waterloo Early Dent.  Ham.

Similar names.  Waterloo Extra Early Dent.

Waterloo Extra Early Dent.  Bur Ebr J&S Stw.

Similar names.  See Waterloo Early Dent.

Wernich's Sweet Pearl.  Entered as Sweet Pearl.

Wernich's Ten Weeks.  Wer.

Western White Dent.  Roc.

Similar names.  Western Yellow Dent.

Western Yellow Dent.  Kel May Roc.

Similar names.  See Western White Dent.

White Australian.  Pir.

White Canada.  Ewg Gra.

Similar names.  See Early Eight-Rowed Yellow Canada.

White Cap Early Yellow Dent.  Buil IP.

Similar names.  See White Cap Yellow Dent.

White Cap Yellow Dent.  Brdl Bkt Ber Bru Buc Bur Csc Col Cur Dlw D&H DD RE Ewg Fnr Frd G&G Ham Hind Hrs Hrv Hen Hop Iml J&S Kei Kg Koe Kos Lnr Liv Mgd May Mls NK OV Old Py Por Qkr Ren Rob Roc Rs S&R Shw Sim Spf SB Stw S&H Tex Tpk Wd Wer Yng.

Similar names.  Hammond's White Cap Yellow Dent, White Cap Early Yellow Dent, Rhode Island White Cap Flint.
White Dent. Cam Gdn Hst J&S McM Pir WS.
Similar names. Improved White Dent, Early White Dent, Hammond’s White Dent, Bonanza White Dent, Peerless White Dent, Snow White Dent. See also Western White Dent, Wisconsin White Dent, Northern White Dent, etc.

White Elephant. Mf.

White Face Dent. Brn.

White Flint. Bon Cle C&B CF Gra Gng Hen MWJ MV Rob Roe Shm Sox Thr.
Similar names. Early White Flint, Gilbert’s White Flint, Houghton’s Silver White Flint. See also Large White Flint, Rural White Flint, etc.

Seedsmen’s synonyms. Old Honing, MV Sox. Pearl, Bon.

White Hickory King. Bui Hly Shw Yng. For similar names see Hickory King.

White Horse Tooth. Lan. For similar names see Southern Horse Tooth.

White Kansas King. Aub Btl. For similar names see Kansas King.

White Majestic. Wd.

White Perfection. Hrn.
Similar names. Harnden Seed Co.’s White Perfection.

White Prolific. G&T JWJ.

White Rockdale. Ele Hst Stk.

White Sanford. Brd Bgs Brb Crs D&H Lam May Rec Rs.
Similar names. See Sanford.

White Sheep Tooth. Lan. For similar names see Sheep Tooth.

White Snowflake. Brt Kg. For similar names see Southern White Snowflake.

White Surprise. Gdn. For similar names see Golden Surprise.

Seedsmen’s synonyms. Extra Early Pearl, Gdn.


Winn’s Hybrid. Hrn K&W.

Wisconsin Silver. Wer. For similar names see Wisconsin White Dent.

Similar names. Early Wisconsin White Dent, Wisconsin Yellow Dent, Wisconsin White Flint, Wisconsin Silver.

Wisconsin White Flint. Cur. For similar names see Wisconsin White Dent.

Wisconsin Yellow Dent. CSC GH Sim.
Similar names. See Wisconsin White Dent.


Yankee. WS.
Similar names. Eight-Rowed Yankee, Extra Early Yellow Yankee, Extra Early Large Yellow Yankee.

Seedsmen’s synonyms. Yellow Flint, Sox.

Yard Long Yellow Dent. Evt. For similar names see Yellow Dent.

Yellow Blazed. Y&H. For similar names see Red Blazed.

Yellow Canada. Ewg Gra Kei Py Pot Rs SB.

Similar names. See Early Eight Rowed Yellow Canada.

Yellow Clarage. Liv.
Similar names. Early Yellow Clarage.

Yellow Creole. Eie Stk.

Yellow Dent. Bng RE Gng Lam Pir Sim SB Tpk.
Similar names. Hogue’s Yellow Dent, Holmes’ Yellow Dent, Marshfield Yellow Dent, Reid’s Yellow Dent, Walker Yellow Dent, Reliance Yellow Dent,
CORN (POP CORN).

Amber Rice. Brk Bur. For similar names see Rice.

Black Diamond. Bue Roc.

Boys' Favorite. Evt.

Buckbee's Snowball. Entered as Snowball.

Burpee's Tom Thumb. Entered as Tom Thumb.

California Yellow. Brk Bur Pac.

Cook's Improved Egyptian. Entered as Egyptian.

Dye. Iow.

Early Amber Rice. Hcn. For similar names see Rice.

Early White Rice. Hpl. For similar names see Rice.

Egyptian. Cok Ggy.


Excelsior. Hrm.

German White Rice. H&P. For similar names see Rice.

Golden Dwarf. Egs.

Golden Tom Thumb. Brk Bur Pg. For similar names see Burpee's Tom Thumb.

Golden Yellow. Mcl.

Illinois Snowball. Old Van. For similar names see Snowball.

Improved White Rice. Entered as White Rice.

Mapledale Prolific. Air Eng Bue CE CSC Col D&H Evr Frd Gis Ham Hrv Hmm Hop Iow J&S Kg Kra Lar Man May Nef Pg Rec Roc Shw Spf S&H Van Will Wd Ws.

Miniature. Iow.

Monarch. MWJ.

Nonpareil White. Ptt. For similar names see White.

Old Homestead White Rice. Brk. For similar names see Rice.

Page's Striped Rice. Entered as Striped Rice.
VARIETIES OF VEGETABLES.

Pearl. Fst Fld Gng Gry Hrn Iml MWJ McM Pac Sim.

Similar names. See White Pearl.

Seedsmen's synonyms. Silver Lace, Iml. Small White, Bow.

Pride of Hiram. Hse.


Red Rice. Bar DD Fmr Lnr Pac Ptt. For similar names see Rice.

Rice. Blg Bow Bgs Bng Brb Ebe Fer Gry TG Hrn Iml MJW Ken LB Loh May NI Nor Rlk Rl Sic Tat Til Tpk Vin Wd Wdr WS Y&H.


Ruby Beauty. Chl. For similar names see Red Beauty.

Salzer's Silver Ball. Entered as Silver Ball.

Silver Ball. Sal. For similar names see Silver Lace.


Similar names. Salzer's Silver Ball, Silver Ball.

Seedsmen's synonyms. Pearl, Iml. White Pearl, Tat.

Small White. Bow Por.

Seedsmen's synonyms. Pearl, Bow.

Smooth White. CSC Lan. For similar names see White.

Snowball. Alr Buc Evr Fmr GN Roc.

Similar names. Buckbee's Snowball, Illinois Snowball.

Seedsmen's synonyms. White Rice, Alr.

Striped. Buc D&H May Ren Spî.

Similar names. Striped Beauty, Page's Striped Rice.

Seedsmen's synonyms. Variegated, Buc D&H.

Striped Beauty. DD. For similar names see Red Beauty, Striped.

Striped Rice. Iow Roc.

Similar names. Striped, Striped Beauty, Page's Striped Rice.


Similar names. Tattooed Yankee.

Tattooed Yankee. Brb CE Eas Pnc Wea. For similar names see Tattooed.

Tom Thumb. Bar.

Similar names. Golden Tom Thumb, Burpee's Tom Thumb.

Variegated. Buc Cok D&H Roc.

Seedsmen's synonyms. Striped, Buc D&H.

White. Emr No1 Prn W&D.


White Market. Bai. For similar names see White.

White Pearl. Ar Btl CE CSC C&B Cox DD Drr Elt Fmr Hde Hen H&C Hop Lnr Mar May JCM JMM McK Pri Raw Rec SC Shr Tat Thr Trm Wea Wll Wyg.

Similar names. Pearl.

Seedsmen's synonyms. Silver Lace, Tat.

White Rice. Alr Anb Ar Btl Bkt Bel Brk Bar Brr CE CSC C&B Col Cox Del DD Drr Elt Emr RE Evr Ewg Fmr Fst Gls Grn Ggy Grw Hen Hrs Hrv Hst
CORN, SWEET.


**Similar names.** See Riv.

**Seedsman’s synonyms.** Egyptian, Ggy. Monarch, Col. Rat Tooth, C&B. Snowball, Alr.

**Wisconsin Eight-Rowed.** Lar.

**Wisconsin Prolific.** Est.

**Yellow Rice.** Ggy. For similar names see Riv.

**CORN (SWEET CORN).**

**Acme.** *Fair May.*

**Similar names.** May’s Acme.

**Allen’s Golden.** K&W.

**Aheer’s Extra Early Columbia, Aheer’s Improved Evergreen.** Entered as *Extra Early Columbia and Evergreen.*

**Amasement.** C.V.

**Amber Cream.** Buc Brb Brs CSc Cle Mud Man Py Roc.

**Aspinwall.** Pri.

**Asylum.** CE CSc Cle Ebe Hlm J&S Lam Mzy Pri Roc Thr.

**Similar names.** Early Asylum.

**Seedsman’s synonyms.** Early Mammoth, J&S. Burr’s, Blg. Excelsior, Blg. Mammoth Sugar, J&S.

**Ballard.** Alr Crs Kra Lnr Wyg.

**Similar names.** Ballard’s Early, Ballard’s Early Chicago Market, Ballard’s Red Cob.

**Seedsman’s synonyms.** Chicago Market, Kra Lnr Wyg. Early Chicago Market, Alr. Perry’s Hybrid, Crs.

**Ballard’s Early.** CE CSc Cle DD GH Rob Y&H. For similar names see Ballard.

**Seedsman’s synonyms.** Chicago Market, Rob Sal. Perry’s Hybrid, Sal.

**Ballard’s Early Chicago Market.** Buc Roc.

**Similar names.** See Ballard, Chicago Market.

**Ballard’s Red Cob.** Ebe. For similar names see Ballard.

**Baltimore Market.** M&S. For similar names see Extra Early Baltimore.

**Banana.** Fqr. For similar names see Banana Cream.

**Banana Cream.** CSc Wil.

**Similar names.** Will’s Banana Cream, Farquhar’s Banana, Banana.

**Bearsfoot.** Brt EBC.

**Best of All.** Buc Roc Sbk.

**Similar names.** Buckbee’s Best of All.


**Similar names.** Black Sugar, Vaughan’s Black Sugar, White Mexican, Extra Early White Mexican, Mexican, Early Mexican.

**Black Sugar.** Mzy Nol Prn Vn W&D. For similar names see Black Mexican.

**Seedsman’s synonyms.** Mexican, Prn.

**Bloomsdale Sugar.** Lan. For similar names see Sugar.

**Bonanza.** Buc J&S Put Roc Sbk.

**Similar names.** Early Bonanza, Spion’s Early Bonanza.
Boston Market. Cox D&H Vin.

Similar names. Early Boston Market.


Brazilian. Btl.

Breck's Premier, Breck's Zigzag. Entered as Premier and Zigzag.

Buckbee's Best of all, Buckbee's Early Sunrise, Buckbee's First of all, Buckbee's Hickory. Entered as Best of All, Early Sunrise, First of All, and Hickory.

Buck Mountain Early Table. M&S.

Burbank's Early. K&W. For similar names see Burbank's Early Maine.

Burbank's Early Maine. Entered as Early Maine.


Similar names. Early Burlington, Burlington Hybrid, Early Burlington Hybrid.

Seedsmen's synonyms. Early Adams, Buc & B Fer Hen Por Roe, etc. Extra Early Adams, Bar Cur Grw Ptt Vl. Large Early Adams, Wldr.


Similar names. See Burlington.

Seedsmen's synonyms. Early Adams, H&C.

Buckbee's Early Cosmopolitan, Buckbee's Early Fordhook, Buckbee's Early Sheffield, Buckbee's First of All, Buckbee's Sheffield. Entered as Early Cosmopolitan, Early Fordhook, Early Sheffield, First of All, and Sheffield.

Burr's Evergreen. Entered as Evergreen.

Burr's Improved. CSC.

Champion. Bel & J CE CSC EBC CF Crg Evr Ggy GH TG Lan Lnr Xi Ptt Poo Pot Pri Ree Rob Y&H.

Similar names. See Early Champion.


Childs' Honey Dew. Entered as Honey Dew.

Clarke County Champion. Shw. For similar names see Early Champion.

Clark's Nonesuch, Clark's Early Evergreen, and Clark's Old Colony. Entered as Nonesuch, Early Evergreen, and Old Colony.

Colossal. Roe.

Similar names. Price & Reed's Extra Early Colossal, Extra Early Colossal.

Columbus Market. Liv Jl Mzy Ree.

Concord. Wer. For similar names see Moore's Concord.

Cooper's Large Early Shoe Peg. Entered as Large Early Shoe Peg.

Corn-Bearing. CSC.

Cory. Anb Brt Bt Btr Brn Bur CE D&C Dm Eas Fqr Fst Ggy Hrs Hry Hlm Jer K&W Ken Kos LB Mns Man JMM Min May HP Pn Pue Ptt Poo Raw Ren Ree Rs Sl S&O S&H Ten ATG Til Y&H.


Cosmopolitan. Lan Vl.

Similar names. Early Cosmopolitan, Buckbee's Early Cosmopolitan.

Country Gentleman. AIX Air Anb Brt Bt Brt Bt Btr Bur Brg Bow Brg Brk Brk Brg Brs Brt Brn Bur Bng Bue Bll Bur C&J Cam CE CSC EBC ELE C&B Col CF Cox Crg Crs Cur CA Chm Dlw D&H Del Dl D&C Del Ebe Ebr Eie Eit RE Evr Ewg
CORN. SWEET. 153

Craig's Champion. Entered as Champion.

Crosby. Brk Bgs CE Fur Fur Gra Hrm Mnd Nol Xk Rec Stk Th Th Y&H.

Early Bonanza.  Air Hrn Lur M&S Put Rob Slim.  For similar names see Bonanza.
Early Boston Market.  Eas Ggy.  For similar names see Boston Market.
Early Burlington.  Bu! Eic.  For similar names see Burlington.
Seedsmen’s synonyms.  Extra Early Adams, Bu! Eic.
Early Burlington Hybrid.  G&T.  For similar names see Burlington.
Similar names. Improved Early Champion, Early Dwarf Champion, Dwarf Champion, Clarke County Champion, Price & Reed’s Champion, Champion.
Early Chicago Market.  Air Gra Slim.  For similar names see Chicago Market.
Seedsmen’s synonyms.  Ballard, Air.
Early Colony.  Brd.  For similar names see Old Colony.
Early Concord.  CE Fqr GH Gsg Lam May Tpk VI Wea.
Similar names. See Moore’s Concord.
Early Cory.  Brd Rcl Bgg Bng Brr C&J CN C&B Crs Cur DD Fax Gdn Gry Hop H&P Jae RHI J&S Kel Lnr Mnd MV Pac Por Pri S&F S&W Ten Thr Trn VI Van Vn Wea.
Similar names. See Cory.
Early Cosmopolitan.  Bur.  For similar names see Cosmopolitan.
Early Dakota.  Wll.
Early Dwarf Champion.  Koe.  For similar names see Early Champion.
Early Egyptian.  Cm Shw.  For similar names see Egyptian.
Early Eight-Rowed.  Bow Bu! Elt H&P Mhl Pri Vin.
Similar names. See Eight-Rowed.
Seedsmen’s synonyms.  Early Sugar, Inv.  New England, Mhl.
Early Eight Weeks.  Mun.
Similar names. See Stowell’s Evergreen.
Early Fordhook.  Big Bri Bur CSC Cle Col Fnd Hbt Hlm H&P Lam Pn Ree Ree Shw Wdr.
Similar names. Burpee’s Early Fordhook.
Early Giant.  SB Tlk.
Similar names. Improved Giant, Giant, Lohrmann’s Early Giant, Moore & Simon’s Early Giant.
Early June.  Wll.
Similar names. Will’s Early June.
Early La Crosse.  Sal.
Early Large Cob.  Lan.
Early Large Eight-Rowed.  Cle TG J&S Min Rob W&D.
Similar names. See Eight-Rowed.
Seedsmen’s synonyms.  New England Sugar, J&S.
Similar names. Burbank’s Early Maine, Burbank’s Early.
Seedsmen’s synonyms.  June Twenty-First, Chl.
Early Mammoth.  Bkt Big Bow Brk Bri Brn Bug Bui Brw Cm CE CSC Cle C&J Crg Crs Drm Ger GH G&T TG Hrn Hst H&C Hlm H&P Inv MWJ J&J J&S Kel Ken Koe Lan Mnd Man Mns May Mel Mhl MV Mzy Nol Pac Pnt Ptt Pri Ree Ree Rob Shw Sox Spi S&W Thr Tlk VI Wat W&D Wd Wdr Y&H.
Similar names. See Mammoth.
Seedsmen’s synonyms.  Asylum, J&S.
Early Mammoth White Cory.  Buc Crs.  For similar names see Cory.
Early Maple Sugar. Bel. For similar names see Sugar.

Early Marblehead. Aub Bdg Bgs Bac Bui Bar Cle Crs Dun RE Fst GH Hrm K&W Man JCM McM Mzy NI Pri Ren Rob Roc Sal SB TB Tpk Vin Y&H.

Similar names. See Marblehead.

Early Marblehead Mammoth. EBC. For similar names see Marblehead.


Early Melrose. CSC. For similar names see Melrose.

Early Metropolitan. Bel CSC Hen Hhm Roc Shw.

Similar names. See Metropolitan.

Early Mexican. Ewg. For similar names see Black Mexican.


Similar names. Extra Early Minnesota, Minnesota.

Early Monarch. Ebe.

Similar names. Ohio Monarch.

Early Narragansett. Bui.

Similar names. Extra Early Narragansett.

Early Pee and Kay. Bow Pri Y&H. For similar names see Pee and Kay.

Early Perfection. Pg.

Similar names. Price’s Early Perfection, Grey’s Perfection, Low’s Perfection, Price & Reed’s Perfection.

Early Red Cob Cory. Brd Brk Bui CSC Del Gra Hns Hen Man MV Neb Qkr Rob Sim Sec Web Wer Yng.

Similar names. See Cory.

Early Red Marblehead. CSC. For similar names see Marblehead.

Early Sheffield. Alb Bkt Bel Bar CSC Egy Hlm J&S Man May JMM OV Roc Sei Sim Tpk Yng.

Similar names. See Sheffield.

Early Sugar. Stk. For similar names see Sugar.

Seedsmen’s synonyms. Eight Raved, Iml Stk.

Early Sunrise. Ber Buc Iow.

Early Surprise. Shw.

Early Sweet or Sugar. Crs Fer Hw Inl Pks Shw Stk Thb.

Similar names. Large Early Sweet, Darling Sweet, Crosman’s Genesee Sweet, Quaker Sweet, Genesee Sweet.

Seedsmen’s synonyms. Sugar, Crs Fer Pks Stk.

Early Tom Thumb. CSC Hns.

Similar names. Extra Early Tom Thumb, Price & Knickerbocker’s Extra Early Tom Thumb.

Early Triumph. Bdg Bui. For similar names see Triumph.

Early Vermont. Bkt CSC Pri Rob.

Similar names. Extra Early Vermont.

Early White Cory. Brt Ber Bdg Brk Bri Bru Buc Bui Brb CSC Cle Crs Chm Dlw Del Fmr Gra Hde Hop Jns Kra Lam Mnd McK Neb Pnt RP Sim Spf Trm Web.

Similar names. See Cory.
Early Windsor. May OV Tpk.

Early Yankee. Not.

Eastman's Early. Pas.

Similar names. Fottler's Early, Ford's Early, Harvey's Early, Hance's Early, Henderson's Early, Lackey's Early, Leet's Early. See also Burbank's Early, Crosby's Early, Kendall's Early Giant, Early Adams, Shaker's Early, Stabler's Early, etc.

Eclipse. Btl Pri.

Similar names. Price & Reed's Eclipse.

Egyptian. Anb Br Bdl Btl Bkt Bgg Brk Bdg Bgs Bng Buc Bui Bur CE CSC EBC Cle CF Crs Crv Cmn Drr Ebe Elt Emt RE Eyr Fgr Fst Frd GH Ggy Gry G&T TG Hns Hrnr Hrs Hm Hse H&P Iml MWJ J&S Kei Kg Lam Lan Lnr Liv LL Mnl Man Man May JCM JMM Mhl MV M&S Mye Nol NK HP Prn Ptt Pot Pri Raw Rec Ren Rec Rob Roe RP Sal Shw Sim Sox Spf S&H S&W Tat Tlp Tpk Thr Trm 17 Vl Wat Web W&D Wd WS.

Similar names. Hyde's Egyptian, Large Egyptian, Late Egyptian, Early Egyptian.

Seedsmen's Synonyms. Washington Market, Brd Bur J&S Raw Rec Vl, etc.

Eight-Rowed. CSC EBC Iml Lan Tat.

Similar names. Early Eight-Rowed, Large Eight-Rowed, Early Large Eight-Rowed.

Emerson's First Crop. Emr. For similar names see First Crop.


Everitt's Excelsior. Evr. For similar names see Potter's Excelsior.

Excelsior. Bkt Dwe Ett TG Hrv Lan Man. For similar names see Potter's Excelsior.


Extra Early. Cok Gng Hnt Jns Stk.

Similar names. Michell's Extra Early, Market Gardener's Extra Early, Potter's XX Early.


Similar names. See Early Adams.

Seedsmen's Synonyms. Burlington, Bur Crr Grw Ptt Vl. Early Burlington; Eic Vl.

Extra Early Baltimore. G&T.

Similar names. Baltimore Market.


Extra Early Colossal. Pri. For similar names see Colossal.

Extra Early Columbia. Alr.

Similar names. Alnecer's Extra Early Columbia.

Extra Early Concord. Gtg.


Similar names. See Cory.

Similar names. See Crosby's Early.


Extra Early Evergreen. Big See S&W. For similar names see Stowell's Evergreen.

Extra Early Maine. CF. For similar names see Early Maine.

Extra Early Mammoth. DD. For similar names see Mammoth.

Extra Early Mammoth Cory. Kg. For similar names see Cory.

Extra Early Marblehead. CF Ebo Shm. For similar names see Marblehead.

Extra Early Minnesota. Ar Bdg Can EBC D&H Fld Hs Lan McK Ren Stw.

Similar names. See Early Minnesota.

Extra Early Narragansett. Tpk. For similar names see Early Narragansett.

Extra Early Red Cob Cory. CF TG Mic Ms Sc Sex Spf.

Similar names. See Cory.

Extra Early Rockford Market. Shm. For similar names see Rockford Market.

Extra Early Sheffield. Buc Shw Shm. For similar names see Sheffield.

Extra Early Tom Thumb. Hen Pri. For similar names see Early Tom Thumb.

Extra Early Vermont. Buc Frd Hbt Hse Lnr Roc.

Similar names. See Early Vermont.

Extra Early White Cory. EBC Col CF Emr Gng TG Hs M Hm Raw K&F Jl.

Similar names. See Cory.

Extra Early White Mexican. Mic. For similar names see Black Mexican.

Farquhar's Banana. Farquhar's First Crop. Entered as Banana and First Crop.


First Crop. For Ggy Raw S&F.

Similar names. Emerson's First Crop, Moore & Simon's First Crop, Reliance First Crop, Farquhar's First Crop.

First Early Neck. Big Mns Min.

Similar names. Gillespie's First Early Neck.

First in the Market. TG H&P Stk.

Similar names. Hammond's First in Market.

Seedsmen's synonyms. Imitation Sugar, H&P.

First of All. Bkt Brg Bri Brn Buc Bur Brr Cle Col Crs Cur D&H Del D&C Drr Enr Fst Fld Gh Gng GN Ham H&C Hm Hrm Hop J&S Lnr Liv Man Man JCM Mck Mhl Ms Neb Nef Old Pg Qkr Ren Ree Rob Rl Rs Sal SG Shm Sim SB Ten Vau Wer Wdr Yng.

Similar names. Buckbee's First of All, Burpee's First of All, Dreer's First of All, Mills' First of All, Salzer's First of All, Simmers' First of All, Improved First of All.

Seedsmen's synonyms. Red Cob Cory, SB.

Five X. Wil.

Similar names. Wil's Five X.

Ford's Early. CSC Frd Hrs Hbt Iml Rt. For similar names see Eastman's Early.

Ford's Improved Mammoth. Entered as Mammoth.

Forsythe's Favorite. Btl. For similar names see Trucker's Favorite.

Fottler's Early. S&F. For similar names see Eastman's Early.

French Honey. Mks. For similar names see Honey.

Genssee Sweet. Crs. For similar names see Early Sweet.

Gentry Early Market. Wd. For similar names see Early Market.

Giant. Lbh Man Shm. For similar names see Early Giant.

Giant Early Adams. Wdr. For similar names see Early Adams.

Gillespie's First Early Neck. Entered as First Early Neck.
American Varieties of Vegetables.

Gold Coin Evergreen.  Hlm.  For similar names see Stowell's Evergreen.
Golden Bantham.  Brw.  #
Golden Hybrid.  Eas.
Gold Medal.  Ms.
Grey's Perfection.  Gry.  For similar names see Early Perfection.
Hance's Early.  Liv.  For similar names see Eastman's Early.
Harmon.  Hrn.
Harvey's Early.  Hrv Vk.  For similar names see Eastman's Early.
Hastings' Yezo.  Entered as Yezo.
Henderson's Country Gentleman, Henderson's Early Metropolitan.  Entered as Country Gentleman and Early Metropolitan.
Henderson's Early Sugar.  Lam Shw.  For similar names see Sugar.
Henderson's Sugar.  Bgs CSC Cle C&B Chm Frd Hen Man.

Similar names.  See Sugar.


Similar names.  Buckbee's Hickox, Hickox Improved, Hickox Canner.

Hickox Canner.  Sal.  For similar names see Hickox.

Hickox Improved.  Entered as Hickox.

Holmes' Improved Gold Coin Evergreen, Holmes' Premo.  Entered as Gold Coin Evergreen and Premo.

Holmes' No. 1.  Hlm.

Honey.  Frd Hlm J&S.

Similar names.  French Honey, Honey Sweet, Honey Dew, Childs' Honey Dew.

Honey Dew.  Chl CF Mhl.  For similar names see Honey.

Honey Sweet.  Alr Buc CSC Ewg Roe Shw Sim Tem.  For similar names see Honey.

Hyde's Egyptian.  Entered as Egyptian.

Imitation.  Blg.

Seedsmen's Synonyms.  First in the Market, H&P.

Improved Cory, Improved Early Adams, Improved Early Champion, Improved Crosby's Early, Improved Evergreen, Improved First of All, Improved Giant, Improved Large Adams, Improved Large Mammoth, Improved Ne Plus Ultra, Improved Ruby, Improved Shoe Peg, Improved Stowell's Evergreen, Improved Triumph.  Entered as Cory, Early Adams, Early Champion, Early Crosby, Evergreen, First of All, etc.

Indiana Wonder.  Evr.

Similar names.  Kendel's Early White Wonder, Philipps' Wonder.

June Market.  May.

June Twenty-First.  Chl.

Seedsmen's Synonyms.  Early Maine, Chl.


Similar names.  Kendel's Giant, Kendel's Large Early, Kendel's Early White Wonder.

**Similar names.** See Kendel's Early Giant, Indiana Wonder.

Kendel's Giant. Gra Ree Tat. For similar names see Kendel's Early Giant.

Kendel's Large Early. Shm. For similar names see Kendel's Early Giant.

Kendel's Large Early Giant. Buc.

Keystone Wonder. Thh.

Lackey's Early. Fgr Ggy. For similar names see Eastman's Early.

Landreth's Early Market. Entered as Early Market.

Landreth Sugar. Bri Dlw H&P MWJ Lan Rim TB Trm Vi.

**Similar names.** See Sugar.

Seedsmen's synonyms. Old Colony, Hrn.

**Large Adams.** Shw. For similar names see Early Adams.

Seedsmen's synonyms. Early Adams, Shw.

**Large Early Adams.** Ele Hst MWJ. For similar names see Early Adams.

Seedsmen's synonyms. Burlington, Wdr.

**Large Early Shoe Peg.** M&S.

**Large Early Sweet.** Haw. For similar names see Early Sweet.

**Large Egyptian.** Ebr. For similar names see Egyptian.

**Large Eight-Rowed.** Bdg Fst Thr. For similar names see Eight-Rowed.

**Large Excelsior.** Nol. For similar names see Potter's Excelsior.

**Large Late Mammoth.** Big Brw EBC C&B Crs Vin Y&H.

**Similar names.** See Mammoth.

**Large Mammoth.** Min Shw. For similar names see Mammoth.

**Large Sugar.** Shw. For similar names see Sugar.

Seedsmen's synonyms. Mammoth Sugar, Shw.

**Large White Cob Cory.** Bel Bar Pks Ree Yng. For similar names see Cory.

**Late Concord.** M&S. For similar names see Moore's Concord.

**Late Egyptian.** EBC. For similar names see Egyptian.

**Late Mammoth.** Bkt Bow Brk Bgs Bri Bng Cam CE CSC Cle CF Crg DD Elt Enr Fst GH Gfy G&T TG Hrn Hrv Hst Hnn H&P Iml MWJ J&M J&S Jns Kel Lan Mnd Mgd Man PM Mns May Ms MV M&S Neb Nol NK Pac JMP Pnt Ptt Qkr Rob Rt RP S&O S&O S&O S&W Tat Thr Thb Van Vk Wdt Web Wd WS.

**Similar names.** See Mammoth.

Seedsmen's synonyms. Mammoth Sugar, Ggf.

Leet's Early. Hrv Sie. For similar names see Eastman's Early.

Little Gem. EBC Ihr Mhl Ptt.


Livingston's Red Cob Evergreen. Liv.

**Similar names.** See Stowell's Evergreen.

Livingston's Silver Coin. Liv.

Lohman's Early Giant. Loh. For similar names see Early Giant.

Low's Perfection. Reln. For similar names see Early Perfection.

McKenzie's Northern Success. Entered as Northern Success.

McMillan's Early Market. McM. For similar names see Early Market.

Main Crop. M&S.

Malakhoff. Frei.

**Mammoth.** Alx Bai Brd Ber Bou Bdg Brn Buc C&J Cam CE Chl Col Cox Cur D&H Drr Ebe Eie RE Eyr Eyr Fgr Fer Frd Gdn Gra Grg Grg Gw Hm Hen H&C Hly Hut Low Jae Kei Ken Kg Kos Kua Lam Lur LB Liv JL Man
AMERICAN VARIETIES OF VEGETABLES.


Similar names. Hammond’s Mammoth, Maule’s Mammoth, Shumway’s Mammoth, Ford’s Improved Mammoth, Large Mammoth, Late Mammoth, Large Late Mammoth, Improved Large Mammoth, Mills’ Late Mammoth, Early Mammoth, Extra Early Mammoth.

Seedsmen’s synonyms. Asylum, Bdg. Barre’s, Bdg. Excelsior, Bdg. Large Sugar, Shw. Late Mammoth, Gg.

Mammoth Cory. Yng. For similar names see Cory.

Mammoth Evergreen. Anb Ar Btl Cox Del Hns Loh.

Similar names. See Stowell’s Evergreen.

Mammoth Southern Sweet. RE.

Mammoth White Cob Cory. Air Bnd Bdl Bkt Big Bow Brk Bri Brn Brw CE CSC EBC Col Cur Chm Dlw D&H Ebe RE Ext Fnr Fer Frd Gls G’H Ggy Gey Hns Ham Hrn Hrs Hlm HAP Iml J&S Jns Kra Lam Lan Lnr Liv JL Loh Lm Mhd Man JCM JMM MV M&S Neb NK Old Pg HP Prn Por Pri Rkl Raw Rec Rim Rob Rs S&R Shw Shm Sie Sim Sox SB S&H Thr AGT Tlr Til Van Vkl Wdr WS Yng.

Similar names. See Cory.

Manhattan. Thf.

Marblehead. CE Ebr Emr Mnd May MV Rec Sox Thr Vin.


Marblehead Mammoth. Ggy Raw Rs. For similar names see Marblehead.

Market Gardener’s Extra Early. Shm. For similar names see Extra Early.

Maule’s XX. Man.

Maule’s Mammoth. Entered as Mammoth.

May’s Acme. Entered as Acme.

Melrose. Bkt Ebr Xol Thr.

Similar names. Early Melrose.

Metropolitan. Bkt Bgy Bdg Buc Bur EBC Dvr Ebr Ebr Frd J&S Jns Lan Mau May Ptt Rob S&W Thr Vnl Wdr.

Similar names. Early Metropolitan, Henderson’s Early Metropolitan.

Mexican. Ggy Prn. For similar names see Black Mexican.

Seedsmen’s synonyms. Black Sugar, Prn.

Michell’s Delicious. Mhl.

Michell’s Extra Early. Mck. For similar names see Extra Early.

Mills’ Earliest Large. Mls.

Mills’ First of All, Mills’ Late Mammoth. Entered as First of All and Late Mammoth.

Minnesota. CE Ebr Emr Hlm J&S Mnd Nol Rec Roe S&O Sox S&W Thr.

Similar names. See Early Minnesota.

Moonarch. Mzy Wdr.


Similar names. Moore’s Early, Moore’s Early Concord, Early Concord, Late Concord, Concord.

Moore’s Early. XI. For similar names see Moore’s Concord.


Similar names. See Moore’s Concord.

Moore & Simon’s Early Evergreen. Entered as Early Evergreen.
Moore & Simon's Early Giant. M&S. For similar names see Early Giant.
Moore & Simon's First Crop. M&S. For similar names see First Crop.
Mosby's Prolific. Eic. For similar names see Russell's Prolific.
Seedsmen's synonyms. Country Gentlemen, C&J Elt Ham Kra Sim Pit, etc.
Little Gem, Drf EBC Pit Ms. Quaker Sweet, Chl Ggy Pit Ren Ms. Show Peg, Ms Bui Bar Drn Hen Thr, etc. Show Peg Evergreen, Ebc. Zigzag Hen.
Similar names. New England Early.
Seedsmen's synonyms. Early Eight-Rowed, Mls. Early Large Eight-Rowed, J&S.
New York's Best. Pg.
Ninety Day Red Cob. Blg.
Similar names. Owen's Red Cob.
Nonesuch. Alr Bgs Bm CSC Col Crs Drd DD Gra Hln Hen Mnd Mun Mzy NK Ren SC Shw Sim S&H Tat Ten Yng.
Similar names. Clark's Nonesuch.
Norfolk Market. Tat.
Northern Success. McK.
Northrup, King & Co.'s XXXX. NK.
Northrup, King & Co.'s Zigzag Evergreen. Entered as Zigzag Evergreen.
North Star. GN.
Northwest. McK.
Seedsmen's synonyms. Old Square, McK.
Oakview Early Market. For Jns Yn.
Ohio Monarch. JMM. For similar names see Early Monarch.
Ohio Red Cob Evergreen. HP. For similar names see Snowell's Evergreen.
Similar names. Early Colony.
Seedsmen's synonyms. Landreth Sugar, Hrn.
Owen's Red Cob. Jac. For similar names see Ninety Day Red Cob.
Pee and Kay. CE EBC Cle Crs Grn TG Luc Liv Pit Rob Roc Wdr Wdr.
Similar names. Early Pee and Kay, Price & Knickerbocker's Early Pee and Kay.
Peep O'Day. For Old Vnn.
Perkins' Early Market. Bui. For similar names see Early Market.
Perry's Early Hybrid. Bgs Shrn. For similar names see Perry's Hybrid.
Similar names. Perry's Early Hybrid.
Philadelphia Evergreen. M&S. For similar names see Stowell's Evergreen.
Philippus' Wonder. HP. For similar names see Indiana Wonder.

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AMERICAN VARIETIES OF VEGETABLES.

Portland. Fnr NK.

Potter's Excelsior. Bdg Bgy Brk Bdg Buc Bui Bur Brw CECSC EBC Cle CF Cox 
CrS Curr Dec Eas Ebe Emr Fqr Fst Fax Fre GH Ggy Gry TG Hrn Hrs Hlm J&S K&W Kra Prn Pne Pot Raw Rec Rob Roc Rs S&F Tat Thr Thb Vk Wat Wtn Wdr. 

Similar names. Large Excelsior, Everitt's Excelsior, Shumway's Excelsior, Excelsior, Potter's XX Early, Potter's Sugar. 

Seedmen's synonyms. Squantum, Bai Bur Fqr J&S Mhl Raw, etc.

Potter's XX Early. Pot. For similar names see Extra Early, Potter's Excelsior.

Potter's Sugar. Bdg. For similar names see Potter's Excelsior. 

Seedmen's synonyms. Squantum, Bdg.

Premier. Brk. 

Similar names. Breck's Premier.

Premo. All Brd Brn Eve Ggy Hlm Thr Vk Wnt.

Price & Knickerbocker's Early Pee and Kay, Price & Knickerbocker's Extra Early 
Tom Thumb. Entered as Pee and Kay and Extra Early Tom Thumb.

Price & Reed's Champion, Price & Reed's Eclipse, Price & Reed's Extra Early 
Colossal. Entered as Champion, Eclipse, and Extra Early Colossal.

Price & Reed's Perfection. Pri. For similar names see Early Perfection.

Price's Early Perfection. M&S. For similar names see Early Perfection.

Price's 1800. Pri.

Pride of Chenango. Pg.

Prosperity Evergreen. H&P. For similar names see Stowell's Evergreen.

Quaker Sweet. Chl CSC Ptt Tat. For similar names see Early Sweet. 


Red Cob Cory. Bt Bgs Brt Cle Chm Ebe RE Fnr GH Grw Jns Kei Lan McK 
S&O Stw Wll Y&H. 

Similar names. See Cory.

Seedmen's synonyms. First of All, SB.

Reliance First Crop. M&S. For similar names see First Crop.

Rhode Island. Pot. 

Similar names. Rhode Island Bearfoot.

Rhode Island Bearfoot. Emr. For similar names see Rhode Island.

Rice's Early Evergreen. Entered as Early Evergreen.

Riley's Favorite. Btl. For similar names see Trucker's Favorite.

Rockford Market. Buc Roc. 

Similar names. Extra Early Rockford Market.

Ptt Pri Thr Wat W&D Wdr. 


Similar names. Improved Ruby.

Russell's Prolific. Bkt Bgs Bri CSC Cok Frd GH TG Hse HP Rob Shw Vk. 

Similar names. Mosby's Prolific.

St. Louis Market. Pot. 

Salzer's First of All. Entered as First of All.

Schwill's Early Market. Shw. For similar names see Early Market.

Schwill's Early Surprise. Shw.

Schwill's Improved Large Adams. Entered as Large Adams.

Second Early Adams. Blg. For similar names see Early Adams.

Shaker's Early. Bkt Bdg Bgs CE CSC EBC Cle CF Crs Curr Chm D&H DD Drm 
Ebr RE Evr Fst Ggy GH Hrn Hrs Hen Hlm Hop Hut Imi J&S Kel Lnr Liv
JOHN LOH LOH MMS May JCM JMM Min MV Neb HP Pmt Pri Ren Rec Rob Rs SC S&O Sue Sax Thr Til Tpk Yng Y&H.

**Similar Names.** Shaker's Extra Early, Shaker's Large Early.

**Shaker's Extra Early.** Spl. For similar names see *Shaker's Early.*

**Shaker's Large Early.** Brn Buc Bur Bre Ebe Haw Qkr Roe Wdr.

**Similar Names.** See *Shaker's Early.*

**Sheffield.** Frd TG Mgd Sim Vl.

**Similar Names.** Burpee's Sheffield, Burpee's Early Sheffield, Early Sheffield, Extra Early Sheffield.

**Shoe Peg.** Bue Bui Chl CSC Cox Ewz GH TG H&C J&S K&F K&F Man Min Put Pri Roe TB.

**Similar Names.** Improved Shoe Peg, Shoe Peg Evergreen.


**Shoe Peg Evergreen.** Ebe. For similar names see *Shoe Peg, Evergreen.*

**Seedsmen's Synonyms.** *Xe Plus Ultra,* Ebe.

**Shumway's Excelsior.** Sim. For similar names see *Potter's Excelsior.*

**Shumway's Extra Early Cory, Shumway's Mammoth, Shumway's Western Queen.**

Entered as *Extra Early Cory,* Mammoth, and Western Queen.

**Simmers' First of All.** Entered as *First of All.*

**Simon's Extra Bonanza.** Entered as *Early Bonanza.*

**Snowflake.** *Thun.*

**Southern Express.** Eic.

**Southern White Snowflake.** *Akr.*


**Stabler's Early.** Bnt Buc CE CSC EBC Cox Drr Ggy GH G&T TG Hen Hlm J&S Man Pri Roe Roe W&D Wdr.

**Similar Names.** Stabler's Extra Early, Stabler's Hybrid, Stabler's Pedigree, Stabler's Nonpareil.

**Stabler's Extra Early.** Alr Bui Bur Cur PM Mhl M&S Neb.

**Similar Names.** See *Stabler's Early.*

**Stabler's Hybrid.** Cle. For similar names see *Stabler's Early.*

**Stabler's Nonpareil.** Mhl M&S. For similar names see *Stabler's Early.*

**Stabler's Pedigree.** Bly CSC Fst Hlm Raw Rec Rob Y&H.

**Similar Names.** See *Stabler's Early.*

**Stowell's Evergreen.** Aix Alr Anh Ar Bae Br Bdt Btt Blt Btk Bel Ber Blg Bon Bow Bgg Brg Bg Bbg Bgs Br Brr Br Brr Bng Bue Bui Brr Bur Bre Cam CE CSC EBC Cle C&B Col CF Cox Crs Cur CA Chun Dlw D&H Del DD D&C Drr DRm Dnn Eas Ebe Eic Elt Emar RE Evr Ewz Fqr Fst Fax Fer Frd Ger Gls Gn GH Gng GN Ggy Gry Ggy Gt G&T TG Ham Hlm Hm Hm Hrs Hrv Hst Hen Htt H&C Hl Hlm Hop H&P Inlu Iow Jac MJW J&M J&J Jns Kei Kel K&W Ken K&F Kg Koe Koe Ksk Lmm Lam Lan LB Liv JL Loh Lon Mnd Mgd Man PM Ms Mns Mas Man May JMM McM Mic Mhl MV Mzy Nef Nol XI NK OV Old Pse Png HP JMP Pr Pmr Pmc Ptt Ptt Too Por Pot Pri Qkr Rtk Raw Rec Reneo Rm Rob Rce Rf Rs RP Sa S&R SC S&F S&F Shw &O Sim S&I Sim Sox Spf Sfo B&H S&W Tat Tem Tex Thm Thb AGT Thh Til Trm T&B Vl Van Vm Vin Wat Web W&D Wer Wlt Wd Wdr WS Wyg Yng Y&H.

**Similar Names.** Evergreen, Improved Stowell's Evergreen, Hammond's Improved Stowell's Evergreen, Burr's Evergreen, Ferry's Evergreen, Livingston's Evergreen, Prosperity Evergreen, Philadelphia Evergreen, Shoe Peg Ever-

Sugar.  Crs For Haw Pks Van.

Similar names.  Bloomsdale Sugar, Landreth Sugar, Henderson's Sugar, Early Sugar, Henderson's Early Sugar, Early Maple Sugar, Large Sugar.

Seedsmen's synonyms.  *Early Sweet, Fer Crs Pks*.

Sugar Productive.  Kei.

Tal's Market Garden.  Tat.

Thorburn's Melrose.  Entered as Melrose.

Tilton's Twelve-Rowed.  Til.

Triumph.  CE CSC EBC Drf G11 H&P Lan McM Mhl M&S Mzy Nol Pir Pri Raw Reo Rob Sim Tat Thr Wd WS.

Similar names.  Early Triumph, Improved Triumph.

Troy Market.  Y&H.

Trucker's Favorite.  Mno Wd.

Similar names.  Forsythe's Favorite, Riley's Favorite.

Tuckit.  Drw.

Tuscarora.  Ewg Ren Sim Tex Thr.

Similar names.  White Tuscarora.

Vaughan's Black Sugar.  Entered as Black Sugar.

Vick's Earliest of All.  Entered as Earliest of All.


Similar names.  Washington.

Seedsmen's synonyms.  *Egyptian, Bur Brd Frd GT Prn Sim, etc.*

Western Queen.  Shnl.

Similar names.  Shumway's Western Queen.


Similar names.  See Cory.

White Cob Evergreen.  Liv.  For similar names see Stowell's Evergreen.

White Early Adams.  Put SC Sox.  For similar names see Early Adams.

White Mexican.  Fbl MV Sox.  For similar names see Black Mexican.

White Tuscarora.  CSC.  For similar names see Tuscarora.

Will's Banana Cream, Will's Early June, Will's Five X.  Entered as Banana Cream, Early June, and Five X.

Wisconsin Beauty.  May.

Yexo.  Hst.

Similar names.  Hastings' Yexo.

Zigzag.  Brk Min.  For similar names see Stowell's Evergreen.


Similar names.  See Stowell's Evergreen.
CORN SALAD.

(Also called Fetticus.)

Corn Salad. Bel Bru Buc Ckr Cur Ebr Eic Evr Ewg Fqg Frn Grw Ham H&C H&I low M WJ Kna Lam Liv Mgd PM Mus Pri Pug Raw Rl SaF SC Shw Spl Stk S8 Stw Tpk Vnm Vm.


Similar names. Small-Seedcd Broad Leaf, Large-Seedcd Broad Leaf, Broad-Leaved Dutch.

Broad-Leaved Dutch. M&S.

Similar names. Large-Leaved Dutch, Small-Seedcd Dutch, Large-Seedcd Dutch.

Green Cabbaging. Crs Mnl Thr.

Similar names. Improved Green Cabbaging, Large Green Cabbaging.

Improved Green Cabbaging. Improved Large-Leaved, Improved Large-Seeded.

Entered as Green Cabbaging, Large-Leaved, and Large-Seeded.

Italian. Kf.

Similar names. Large-Seedcd Italian Broad-Leaved.

Large German. Pnc T&B.

Large Green Cabbaging. CE Hst Ree Sic Til Y&H.

Similar names. See Green Cabbaging.


Similar names. Improved Large, Large-Seeded Large-Leaved, Large-Leaved Dutch, Large-Leaved Fetticus:

Large-Leaved Dutch. Ren. For similar names see Broad-Leaved Dutch.


Similar names. See Round-Leaved.

Large Round-Leaved Large-Seeded. Bur Hrn Ree.

Similar names. See Round-Leaved.

Large-Seeded. Anb Brg Btk Bdg Brg Bng Cle CE Crs Drr Eft Ger GH Gry Hrv Hul Kg Kns Lnr Mdl Mfn May JCM JMM MV Mzy Nef HP Por S&R S&F Sox S&W Tat Tex TB Thr Tln Vi W&D Wdr.

Similar names. Improved Large-Seeded, Large-Seedcd Dutch, Large Seed Broad-Leaved, Large-Seeded Large-Leaved, Large Round-Leaved Large-Seeded.

Large-Seeded Broad Leaf. CE.

Similar names. See Broad-Leaved, Large-Seeded.

Large-Seeded Dutch. Ree. For similar names see Broad-Leaved Dutch.

Large-Seeded Italian Broad-Leaved. M&S. For similar names see Italian.

Large-Seeded Large-Leaved. Ldh.

Similar names. See Large-Leaved, Large-Seeded.


Similar names. Large Round-Leaved Large-Seeded, Round-Leaved.

Small-Leaved. Då. For similar names see Small-Seeded.

Small-Seeded. Bdg Ebe GH May JMM Mzy Thr.


Small-Seeded Broad Leaf. CE. For similar names see Broad-Leaved.
American. Hen Mud W&D.
Similar names. American Land.
Seedsmen’s synonyms. Land, Hen Mud W&D.

American Land. RHJ Kei. For similar names see American.

Australian. Big Hen RHJ Kei Vk W&D.
Similar names. Henderson’s Australian.
Seedsmen’s synonyms. Golden, Big Kei. Golden Yellow, Bgs.

Broad-Leaved. Ar Brn Bru RE Gra Ging Kei Lan MV HP Pri Ren Sim Sax Stw Thr.

Broad-Leaved Garden. Sax Vk.
Similar names. Curled Garden.

Broad-Leaved Gray-Seeded. Elec G11. For similar names see Broad-Leaved.

Broad-Leaved Green. SB. For similar names see Broad-Leaved.

Broad-Leaved Winter. MV Sax Thr. For similar names see Broad-Leaved.

Curled. Ar Brk Brk Bru Brn Buc Bui Bru CF CS Dlw Dl Eas EWG Fle G11 Gg Gg Gg TX TG Hde Hen H&C H&P J&M Koe Kra Lam Lan Lur LB Loh May Mc Min MV Mzy Neb Nol NK Pk PKS HP Pot Por Pri Qkr RP S&R S&F Shw Shv Sax Stw S&H S&W Tat Tmr Thr Tpk Vin Wat Wd WS Y&H.

Seedsmen’s synonyms. Pepper, NK. Peppergrass, Buc Fer H&P Neb Pg HP, etc.

Curled Garden. Ebe Fur JL Mns Old Rec Van Wer.
Similar names. See Curled, Broad-Leaved Garden.

Seedsmen’s synonyms. Peppergrass, Frd.

Curled Peppergrass. Brt C&J CE Fer Y1. For similar names see Peppergrass.

Curled Upland. Thm. For similar names see Upland Cross.

Double Curled. Brd Cle Dun Ebr Hrn Kei TB Trm. For similar names see Curled.

Seedsmen’s synonyms. Peppergrass, Thm.

Dwarf Fine Curled. Ebe Mgd. For similar names see Curled.

Early Curled. Til. For similar names see Curled.

Erfurt. Drr Mud JMM Mhl S&W W&D.
Similar names. Erfurt Sweet.

Erfurt Sweet. Thr. For similar names see Erfurt.

Similar names. See Curled.

Seedsmen’s synonyms. Peppergrass, Brt Bkt Drr J&S Lam Liv, etc.

Extra Curled Peppergrass. Ham. For similar names see Peppergrass.

Extra Curled Upland. Hst. For similar names see Upland Cross.

Extra Double Curled. JCM. For similar names see Curled.

Extra Early Curled. Cam. For similar names see Curled.

Extra Fine Curled. Hrs S&O Sox. For similar names see Curled.

Extra Triple Curled. McK Ren. For similar names see Curled.

Fine Curled. Pkg Br Col RE Hbt Hlm Inl Lea M&S Sie Vk Wll.
Similar names. See Curled.

Seedsmen’s synonyms. Peppergrass, Brt Del Hlm Mls.
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Fine Double Curled. VI. For similar names see Curled.

Golden. Dry RE Kei.


Golden Yellow. Bgs. For similar names see Golden.

Seedsmen's synonyms. Australian, Bgs.

Gray-Seeded Early Winter. Fert Loh. For similar names see Winter.

Henderson's Australian, Henderson's Golden. Enter as Australian and Golden.

Improved Large-Leaved. Enter as Large-Leaved.

Land Cress. Hen Mud W&D.

Seedsmen's synonyms. American, Hen Mud W&D.

Large-Leaved. Gyg.

Similar names. Improved Large-Leaved.


Plain. Ewg.

Single Curled. Th. For similar names see Curled.

Triple Curled. Man Pac. For similar names see Curled.


Winter. MWJ.

Similar names. Gray-Seeded Early Winter, Broad-Leaved Winter.

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African Horned. Chl D&H Frr Ggy Lw Jws Mau Ms Swo Wer.

Alaska. Buc Roc.

Similar names. Buckbee's Alaska.

Albino. Fer Lwr Liv Pk Vau.

Similar names. White Albino.

Arlington Early White Spine. Buc M&S NK Ptt S &F SB.

Similar names. See Arlington White Spine.

AMERICAN VARIETIES OF VEGETABLES.


Arlington White Spine Forcing. Dtr Jns Tat.

Similar names. See Arlington White Spine.

Arnstade’s Green Giant Forcing. Koe. For similar names see Norbiton Giant.

Astro. Iow Loc.

Seedsmen’s synonyms. Rollinson’s Telegraph, J.l.

Austrian Gherkin. Iau.

Baltimore White Spine. G&T. For similar names see White Spine.

Bell’s Prolific Pickling. Bel. For similar names see Green Prolific.

Bennett’s Early White Spine. C&J.

Similar names. See Bennett’s White Spine.

Bennett’s Evergreen White Spine. Web.

Similar names. See Evergreen White Spine, Bennett’s White Spine.

Bennett’s Improved Early White Spine, Bennett’s Improved White Spine. Entered as Bennett’s Early White Spine and Bennett’s White Spine.


Similar names. Bennett’s Improved White Spine, Bennett’s Improved Early White Spine, Bennett’s Evergreen White Spine. See also White Spine.

Seedsmen’s synonyms. Peerless White Spine, Ptt.

Bismarck. Brd Buc Fer Ggy Hde low Iml Ldr LB Mns Neb Shw.

Seedsmen’s synonyms. Evergreen Long Evergreen, Iml. Tailby Hybrid, Fer.

Bloomdale White Spine. Lan. For similar names see White Spine.

Blue Gown. Brk Bui Gry Hen Mzy Sim SB W&D.


Similar names. See White Spine.

Boigiano’s Improved Extra Early White Spine. Entered as Boigiano’s Extra Early White Spine.

Boston Market. Lan M&S Ren Stw. For similar names see Boston Pickling.

Seedsmen’s synonyms. Boston Pickling, Lan Stw. Prize Taker, M&S.

Boston Market Forcing. Fqr. For similar names see Boston Pickling.


Breck’s Forcing White Spine. Brk. For similar names see White Spine.

Briggs’ Early Green Prolific. Entered as Early Green Prolific.

Brunning’s White Spine. Bug. For similar names see White Spine.


Burner's Monarch. RE. For similar names see Monarch White Spine.


Seedsman's Synonyms. Gherkin, Alx Brl Eic G&T Mns JMP, etc. Round Pickly, Lam. Small Gherkin, Bri Drr JL Mhl S&R Trm. West India Gherkin, Bui Elt Ewg Frd Hen Iow, etc.

California Pickling. J&M.

Cardiff Castle. Raw.

Carter's Earliest of All, Carter's Tender and True. Entered as Earliest of All and Tender and True.

Carter's Model. Brk D&H Gry S&F SB Van. For similar names see Model.


Seedsman's Synonyms. Westfield, Ebr.


Seedsman's Synonyms. Chesterfield, Jns. Westfield Pickling, Bkt Btl Fer Lam Liv May, etc.

Childs' Early Beauty, Childs' Ivory Monarch. Entered as Early Beauty and Ivory Monarch.


Chinese Snake. Kei. For similar names see Vick's Early Chinese.

Seedsman's Synonyms. Seedly Qua, Kei.

Cincinnati Pickle. JCM.

Climax Forcing. Tat.

Climbing. Bel Brr.

Climbing Delicatessen. Ger.

Covent Garden. Mhl.

Similar names. Covent Garden Favorite, Covent Garden Frame.

Covent Garden Favorite. Bui Drr Elt W&D.

Similar names. See Covent Garden, Lord Kenyon's Favorite.

Covent Garden Frame. Bui. For similar names see Covent Garden.

Cox's Early White Spine. Cox. For similar names see White Spine.


Coy's Early Cyclone, Coy's Cyclone, Coy's Cumberland. Entered as Early Cyclone, Cyclone, and Cumberland.

Cream City Pickling. Kos.

Similar names. Koss' Cream City Pickling.

Crosse & Blackwell Pickling. NK.


Currie's Milwaukee Pickling. Entered as Milwaukee Pickling.

Cuthill's Black Spine. Hen Raw SB S&W W&D.

Similar names. See Cuthill's White Spine.


Similar names. Cuthill's Black Spine. See also White Spine.

Cyclone. Ggy Thh.

Darch & Hunter's Improved Long Green. Entered as Long Green.

Duke of Edinburgh. Bing Boli Crr Drr Elt Elv Gry Hrv Hen Mnd JMM Mzy Pks Pot Rn SB Tat Thr Vin W&D.

Dwelling House. Mhl.

Earliest of All. D&H. For similar names see Extra Early.

Early Beauty. Chl.

Similar names. Childs' Early Beauty.

Early Boston Market. Ebe JMM. For similar names see Boston Pickling.

Early Chinese. Vkg.


Similar names. Coy's Early Cyclone.

Early Evergreen. Brd Cam. For similar names see Evergreen White Spine.

Early Express. Iow.

Early Fordhook White Spine. Jer. For similar names see Fordhook White Spine.

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Neb Nef Nol NI NK OV Old Pac Pg JMP Pir Pnt Ptt For Pot Pug Rik Raw Rec Ren Ree Rob Rt Rs RP SC S&P Shw S&O Shw Sim Sim Sox Spf Stk SB Sw S&H Tex TB Thm Thb Tpk Trm T&B VI Van Vt Vin Web W&D W’ll Wlt Wdr WS Wyg Yng.

SIMILAR NAMES. Early Frame, Early Frame Short Green.

SEEDSMEN’S SYNONYMS. 
- Early Green Cluster, Bdg. Early Proliﬁc Short Green, Buc. Early Short Green, Bar Bow Col Est Fer Pg, etc. Early Short Pickling, Bdg. Gerkin, Cnr. Short Green, Cur Drr Ebr Fqr low J&S, etc.

Early Frame Short Green. 
- Mie Sox. See Early Frame, Short Green.

SIMILAR NAMES. See Early Frame, Short Green.

Early Green Cluster. 
- Brd Bigg Bdg Bgs Bui Brb Bur Cam CE Chi Col Cok Crs CA DD Drw Drn Emr Extr Est Gis Hde Hrm Hts Hst Haw Hlm Hop H&I Ini K&K&WK&F Lea Liv JL Man Mns Man MV Mzy NI NK HP JMP Pnt Pri Qkr Raw RP SC Shw Shw Sic Sec SB S&W Tat Thr Vt Vin Web WS.

SIMILAR NAMES. Paris Early Green Cluster, Early Cluster.

SEEDSMEN’S SYNONYMS. Early Frame, Bdg. Early Short Pickly, Bdg. Early Green Prolific. 
- Bgs D&C Fmr Est Hbt Hlm Hop M&S Ree Wdr Y&H. See Green Prolific.

SIMILAR NAMES. Boston Pickling, Bar Est Fmr Hlm Hop.

Early Long Green. 
- Roc. For similar names see Long Green.

Early Long White Spine. 
- Bow RE. See Extra Long White Spine.

SIMILAR NAMES. Salzer’s Market Garden.

Early Netted Russian. 
- H&P. For similar names see Early Russian.

Early Prize. 
- May. Prize Taker, Prize Pickle, English Prize.

Early Prolific Short Green. 
- Buc Roc. See Short Taker, Green Prolific.

SIMILAR NAMES. Early Frame, Buc.

Early Russian. 

SIMILAR NAMES. Improved Early Russian, Extra Early Russian, Early Netted Russian.

SEEDSMEN’S SYNONYMS. Extra Early Siberian, Bur. Moromian Gerkin, Sim.

Early Short Green. 

SIMILAR NAMES. Early Frame, Bow Col Est LB Pug SC, etc. Extra Early Frame, HP.

Early Siberian. 
- Buc Hop Rob. For similar names see Northrup’s Siberian.

Early Spine. 
- Hns. For similar names see White Spine.

Early White Spine. 

Emerald Gem. M&S. For similar names see Emerald.

Emerald Green White Spine. Ber Hst. For similar names see Emerald.

Empress of India. SB. For similar names see White India.

English Forcing. G&T.

Similar names. English Frame.


Similar names. See English Forcing.

Seedsmen's synonyms. Telegraph, C&J.

English Gherkin. Bru. For similar names see Gherkin.

English Prize. M&S. For similar names see Early Prize.

Eskimoso. J&S.


Seedsmen's synonyms. Siberian, J&S.

Evergreen. Aurb Ar Brl Big Brk Bgs Bui Buc Buc Cur C&B Col CF Cok Eas Ebr RE Evr Flr Frd Frt GH Gya TG Ham Hrn Hst Htm Hul Hop Jer MtJ LW Lur JL Mgd Mns Mnl JMM Mhl Ms Mvy Mp AC HP Pne Ptt Qkr Ree Rob S&O Sim Sre SB Thr Van Wt Yng.

Similar names. See Evergreen White Spine.

Seedsmen's synonyms. Extra Long White Spine, HP.


Similar names. See Evergreen White Spine.


Seedsmen's synonyms. Extra Long White Spine, Bur Bkt Buc Fer Frd Hlm, etc.

Excellor Long Green. Big. For similar names see Long Green.

Extra Early. Bkt Eas Haw MWJ.

Extra Early Evergreen. Blg. For similar names see Evergreen White Spine.
Extra Early Frame. HP. For similar names see Early Frame.

**Seedsman's synonyms.** Early Short Green, HP.

*Extra Early Green Prolific.* Brd Bur Cle C&K Cur Ebe KE Frd Hen Man Ms Put Poo Pri Rob Shw Spl Tem Van W&D.

**Similar names.** See Green Prolific.
**Seedsman's synonyms.** Boston Pickling, D&C Frd Bur.

*Extra Early Green Turkey.* Ar. For similar names see Long Green Turkey.

*Extra Early Long Green.* Bnc GN TG Hlm Rob Shw Shm SB Vk Wit.

**Similar names.** See Long Green.

*Extra Early Russian.* Blg CE DD Drn Haw Hse Lam Liv JL JCM McK Ren Ree Sox Tat Tem.

**Similar names.** See Early Russian.

*Extra Early Siberian.* Bgs Col D&H Gra Shw Shm.

**Similar names.** Early Siberian, Northrup's Siberian, Siberian.

**Seedsman's synonyms.** Early Russian, Bur.


**Similar names.** See White Spine.

**Seedsman's synonyms.** Arlington White Spine, Iml.

*Extra Green Prolific Pickling.* HP. For similar names see Green Prolific.

*Extra Long.* Bur Liv S&W. For similar names see Long Green.

*Extra Long Evergreen.* Iml. For similar names see Evergreen White Spine.

**Seedsman's synonyms.** Bismarck, Iml.

*Extra Long Green.* Bai Ken Pac Raw S&W.

**Similar names.** See Long Green.


*Extra Long Green Giant.* Cock Neb Tem Vl.

**Similar names.** See Norblton Giant, Long Green.

*Extra Long Green Prickly.* Bur. For similar names see Long Green.

*Extra Long Green Turkey.* Bow Pnt.

**Similar names.** See Long Green Turkey.

*Extra Long White Spine.* Btl Bkt Bri Buc Bur CE Cle C&K CF Cur Eht Fer Fred Grs TG Hns Hrs Hrv Hen K&F Lnr Liv Loh Man May Neb OH HP Png Reci Rob SC Shw S&O S&H Thm Thr Til Tpk Trm Vl Vau W&D.

**Similar names.** Long White Spine, Long White, Early Long White Spine.

See also White Spine.

**Seedsman's synonyms.** Evergreen, HP. Evergreen White Spine, Bnc Bkt Bur Fred Trm, etc.

*Favorite Pickling.* May OV Tpk. For similar names see Lord Knyon's Favorite.

*Florida Emerald.* Bgs CE Cle. For similar names see Emerald.

*Forcing White Spine.* Bkt Bri Pot S&F. For similar names see White Spine.

*Fordhook Famous.* Bur. For similar names see Fordhook White Spine.

*Fordhook Pickling.* Air Bri Buc Bur Cle Frd Gill Ging Gty Hbt J&S Jns Mgr Ms Myz Olb Bg Rob Roe Shw Shm S&W Thm Tlk Vau Wdr.

**Similar names.** See Fordhook White Spine.

*Fordhook White Spine.* Bnc Buc Ebe Fred Jer McK Ren.

**Similar names.** Improved Fordhook White Spine, Improved Early Fordhook White Spine, Fordhook Famous, Fordhook Pickling, Burpee's Fordhook Pickling. See also White Spine.


*Garden Gem.* May.

**Similar names.** May's Garden Gem.

*General Grant.* DD Mzy Pnt.
Gherkin.  Ax Anb Ar Bai Brd Bow Chl Cle C&B Col Cox Crg Cur Eic RE Evr Fer Glr Glgn G&T Grv TG Hde Hrn Hen Hut Hnd JMJ Min Nfl NK Pck J&P Pot Qkr Ren Rim SC Shw Shin Sox Spf Tat TB Til T&B Vf Van Vk Wat Wt Wd WS.
  Similar names.  English Gherkin, Moravian Gherkin, Paris Gherkin, Small Gherkin, Short Stem Gherkin, Small West Indian Gherkin, West India Gherkin, West India Brr, Brr.
Giant German.  Ggy.  For similar names see White German.
Giant Green.  Fqr.  For similar names see Norbiton Giant.
Giant of Arnstadt.  Crs DD JMM Mzy Thr Vk.
Giant Pear of Guadeloupe.  Evq.
  Similar names.  See Long Pera.
Giant Tailby Hybrid.  Sal.  For similar names see Tailby Hybrid.
Giant White.  Alr Col D&H Emr Fqr Hrs Hop M&S Vin.
  Similar names.  See Norbiton Giant.
Giant White Perfection.  Ewg Gra.  For similar names see Lockie’s Perfection.
Gladiator.  M&S.
  Similar names.  Moore & Simon’s Gladiator.
Glory of Erfurt.  Crs DD.  For similar names see White Erfurt Spine.
Goliath.  Crs Ger Old Thm Thr Vr Wer.
  Similar names.  Goliath Long Green.
  Seedsmen’s synonyms.  Chicago Giant, Old.
Goliath Long Green.  D&H Shw.  For similar names see Goliath, Long Green.
Grand Pera.  Fie.  For similar names see Long Pera.
Green Fournier.  M&S.
  Seedsmen’s synonyms.  Jersey Pickling, Buc Mhl Wat.  Boston Pickling, Bow Buc Evr Ewg Lam Liv, etc.
Green Prolific Pickling.  Bru Chl Ebr H&P Ken Lea Mnd MV Neb Prn Thr Vr Wt W&D Wd.
  Similar names.  See Green Prolific.
Half Long.  Big Mns.
Hammond’s Earliest.  Ham.  For similar names see Extra Early.
Hammond’s Improved White Spine, Hammond’s King of Picklers.  Entered as Hammond’s White Spine and King of Picklers.
Hammond’s White Spine.  Ham.  For similar names see White Spine.
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Hampel's Forcing.  Koc.
Hastings' White Spine.  Hst.  For similar names see White Spine.
Henderson.  Hen.
Henderson's Cool and Crisp.  Entered as Cool and Crisp.
Hill's Arlington White Spine.  Bgs.  For similar names see Arlington White Spine.
Hill's Early Forcing White Spine.  Bui Ebr.

Similar names.  See Hill's Forcing White Spine.

Hill's Forcing.  Cox.  For similar names see Hill's Forcing White Spine.

Similar names.  Hill's Early Forcing White Spine, Hill's Forcing, Hill's Arlington White Spine.  See also White Spine.

Holmes' Early White Spine.  Hlm.  For similar names see White Spine.
Holmes' Improved Early White Spine, Holmes' Improved Jersey Pickling.  Entered as Holmes' Early White Spine and Jersey Pickling.

Ideal.  Mhl.


International.  Buc Roe.

Similar names.  Buckbee's International.

Ivory King.  Buc Roe.

Ivory Monarch.  Chl.  For similar names see Monarch White Spine.

Japanese.  Lan.  For similar names see Japanese Climbing.

Japanese Climbing.  Alx Ar Ar Bvd Bdl Btl Bnc Brk Bdg Bgs Brc Brr Brr Brr
Br CAM Chl Col CF Cok Cox Crs Cur Dbr D&H Del DD Drr Ebr Ele Ebr RE
EvR EwG EmR Fqr Fld Frd Gls Gdn Gra Gng GN Gry G&T Hns Ham Hfr Hrm
Hrs Hvc Hst Hen Hbt Hlm Hop Hsc H&P ImI IoW JcJes MwJ J&M J&S Kri
Kg Kos Kra Lam Lnr Liv JL Lon Mgl Msa Man May JCM JMM Mls MV M&S
Neb Nef Nol NK Old Pae Pk Pks PH Pir Prn Pnc Pnt Pvt Prt Pot Qkr Raw Ree
Ren Rec Rob Rce Rs Sl S&R S&I Shw S&O Shm Sim Sox Spk Stk SB Stw S&H
S&W Tat Tem Thm Thr Til Trm VL Vau Vn Vln Veu W&D Wer Wil Wyg.


Japanese Climbing Green.  Fqr S&F.  For similar names see Japanese Climbing.

Japanese Climbing White.  Fqr S&F.  For similar names see Japanese Climbing.


Similar names.  See Jersey Pickling.

Jersey Pickling.  Alx Bkt Bgt Bgs Brk Brn Brp Buc Btu Bur Brw Cam CE Cle
CF CA Dlw DD EvR Fst Fer Gdn GH G&T Grw TG Hrn Hen Hlm Hop H&P ImI
IoW Jc J&S Ken Koe Lam Lan Lnr Liv Mnd PM Mns Man May JCM JMM Mdl
Mhl Nef Nol NK Pks HP Pnt Pri Raw Ree Rm Rob SC Shw S&O Shm SB
Stw Ten Til VL Vau Wat WS.


Jersey Prolific. Min. For similar names see Jersey Pickling.

Johnson & Stokes’ Perfected Jersey Pickling. J&S.

King of Picklers. Ham.

Klondike. Ham.

Koss’ Cream City Pickling. Entered as Cream City Pickling.

Landreth’s Choice. Lan.

Landreth’s First. Dlw Gtg Lan.


Lemon. Gtg May Vk.

Livingston’s Emerald, Livingston’s Evergreen. Entered as Emerald and Evergreen.

Livingston’s Extra Early White Spine. Liv.

Similar names. See White Spine.

Livingston’s Medium Green. JL.

Similar names. See Nicholas’ Medium Green.

Lockie’s Perfection. Brn Bui D&H Drr Elt RE Gra Hen Lnr Raw Thr W&D.

Similar names. Salzer’s Perfection, Giant White Perfection.

London. JMM. For similar names see Long Green.

SEEDSMEN’S SYNONYMS. Extra Long Green, Ebe. Long Green, JMM.

London Extra Long Green. Ebe. For similar names see Long Green.

K&F M&S Put Pitt Ren SC S&F Tat Wt Wlt Wlr.

Similar names. See Long Green.

Long China. Chl. For similar names see Early Chinese.

Long Evergreen White Spine. Gra. For similar names see Evergreen White Spine.

Long German. Fst. For similar names see White German.


Long Giant. Sal. For similar names see Norbiton Giant.

Long Giant Pera. Pac. For similar names see Long Pera.

Long Grebian. Fst.

Long Green. Alr Bak Brd Brt Btl Bkt Blk Bey Bow Bgg Brk Bdg Bgs Btr Brn Bru
Bng Buc Bui Brb Brr Brw C&J Cam CE Cle C&B Col Cox Crs Cur CA Dlw D&H
Del DD Drr Drm Dun Eas Ebe Eic Eit Emr RE Evr Ewg Fmr Fqr Fax Fer Fld
Fle Frd Gcr Gls Gdn GH Gra Ggy Gry G&T Grw TG Hns Ham Hlf Hrn Hrs
Hrv Hst Haw Hen Hly Hlm Hsc Hnt H&P Jnd Jow Jae Jer RHJ J&M J&S Jns
K&K K&W Kj Ks Ks Lam Lan Lea Lnr LB Lvl LJ Loh Lon Mnd Mgd Man PM
Mns Mas Man May JCM JMM M&K M&K Mie Mhl Ms Min MV M&H Mzy Neb
Nef Nol Nl NK Ov Old Pac Pk Pks HP JMP Pir Prn Pne Poo Por Pot Pri Pug
Rik Ree Ren Rep Rob Roc Rs RP Sal S&R S&H Sbw S&O Shw Sia Sin Sox Spf
SB Stw S&H Tem Tex Thm Thr Thb AGT Til Tpk Trm T&B VI Van Vk Vin
Wat Wea Web W&D Wer Wl Wd WS Wyg Yng Y&H.

Similar names. Long Green, London Long Green, London Extra Long Green,


Long Green Giant. Ger.
Long Green Giant Pera.  Ebr.  For similar names see Long Pera.
Long Green Parisian.  Thr.  For similar names see Parisian Pickling.

SEEDSMEN'S SYNONYMS.  Jersey Pickling, Pat.
Long Green Prolific.  Drw Eic.  For similar names see Long Green.
Long Green Southgate.  Sal.  For similar names see Long Green.
Long Green Turkey.  Anb Bon GE/Cle Cox Cur Dlw Dnm Emr Est GH Ggy Gyg Grw Tg Hen MWJ Koe Lan May Mel Mhl Min MV Ree Rob RP SC Shw Sox Stk Stw Tat TB Thm Thr Web.

SIMILAR NAMES.  Extra Long Green Turkey, Improved Extra Early Long Green Turkey, Extra Early Green Turkey.  See also Long Green.

Long Gun.  May.
Long Island Pickling.  Bug.
Long Pera.  Hnt.

SIMILAR NAMES.  Giant Pera, Burpee's Giant Pera, Mammoth Giant Pera, Long Giant Pera, Long Green Giant Pera, Grand Pera, White Pera.
Long Prickly.  Bui.  For similar names see Long Green.
Long Slim.  Law.
Long White.  Fqr.  For similar names see Extra Long White Spine.

SIMILAR NAMES.  See Extra Long White Spine.

SEEDSMEN'S SYNONYMS.  New Jersey Hybrid, Bdg.
Lord Kenyon's Favorite.  Bui Gry Hen S&W W&D.

SIMILAR NAMES.  May's Favorite Pickling, Covent Garden Favorite, Favorite Pickling.
McKenzie's Prolific.  McK.
McMillan's Improved White Spine.  McMillan’s White Wonder.  Entered as Mc-
Millan's White Spine and White Wonder.

McMillan’s White Spine.  McM.  For similar names see White Spine.
Mammoth Giant Pera.  Shm.  For similar names see Long Pera.
Mammoth Long.  Mic.
Market Garden.  Sud.  For similar names see Early Market.

Marquis of Lorne.  Bui Elt RC Kwg Gra Mhl Prn Ren Sim SB Vin W&D.
Matchless.  Mhl.  For similar names see White Spine.
Matchless Extra Early White Spine.  Not.  For similar names see White Spine.
Matchless White Spine.  M&S.  For similar names see White Spine.
Maule's Early White Spine.  Man.  For similar names see White Spine.
Maule's Extra Early.  Man.  For similar names see Extra Early.

Maule's Improved Long Green.  Entered as Long Green.
May's Favorite Pickling.  May's Garden Gem, May's Peerless.  Entered as Favorite
Pickling, Garden Gem, and Peerless.

Meaux Pickling.  Crs.
Medium Green.  Del Hns Lan May Ov Stw Tpk Wd.

SIMILAR NAMES.  See Nichols' Medium Green.
Medium Pickling.  Eas.  For similar names see Nichols' Medium Green.

Mills' Earliest.  Mls.  For similar names see Extra Early.

Milwaukee Pickling.  Cur Koe.

SIMILAR NAMES.  Currie's Milwaukee Pickling.
Model.  Crs Sim Wd.

SIMILAR NAMES.  Model Forcing, Tait's Model, Carter's Model.
Model Forcing.  Wer.  For similar names see Model.


Morning Star.  Sal.  For similar names see Star of the West.

Moromian Gherkin.  Sim.  For similar names see Gherkin.

Seedsmen's synonyms.  Early Russian, Sim.

New Orleans Market.  Ele Put Show Stk Thm Thr.

Similar names.  Frootscher's New Orleans Market.

Seedsmen's synonyms.  Improved Long Green, Eic.  Tailboy Hybrid, Bui.


Similar names.  Livingston's Medium Green, Medium Pickling, Medium Green.

Noa's Forcing.  Gng Koe Liv Thr Van Vk Vin.

Nonesuch.  Sal.

Norbiton Giant.  Ggy.


Northrup, King & Co.'s Pickling.  NK.

Northrup's Siberian.  Entered as Siberian.

Page's Everbearing.  Entered as Everbearing.


Paris Gherkin.  RHIJ Mgd.  For similar names see Gherkin.

Parisian Long White Ridge.  Ele RHIJ.  For similar names see Stockwood Ridge.

Parisian Pickling.  Alr Bt Bru Bar Col Cox Crs D&H Eas RE Ewr Fld Frd Gra Ggy Hrs Hlm Hop Mau Mck Ren Rce Rob Shm Sim Sox Van.


Similar names.  See Parisian Pickling.

Pearce's Improved Long Green.  Entered as Long Green.

Pearl.  Alr.  For similar names see White Pearl.

Peerless.  GH Mnd Mns Mau May Nol Vin.

Similar names.  See Peerless White Spine.

Peerless Improved White Spine.  Entered as Peerless White Spine.


Similar names.  Peerless Improved White Spine, Peerless, May's Peerless, Vincent's Peerless.  See also White Spine.


Perfected Jersey Pickling.  Entered as Jersey Pickling.

Perfection Early White Spine.  Bui.  For similar names see White Spine.

Perfection White Spine.  Cam low Vk.  For similar names see White Spine.

Philipps' Everbearing.  Entered as Everbearing.

Pickling.  CE.
Pierson's Long Green. Entered as Long Green.

Plant Seed Co.'s Early White Spine. Entered as Early White Spine.

Prescott Wonder. Mnd Thr. For similar names see White Wonder.

Pride of Canada. Sim.

Prize Pickle. Ren. For similar names see Early Prize.

Prize Taker. M&S. For similar names see Early Prize.

SEEDSMEN'S SYNONYMS. Boston Market, M&S.

Prolific Pickling. Sal. For similar names see Green Prolific.

Rawson's White Spine. Brt Raw. For similar names see White Spine.

Rochford. For.


Rochford's Market. Drr S&F. For similar names see Rochford.

Rochford's Market Garden. Mbl. For similar names see Rochford.

Rockford Market. W&D. For similar names see Rochford.

Rockford Pickle. Bue GN Roc. For similar names see Rochford.

Rollinson's Telegraph, Rollinson's Telegraph Forcing, Rollinson's Telephone.

Entered as Telegraph, Telegraph Forcing, and Telephone.

St. Louis Pickling. DD SC.

Salzer's Earliest. Sal. For similar names see Extra Early.


Salzer's Perfection. Sal. For similar names see Locke's Perfection.

San Francisco Pickling. Cox.

SIMILAR NAMES. Cox's San Francisco Pickling.


SIMILAR NAMES. See Snake.

SEEDSMEN'S SYNONYMS. Snake, Buc Bar Brr J&S Liv Neb, etc.

Short Green. Alg Bk Bel Brr C&G Cur Del Ebr Gls GH Ggy Gry Gg Gw Hns Hde Hrm Hrn Hvy Hen Hnn Hop H&P Iml Iow Jns Koi K&W Lam Lmr Liv Man Man Min Nef NX Pnt Ptt Pri Pug Rec Rs RP S&R S&F Shm SB Tx Trm Vl Vk Wea W&D Wb Y&H.

SIMILAR NAMES. Early Short Green, Improved Short Green, Early Prolific Short Green, Early Frame Short Green.


Short Green Gherkin. CA SB. For similar names see Gherkin.

Short Prolific. Hns. For similar names see Green Prolific.

Short Prolific Pickling. Btl Dlw Koe Lan Rmn Ul.

SIMILAR NAMES. See Green Prolific.

Shumway's Giant. Shm. For similar names see Norbiton Giant.

Shumway's Improved White Spine. Entered as Shumway's White Spine.

Shumway's White Spine. Shm. For similar names see White Spine.

Siberian. Anb Brd Btl Buc Fmr Frd Ger Hns Hrs J&S Mgd Neb NK Sim Trm Van Wd Ws.

SIMILAR NAMES. Early Siberian, Extra Early Siberian, Northrup's Siberian.

SEEDSMEN'S SYNONYMS. Everbearing, J&S.

Simmers' Extra Early White Spine. Sim. For similar names see White Spine.

Similar names. Improved Sion House.

Small Gherkin. Bow Bri Drr Emr JL Mnd Mau Mhl MV Neb Nol HP Por S&R Sor Thr Tpk Trm.
Similar names. See Gherkin.
Seedsmen's synonyms. Burc, Bri Drr JL Mhl Por S&R Trm.

Small Green Pickling. S&W.

Small West Indian Gherkin. Kei. For similar names see Gherkin.

Similar names. Serpent.
Seedsmen's synonyms. Serpent, Buc Bnr Brt Cie Neb Ree, etc.

Sooly Qua. Kei.

Star of the West. Bui.
Similar names. Salzer's Morning Star.

Steele-Briggs' Evergreen. Entered as Evergreen.

Sterling. CE.

Stockwood Ridge. Brui.
Similar names. Parisian Long White Ridge.

Sutton's Matchless. Entered as Matchless.

Sutton's Progress. Bug Thr.

Swan Neck. DD Mzy Vk.

Tailby Hybrid. Anb Bai Brr Brl Brk Bdg Bgs Bui CE Cie Cur DD Fst GH Ggy Gry Hns Hrn Hrs Hrn Mnd May Mhl MV M&S Mzy OV HP Pnt Ree Rob SC S&W Shm Sox Thr Tpk Van Wea W&D.
Similar names. Salzer's Giant Tailby Hybrid.
Seedsmen's synonyms. New Orleans Market, Bui Fer.

Tait's Climax Forcing, Tait's Improved White Spine. Entered as Climax Forcing and Tail's White Spine.

Tait's Model. Tat. For similar names see Model.

Tait's White Spine. Tat. For similar names see White Spine.

Telegraph. Brd Brr Brk Bri Bru Bng Buc Bui C&J Crs Drr Ebe Elt RE Ewg Fqr Gra Gng Gry Hen MWJ Ken Lnr Liv JL Mnd JMM McK Mhl Mzy Pks Prn Ptt Por Pot Raw Ren S&R S&F Sim SB S&W Tat Thr Til Vau Vk Wea W&D.
Similar names. Telegraph Forcing, Rollinson's Telegraph Forcing, Rollinson's Telegraph, Rollinson's Telephone, Telephone.
Seedsmen's synonyms. Astro, JL English Frame, C&J.

Telegraph Forcing. Koe Wer. For similar names see Telegraph.

Telephone. Ewg Gra. For similar names see Telegraph.

Tender and True. Brg Brg D&H Eln RE Fqr Gry Mhl Mzy Raw S&F Thr.
Similar names. Carter's Tender and True.

Thorburn's Commercial Pickling. Brg Bgs Ebr Ggy Nor Thr.
Similar names. Thorburn's 1896 Pickler.

Thorburn's 1896 Pickler. Thr.
Similar names. See Thorburn's Commercial Pickling.

Thorburn's Everbearing, Thorburn's Evergreen. Entered as Everbearing and Evergreen.

Toledo Market Evergreen White Spine. HP.
Similar names. See Evergreen White Spine.

Triumph. Pot.

Vaughan's Improved White Spine. Entered as White Spine.

Vaughan's Prolific Forcing. Vau. For similar names see Green Prolific.

Vincent's Peerless. Entered as Peerless.

Walker's Prolific. RF. For similar names see Green Prolific.

Washington White Spine. I.B. For similar names see White Spine.

Wernich's Chicago Pickling. Entered as Chicago Pickling.

Westfield. Ebr Iow Roc. For similar names see Chicago Pickling.

Seedsmen's Synonyms. Chicago, Ebr.

Westfield Chicago Pickling. Alr Ar BtI Brd Ber CE Cle Evr Frd GH Tg Hst H&C Hse Ind J&S Kra Man MV Rec SC S&O Shm Sim Sox Spf Ten Van Wd WS Yng Y&H.

Similar Names. See Chicago Pickling.

Westfield Pickling. Fer Ham Lam Lar Liv May Nk OV Por S&R S&B SB Tpk Vk.

Similar Names. See Chicago Pickling.

Seedsmen's Synonyms. Chicago Pickling, Bkt BtI Fer Lam Liv Nk, etc.

West India Burr. Grw MzY. For similar names see Gherkin.


Similar Names. See Gherkin.


White Albino. Mic. For similar names see Albino.

White Apple Shape. Ger.

White Dutch. CE Del.

White Erfurt Spine. Sal.

Similar Names. Glory of Erfurt.

White German. Sal.

Similar Names. Long German, Giant German.

White India. Alr Shm.

Similar Names. Empress of India.

Seedsmen's Synonyms. White Pearl, Alr.

White Japan. Fst Liv MzY. For similar names see Japanese Climbing.

Seedsmen's Synonyms. White Pearl, Liv.

White Pearl. Bel Bgg Brk Brg Brr Brn Bar CE Cle Col D&G D&J Fqr Frd Hrv Iow J&S Lar Liv May Mls MzY Pac Ptt Por Pri Raw Ren Rec Rob Shm Thr Vk.

Similar Names. Burpee's White Pearl, Pearl.


White Peru. Sal. For similar names see Long Peru.

White Snow. Lon.

White Spine. Bai Bak Brd Brt Bkt Ber Bgg Brk Bri Brn Brr Cam Chl Cle Col CF DD Drw Dum Eas Ebe Emar Ewg Fqr Fqr Fax Ger GH Gra Ggy Gry GgG Gw TG Ham Hrm Hrn Hrv Hse J&S Jns K&W Ken Liv JL Lon Mgd Man PM May JCM JMM Mic MV Nef Nol Nk OV Pae Pir Prn Pue Pnt Pot Pri Raw Rs S&F Sox Spf Thr Thl Til Tlk Tnk Tkr Van Vn Wea Wer.

DANDELION.

Dandelion.  Bow Bdg CE Cle C&B D&H Fer Ger GH Ggy Hns Hrn Hrv Haw Iow Man MV Rec Rs S&F Tat Vk Wll.

Arlington.  Ggy Rs.


Common French.  For.

Cultivated.  Lam.

Endive Leaved.  Mzy.

Extra Early Broad-Leaved.  Tat.  For similar names see Broad-Leaved.

French.  Bdg CF Elt Lam Lmr Mzy Nol Rs W&D.


GIANT ERECT.  Tat.

Improved.  Cts Ger.  For similar names see Improved Large-Leaved.

Improved American.  Bdg Brk Emr May Rs.

Improved American Thick-Leaved.  Brt Sic.  For similar names see Thick-Leaved.

Improved Broad-Leaved.  CF Fax Haw Mas Pot Tat.

Improved Cabbaging.  SB.


Improved Large Thick Leaf.  Man.  For similar names see Thick-Leaved.

**Similar names.** See *Thick-Leaved.*

**Seedsmen’s synonyms.** Cabbage, Hrm.

Large Broad-Leaved. Br. For similar names see *Broad-Leaved.*


**Similar names.** See *Improved Large-Leaved.*

Large Thick-Leaved. Hrs SC. For similar names see *Thick-Leaved.*

**Similar names.** Large Thick-Leaved, Improved Thick-Leaved, Improved Large Thick-Leaf, Improved American Thick-Leaved, French Thick-Leaved.

**Seedsmen’s synonyms.** Cabbage, Hrm & M&S No! Sim Van Yug.

Very Early Improved. Ggy. For similar names see *Improved Large-Leaved.*

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**EGGPLANT.**

Baltimore. G&T.

Bell’s Perfection Spineless. Entered as *Perfection Spineless.*

Black Beauty. *Bar.*


Black Snake. Thr.

Buckbee’s Large Purple. Buc. For similar names see *Long Purple.*

Buckbee’s White. Buc. For similar names see *Long White.*

Buist’s Improved Large Spineless. Entered as *Buist’s Large Spineless.*

Buist’s Large Spineless. Bui. For similar names see *Spineless.*

Burpee’s Black Beauty. Entered as *Black Beauty.*

Cherry Black. *Man.*

Dammann’s Delicious. *Koe.*

Delicatessen. *Thr.*

Dwarf Round Purple. *S&O.* For similar names see *Round Purple.*

Earliest Dwarf Purple. *Man Thr.* For similar names see *Early Dwarf Purple.*

Early Black Pekin. *Bdg Mas.*

**Similar names.** Early Large Purple, Smooth Stem Pekin.

Early Dwarf. *Ggy.* For similar names see *Early Dwarf Purple.*

Early Dwarf Oval. *Sk.* For similar names see *Early Dwarf Purple.*

Early Dwarf Purple. *Mzy Ree Sim Thr Vau.*

**Similar names.** Earliest Dwarf Purple, Extra Early Dwarf Purple, Extra Early Dwarf, Early Dwarf, Early Dwarf Oval.

Early Large Purple Smooth Stem Pekin. *M&S.*

**Similar names.** See *Early Black Pekin.*


**Similar names.** See *Long Purple.*

Early Long White. *Ewg Gra.* For similar names see *Long White.*

Early Purple. *Sal.* For similar names see *Long Purple.*

Early Purple Spineless. *Eic.*

Early Round. *Ewg.* For similar names see *Round Purple.*
Early Round Purple. Anb Bow CE Fur GH TG Iow May Sox

**Similar names.** See Round Purple.

Eichling's Early Purple. Eic. For similar names see Long Purple.

Eichling's Large Purple. Entered as Large Purple.

Excelsior Tree. Man.

Extra Early Dwarf. Frd. For similar names see Early Dwarf Purple.

Extra Early Dwarf Purple. Hrs. For similar names see Early Dwarf Purple.

Extra Early Dwarf Round Purple. Bar Evr Fst Hbt M&S

**Similar names.** See Round Purple.

Extra Early Long Purple. Roc. For similar names see Long Purple.

Extra Early Round Purple. Ber. For similar names see Round Purple.

Extra Large Long Purple. Buc. For similar names see Long Purple.

Ferry's Improved Large Purple. Entered as Ferry's Large Purple.

Ferry's Large Purple. For Ggy. For similar names see Long Purple.

Fordhook Improved Spineless. Entered as Fordhook Spineless.

Fordhook Spineless. Bar. For similar names see Spineless.

Griffing's Improved Spineless. Entered as Griffing's Spineless.

Griffing's Spineless. Gtg. For similar names see Spineless.

Guadaloupe. Bdg.

**Seedsmen's synonyms.** Striped, Bdg.

**Hastings' Improved Large Purple Spineless.** Entered as Hastings' Large Purple Spineless.

**Hastings' Large Purple Spineless.** Hst. For similar names see Spineless.

Henderson's Improved New York Spineless. Entered as New York Spineless.


Landreth's Spineless. TB. For similar names see Spineless.

Landreth's Spineless Large Round Purple. Lan Stw.

**Similar names.** See Round Purple.

Landreth's Spineless Round Purple. Dlw Rim.

**Similar names.** See Round Purple.

Large New York Improved Spineless. Entered as Large New York Spineless.

Large New York Spineless. Bdg. For similar names see New York.

Large Oval Dark Glossy Purple Spineless. Big.

**Similar names.** See Spineless.

**Large Purple.** Bri Cam Ebe Eic GN Gw J&M Lam LB Roe Stk S&H Thm Wyg.

**Similar names.** See Long Purple.

**Seedsmen's synonyms.** New Orleans Market, Stk.

Large Purple Spineless. JL. For similar names see Spineless.

Large Round Purple. Bov. For similar names see Round Purple.

Large Smooth. Cle. For similar names see Smooth Stem.

Large Spineless. Cam G&h. For similar names see Spineless.


Livingston's Mammoth Purple. Liv. For similar names see Mammoth Purple.


**Similar names.** Early Long Purple, Extra Early Long Purple, Extra Large Long Purple, Improved Purple, McMillan's Improved Purple, McMillan's Purple, Early Purple, Eichling's Early Purple, Large Purple, Buckbee's Large Purple, Improved Large Purple, Ferry's Improved Large Purple, Ferry's Large Purple, Thornless Large Oval Purple.
LONG WHITE.  K'i Sim Thr.


LONG WHITE CHINESE.  Bd.  For similar names see Long White.

LOUISIANA PURPLE.  Blt Jns.

MCCULL'S IMPROVED PURPLE.  Entered as McMillan's Purple.

MCCULL'S PURPLE.  McP.  For similar names see Long Purple.

MAMMOTH PEARL.  For Thr.  For similar names see White Pearl.

MAMMOTH PURPLE.  Liv.

SIMILAR NAMES.  Livingston's Mammoth Purple, Mammoth Purple Spineless, Mammoth Smooth Stem.

MAMMOTH PURPLE SPINELESS.  Tex.  For similar names see Mammoth Purple.

MAMMOTH SMOOTH STEM.  Ms.  For similar names see Mammoth Purple.

MCCULL'S NEW YORK IMPROVED LARGE PURPLE.  Entered as New York Large Purple.

NEW JERSEY.  Cam Cle Mic Rs &R TB Y&H.

SIMILAR NAMES.  New Jersey Improved, New Jersey Improved Large Purple, New Jersey Improved Early Large Purple, New Jersey Improved Large Smooth, New Jersey Improved Large Smooth Stem, New Jersey Improved Large Dark Purple Smooth Stem, New Jersey Early Large Purple.

NEW JERSEY IMPROVED, New Jersey Improved Early Large Purple, New Jersey Improved Large Dark Purple Smooth Stem, New Jersey Improved Large Purple, New Jersey Improved Large Purple Smooth Stem, New Jersey Improved Large Smooth.  Entered as New Jersey, New Jersey Early Large Purple, New Jersey Large Dark Purple Smooth Stem, New Jersey Large Purple, etc.

NEW JERSEY LARGE DARK PURPLE SMOOTH STEM.  Nol.  For similar names see New Jersey.

NEW JERSEY LARGE PURPLE.  Fst Kg.  For similar names see New Jersey.

NEW JERSEY LARGE SMOOTH STEM.  J&S.

SIMILAR NAMES.  See New Jersey.

NEW JERSEY LARGE SMOOTH.  Bg G1.  For similar names see New Jersey.

NEW ORLEANS MARKET.  Eic Stk.

SEEDSMEN'S SYNONYMS.  Large Purple, Stk.

NEW YORK.  Abre Brn Brk CE Chl Cox Cyg CA Del DD Drw Drn Ebe RE Fqr Fst Gry Gifg Hrn Hrn Hrs Hnt Hn1 Iow Kos Kra Lan Mas May JCM JMM Mic Mhl Mzy Nef Olc HP Prn Pot RP Sox Spf SB Stw Thn Thb Trm Wat Web Wer Wil Yng.


NEW YORK GIANT.  Koe.  For similar names see New York.

NEW YORK GIANT SPINELESS.  Chl.  For similar names see New York.

NEW YORK GIANT ROUND PURPLE.  Bgs.  For similar names see New York.

NEW YORK IMPROVED, New York Improved Large Purple, New York Improved Large Purple Spineless, New York Improved Large Round Purple, New York Improved Oval Purple, New York Improved Purple, New York Improved Purple Spineless, New York Improved Round Purple, New York Improved Spine-
New York Large Purple. At Bow Buc Bfr Drf Ext Gng Grw Hst Liv Loh Pm Mil Mis M&S HP Por Roc S&R Tex Tpk Vun.
Similar names. See New York.

Similar names. See New York.

New York Market. Eic Stk. For similar names see New York.


New York Pearl. Bai Bk Brl Bg BDg Bgs Brn Brr C&J Cam CE Col Cok Cox DC Ebr Emr Ewg Fmr Fst Fax Fld Ger Gls Gdn Gra TG Hrv Hly Hlm Hsp Hse H&P Jac K&W Ken Kg Lea Mnd Mgd Man Mns Man McK Min MV Neb NK Pac JMP Pir Pri Pug Qkr Raw Ree Ren Ree Sal Shw S&O Sie Til T&B V'f Vin W&D Wlt Wd Wdr WS.
Similar names. See New York.

Seedsmen’s synonyms. Large Oval Purple, Bdg. Round Purple, Bdg.

New York Purple Spineless. Bug CF Crs Hde Lnr Ree Vk.
Similar names. See New York.


Similar names. See New York.

New York White. NK. For similar names see New York.

Pearl. Bur Brr Eic Lnr Pug Sim. For similar names see White Pearl.

Perfection Spineless. Bel Gra. For similar names see Purple Perfection.

Prolific Tree. Chl.

Purple. Alx. For similar names see Long Purple.

Purple Perfection. Brw TB.

Similar names. Purple Perfection Spineless, Perfection Spineless, Tait’s Purple Perfection, Improved Purple Perfection.

Purple Perfection Spineless. Gra. For similar names see Purple Perfection.

Purple Spineless. Bon. For similar names see Spineless.

Round French. Thr.

Round Purple. Brn MV Ree Sex Vk.

Similar names. Early Round Purple, Extra Early Round Purple, Extra Early Dwarf Round Purple, Dwarf Round Purple, Landreth’s Spineless Round Purple, Landreth’s Spineless Large Round Purple, Large Round Purple Spineless, Large Round Purple, Early Round.

Seedsmen’s synonyms. Improved New York Purple, Bdg. Large Oval Purple, Bdg.

Round White. Shn Thr. For similar names see Long White.


Scarlet Chinese. Bdg Tat Thr.

Spineless. Chl Cle TG Hbt Jac WS.

Similar names. Improved Spineless, Large Spineless, Purple Spineless, Improved Large Purple Spineless, Hastings’ Improved Large Purple Spineless, Buit’s Improved Large Spineless, Buit’s Large Spineless, Griffith’s Improved Spineless, Griffling’s Spineless, Landreth’s Spineless, Fordhook Improved Spineless, Fordhook Spineless, Improved Large Spineless, Large Oval Dark Glossy Purple Spineless, Hastings’ Large Purple Spineless.

Striped. Bdg Ewg Gra Thr.

Similar names. Tricolor Large Streaked Purple Green and White.

Seedsmen’s synonyms. Guadaloupe, Bdg.

Tait’s Purple Perfection. Tat. For similar names see Purple Perfection.
Thornless Large Oval Purple. SC. For similar names see Long Purple.

**SEEDSMEN'S SYNONYMS.** Thornless Smooth Stem, SC.

**Tomato.** Buc.

Tricolor Large Streaked Purple Green and White. Koe.

**SIMILAR NAMES.** See Striped.

White. Hrn K&W Mau M-K Rene Roe Sal Tat. For similar names see Long White.

White Egg-Shaped. Bdg. For similar names see Long White.

White Ornamental. Crs. For similar names see Long White.


**SIMILAR NAMES.** Pearl, Mammoth Pearl.

Wild. Bdg.

# ENDIVE.

Berlin Giant. Bri J&S.

Bordeaux. M&S.

**SIMILAR NAMES.** Simon's Bordeaux.


**SIMILAR NAMES.** Green Broad-Leaved, White Broad-Leaved, Yellow Broad-Leaved. See also Broad-Leaved Batavian, Broad-Leaved Escarole.

**SEEDSMEN'S SYNONYMS.** Batarian, Bui SC. Escarole, Ebe Thr.


**SEEDSMEN'S SYNONYMS.** Escarole, Bow Drs Fqr Hen J&S Raw, etc. Escarole, Vin.

Broad-Leaved Escarole. Bng DD Eic J&S. For similar names see Escarole.

Brussels Chicory. Bdg.

Champion Moss Curled. Lam Van. For similar names see Moss Curled.

Curled. Ewg Gra.

Dallwig's Green Curled, Dallwig's Yellow Curled. Entered as Green Curled and Yellow Curled.

**De Ruffec.** Fqr.

**SIMILAR NAMES.** Large Green Curled de Ruffec.

**Dreer's Giant Fringed.** Entered as Giant Fringed.

**Early Green Curled.** Cam Sim. For similar names see Green Curled.

**SEEDSMEN'S SYNONYMS.** French Moss Curled, Sim.

**Early Summer Moss Curled.** Mzy. For similar names see Moss Curled.

**Escarole.** *Big Crs Put Raw.*

**SIMILAR NAMES.** Broad-Leaved Escarole.

**SEEDSMEN'S SYNONYMS.** Broad-Leaved, Ebe Thr. Broad-Leaved Batavian, Bow Cox Drr Fqr Hen J&S, etc. Broad-Leaved Green, Pnt. Broad-Leaved Imperial Batavian, Sim.

**Ever White Curled.** RE Fer Gls J&S LB Liv Man Mzy Vau.

**SIMILAR NAMES.** See White Curled.

**Extra Fine Curled.** Eic.

**Fine Curled.** Ebc.

**Fine Moss Curled.** Ggy Shm Vau. For similar names see Moss Curled.
French Curled. Bdg. For similar names see Green Curled.

French Green Curled. TB VI. For similar names see Green Curled.

French Green Moss Curled. Ger Neb. For similar names see Moss Curled.

French Moss Curled. Alr Cle C&B Elt Fqr Hen May Pac Sim Vin.

Similar names. See Moss Curled.

French Green Fringed. Bur Ddr Hbt low J&G Mhl Mrs.

Similar names. Dreer's Giant Fringed.

Green Broad-Leaved. Dlw Mnd Pnt. For similar names see Broad-Leaved.

Green Fringed. Brg Hbt Low J&G Mhl Mrs.

Similar names. See Giant Fringed.

Green Improved Fringed. Brg Hbt Low J&G Mhl Mrs.

Similar names. See Giant Fringed.


Similar names. See Broad-Leaved Batavian.


Green Curled Edge. Dlw. For similar names see Green Curled.

Green Curled Italian. Pnt. For similar names see Green Curled.

Green Curled Summer. Bdg DD Hde Kra Ree.

Similar names. See Green Curled.

Green Curled Winter. CE C&J C&B Cts Cur DD Drr Ebe GH Hde H&C Kra Mnd MV Mzv Ree Rce S&O Thr.

Similar names. See Green Curled.

Green Moss Curled. Bdg Dlw. For similar names see Moss Curled.

Imperial Broad-Leaved Batavian. Sim.

Similar names. See Broad-Leaved Batavian.

Green Moss Curled. Bdg Dlw. For similar names see Moss Curled.

Improved Green Curled. Entered as Green Curled.

Laciniated. Thr.

Large Curled. Ger.

Similar names. See Ruffled-Leaved, Ger.

Large Green Curled. Bkt Fer Gls Lan Liv Loh Mrs Mnd Rs Thr.

Similar names. See Green Curled.

Large Green Curled de Ruffec. Thr. For similar names see De Ruffec.

Large Round Black. Lctn.

Lettuce-Leaved. Cts Hde.

Similar names. See Broad-Leaved White, Cts.

London Curled. Eas. For similar names see White Curled.

London Green Curled. Ger Ggy Ptt Wdr. For similar names see Green Curled.
Long Green Curled.  Pac.  For similar names see Curled.
  Similar names.  See Green Curled.
Mammoth Green Curled Italian.  M&S.  For similar names see Green Curled.
Model Prize Curled.  Min.
Moore's Mammoth Green Curled Italian.  Entered as Mammoth Green Curled Italian.
Moss Curled.  Bkt Brk Bdg Bgs Bri Brn Buc Bui Brb Brp CE Col CE Crs Drn
  Ewg Fmr Fcr Frd Gt Hcr Ga GN Grw TG Hrn Hrs Hrv Hsn Jns Ken Krs
  Lan Lnr LB Liv Loh Mnd Man JCM JMM Mic Mrs Pg JMP Pri Pug Rec-Rec
  Rs S&l S&R SB SB SB Sw Sw Van Vl W&D.
  Similar names.  Champion Moss Curled, Fine Moss Curled, French Moss Curled,
  French Green Moss Curled, Green Moss Curled, Salzer's Moss Curled,
  Yellow Moss Curled, White Moss Curled, Early Summer Moss Curled.
  Seedsmen's synonyms.  French, Bdg.  Parisian Curled, Brk.  White Curled,
  Frd.
Oyster.  Bur J&S Maw Mrs Wat.
  Seedsmen's synonyms.  Giant Fringed, Bur Mhl Mrs.
Paragon Curled Summer.  M&S.  For similar names see Paragon Curled Winter.
Paragon Curled Winter.  M&S.
  Similar names.  Paragon Curled Summer.
Parisan Curled.  Brk.
  Seedsmen's synonyms.  Moss Curled, Brk.
Round-Leaved Batavian.  Kei.  For similar names see Broad-Leaved Batavian.
Ruffled-Leaved.  Ger.
  Seedsmen's synonyms.  Large Curled, Ger.
Salzer's Moss Curled.  Entered as Moss Curled.
Savoy Leaved.  Thr.
  Seedsmen's synonyms.  Panzeller, Thr.
Self-Blanching.  DD Ebr.
Simon's Bordeaux.  Entered as Bordeaux.
Small Green Curled.  Loh.  For similar names see Green Curled.
Staghorn.  Mrs.
White Batavian.  Cam.  For similar names see Broad-Leaved Batavian.
White Broad-Leaved.  Crs Hde.  For similar names see Broad-Leaved.
  Seedsmen's synonyms.  Lettuce Leaved, Crs.
  Similar names.  See Broad-Leaved Batavian.
White Curled.  Ar Bkt Bow Brk Bdg Bri Brn Bui Bar Brp C&J CE Cle C&B CF
  Crs Del Drr Dun Ebr Elt Enr Ewg Fqr Fst Frd Gls Gdn GI Gra Grw TG Hrn
  Hrv Hen Hbt H&C Hlm Hop Iml Jnc MWJ J&M J&S Kei K&W Ken Koe Lam
  Lan Lnr Liv Loh Mgd Man Mns Man May Mhl Mrs Neb XI JMM Pvt Por Pri
  Raw Rec Ren Rec Rim Roc RP S&R SC S&O Sc Spf S&H S&W Tem Tex Thm
  Thr Til Vi Van Vl Wat Wca Web W&D Yng.
  Similar names.  White Curled Guillaume, Ever White Curled.
  Seedsmen's synonyms.  Moss Curled, Brk.
White Curled Guillaume.  M&S.  For similar names see White Curled.
White Moss Curled.  HP.  For similar names see Moss Curled.
Winter.  Fmr.
  Seedsmen's synonyms.  Green Curled, Fmr.
Yellow Broad-Leaved.  Dlw.  For similar names see Broad-Leaved.
Yellow Curled.  Dlw.
Yellow Moss Curled.  Dlw.  For similar names see Moss Curled.
AMERICAN VARIETIES OF VEGETABLES.

FETTICUS.  (See CORN SALAD.)

FLAG.  (See LEEK.)

FRENCH SPINACH.  (See ORACH.)

GARLIC.


Erfurt.  H&C.

Large Italian.  Bru.

GERMAN CELERY.  (See CELERIAC.)

GRASS NUTS.  (See CHUFAS.)

GUMBO.  (See OKRA.)

HERBS.

(Excluding those used only for medicinal purposes.)

Agrimony.  Nol Thr.

Alecost.  Iow.  Also called Balsam Mint and Costmary.

Angelica.  Bkt Bru Ewg Ger GH Gra Nol Raw Sim Thr.


Artemisia.  Iow.  Also called Broton.

Asperula Odorata.  Bkt Dlw Thr.

SYNONYMS:  Woodruff, Sweet Woodruff, Woodroof, Waldmeister.


SEEDSMEN'S SYNONYMS.  Melissa, Kei.

Balm, Sweet.  JCM JMM OV Ren.

Balsam Mint.  Iow.  Also called Alecost and Costmary.

Basil.  Ar Cle Emr RE Fqr G&T Hde Kei Koe Lnr Loh Man Mns.

SYNONYMS:  Basilicum.

Basil, Bush or Dwarf.  Bru Mnd Nol Thr.

**Basil. Sweet Large-Leaved.** SC Stk.

**Basil, Sweet Small-Leaved.** SC Stk.

**Basilicum.** Fur. Also called Basil.


**Bergamot, Scarlet-Flowering.** low. **SROD**

**Bohnen Kraut.** Dnm Kra Liv. Also called Summer Savory.


**Brotan.** low. Also called *Artemisia.*

**Calanus.** low. Also called *Sweet Flag.*


**SYNONYMS.** *Catnip.*


**SYNONYMS.** *Catmint.*

**Chervil, Sweet.** See *Sweet Cicely.*

**Cicely, Sweet.** Man. Also called *Sweet Chervil.*

**Coriander.** Alx Alr Ar Bak Bkd Brl Btd Bkl Btd Ber Bow Brk Bdg Bri Brn Bru Bng Buc Bui Bur Brr Chl Cle C&B Col CF Cox Crs Cur Dlw D&H Del DD Drr Dnm Ees Ebe Eic Elt RE Ewg Fnr Fst Fer Frd Ger GH Gry Gry Gry G&T Grw TG Hms Ham Hde Hrm Hrn Hrs Hen H&C Hlm Hop Hse H&P Iow MWJ J&M Kei K&W Ken Keo Kos Kra Lam Lam Lnr LB Liv JL Mnd Mgd Man PM Man May JCM JMM McM Mel Mlt Mls Mn MV Min M&S Mzy Nol NK OV PG Pks HP JMJ Put Ptt Poo Por Pot Pri Pri Raw Rec Ren Rec Rs Sal S&R SC S&F S&O Shn Sim Sim Sox Spf Stk SB Tat Tem Tex Thm Thn Thb AGT Til Tpk T&B Van Vl Wei Wei W&D Wer Wll Wdr Wng.

**Costmary.** low. Also called *Acorvost and Balsam Mint.*

**Cumin.** Btk C&B Cox Drr Ger Hen MWJ LB Liv Man M&S.

**Dill.** Alx Alr Anb Ar Bak Bkd Brl Btd Bkl Btd Bow Brk Bdg Bgs Brn Bru Bng Buc Bui Bur Brr C&J CE Chl Cle C&B Col CF Cox Crs Cur Dlw D&H Del DD Drr Dnm Ees Ebe Eic Elt Env RE Ewg Fnr Fqr Fst Fer Frd Ger GH Gry Gry Gry G&T Grw TG Hns Ham Hde Hrm Hrn Hrs Hrn Hrs Hen H&C Hlm Hop Hse H&P Iow MWJ J&M J&S Jns Kei K&W Ken Kg Keo Kos Kra Lam Lam Lnr
AMERICAN VARIETIES OF VEGETABLES.

LB Liv JL Loh Mnd Mgd Man PM Mns Manu May JCM JM McC Mel Mhl Ms MV M& Mzy Neb Nol NK OV Old Pks HP JMP Pir Pnt Ptt Poo Por Pot Pri Pug Raw Ren Rec Rs Sal SJ C&F S&J S&O Shm Sie Sim Sox Spf Stk SB Stw Tat Tem Tex Thm Thr AGT Til T&B Van Vk Vin Wea Web W&D Wer Wll Yng Y&H.

Dill, Mammoth.  Big Nol Thr W&D Wdr.
Elecampane.  Bkt MWJ LB M&S Nol Thr.
Estragon.  May Thr.  Also called Tarragon.
Fennel, Bolognese Sweet.  Koe.
Fennel, Celery-Rooted.  M&S.
Fennel, Celery-Rooted Florence.  Buc.
Fennel, Florence.  C&B J&S LB MV Ptt Thr W&D.
Fennel, Large Sweet.  Vk.
Fennel, Napes.  My Ptt Thr W&D.
Hibiscus Sabdariffa.  See Roselle.
Hop.  Bkt Brk Bdg Buc Bar C&B D&H DD Drn Fsr Ger Hen Hen Hop Hov Jow MWJ Kra Lan LB Liv Mhl Por Sal Sim Sox Thr Vn Vh.
Lavender, Sweet.  Hde.
Lemonade Plant.  J&M.

SEEDSMEN’S SYNONYMS.  Roselle (Hibiscus sabdariffa) J&M.
Lovage.  Bkt Brk Fnr Gry Nol Pot S&F Sim Thr Vea.
**HERBS.**

**Marjoram.**  Ar Cam Ebe Fur Fqr G&T Gw Hns Hrn Inl Kei Loh Man PM Mns Png Qkr S&O Spl.

**Marjoram, Pot.**  Bkt Bru DD Elt Ewg Gru Hen LB Mund Nol Pks Ren SB Thr W&D.

**Marjoram, Sweet.**  Alx Air Anb Bak Brd Brt Btl Bkt Btg Bow Brk Bdg Bgs Bri Bru Bru Bng Buc Bui Bur Brr C&J CE Chl Cle C&B Col CF Cox Csc Cur Dw&H Del DD Drr Dnm Dum Eas Eic Elt Emr RE Ewg Fst Fax Fer Frd Ger GH Gra GgY Gry Tg Hm Hde Hrn Hrs HrV Hen H&C Hm Hup Hse H&P Inl Iow MWJ RIJ J&M J&S Jns K&W Ken Kg Koe Kos Kra Lam Lan Lur LB Lw NL Msd Mnl May JCM JMM McM Mfl Mfl Ms Min MV M&S Mzy Nol NK OV Old Pac Pks HP JMP Prn Pnt Ptt Poo Por Pot Pri Raw Ree Ren Rec Rim Rs RP Sal S&F SC S&F Shn Sis Sim Sex Stk SB Stw S&H S&W Tat Tex TB Thu Thr Thb AGT Til Tpk T&B Van Vf Vin Wef Wbd W&D Wer Wld Wdr Yng Y&H.

**Melissa.**  Kei.

**SEEDSMEN’S SYNONYMS.**  Balm, Kei.

**Mint.**  D&H Ebe Gra NK Pks Sim SB.  Also called Spearmint.

**SIMILAR NAMES.**  Catmint, Catnip, Spearmint. Spearmint (Variegated), Balm-mint.

**Monarda Didyma.**  Iow.

**SEEDSMEN’S SYNONYMS.**  Scarlet-Flowered Bergamot, Iow. Oswego Tea, Iow.

**Opium Poppy.**  Buc Cie DD Ger Hn Iow J&S LB Mzy Neb Raw S&F Thr Vin W&D.

**Oswego Tea.**  Iow.  See also Monarda didyma.

**Peppermint.**  Dw Ebe Gra Man Nol Pks Pot Sim Thr Vf.

**Pimpernel.**  Pnt.  Also called Salad Burnet.

**Pimpinella.**  Van.

**Purslane.**  Mnd Sal.

**Roselle.**  Bur Ger Hbt J&M Thm.

**SEEDSMEN’S SYNONYMS.**  Lemonade Plant (Hibiscus sabdariffa), J&M.


**Saffron.**  Anb Brd Brt Btl Bkt Ber Brk Bdg Brn Bru Buc Bui CE Cle C&B Col Crs Cur D&H Del DD Dnm Eas Ebe Eic Elt Emr RE Ewg Fmr Fqr Fst Fer Frd Ger GH Gra GgY Gry Hns Hm Hnr Hrn HrV Hen Hup H&P Inl Iow MWJ J&M J&S K&W Ken Kos Kra Lam Lan LB Liv JL Man May JCM JMM Mhl MV M&S Mzy Nol NO OV Pks HP Pnt Ptt Ptp Pri Raw Rec Rec Sal SC S&F S&O Shn Spl SB S&W Tat Thm Thr Thr Thr Vin Vf Vin Wef W&D Wer Wld Yng.

**Sage.**  Alx Air Anb Ar Bak Brd Brt Btl Bkt Ber Bis Bow Brk Bdg Brn Bru Bng Buc Bui Brb Bur Cam CE Chl Cle C&B CF Cox Crg Csr CA Dlw D&H Del DD Drr Dnm Dum Eas Ebe Eic Elt Emr RE Ewg Fmr Fqr Fst Fax Fer Frd Ger GH 1329—No. 21—02—13
AMERICAN VARIETIES OF VEGETABLES.


Sage, American Broad-Leaved. Roc.


Sage, English Broad-Leaved. Crs Ptt Wdr.


Sage, Large-Leaved. Koe.

Sage, Mammoth. Fld.

Sage, Purple. Thr.

Sage, Red. Thr.

Sage, Variegated Mammoth. Iow.

Salad Burnet. See Pimpinella.

Savory. Ar Bl Fld PM May OV.

Savory, Perennial. SB.


Spearmint. Dw Iow. Also called Mint.

Spearmint, Variegated. Iow.

Sweet Flag. See Calamus.

Sweet-Scented Marigold. See Tagetes lucida.

Tagetes Lucida. Bur. Also known as Sweet-Scented Marigold.


Tarragon, Russian. -Mnd.

Thyme. Alx Alr Bk Brd Brt Bkt Bow Bgs Bri Brn Bng Buc Bui Brf C&J Cam CE Chl Cle Crg Dw D&H Del Dnm Eas Ebe Eic Emr RE Fnr Fgr Fst Fax Fer Frd GH Gry Grw TG Hns Ham Hde Hrm Hrs Hst H&C Hlm Hop Iml MWJ RHJ J&M J&S Jns Kei K&W Ken Kg Kos Kra Lan Lnr Liv J&J Loh Mgd
HERBS—KALE. 195

Man PM Mns Mau May JCM JMM McM McM Mhl Ms Mm MV M&S Neb NK
OV Old Pae Pg Pks JMP PiR Prn Pne Poo Por Pri Raw Rec Ren Rec Rs RP Sal
S&F S&B S&O Shm Sic Sim Spf Stk Stw S&H Tat Tem Thm Thb AGT Til T&B
Van Vin Web Wer WII Y&H.

Thyme, Broad-Leaved. Amb Bell Brk CF Crs Cur DD Ett Ger Hen Hse Hk Pk Iow
Kei Lb Man Sox SB S&W Wea W&D Yng.

Thyme, Broad-Leaved English. Art Brk C&B Cox Gls Ggy G&T Lam Mund Mzy
Nol Pat Thyr Vk Wea Wdr.

Thyme, English. Bd g Brn Drr Tpk.


Thyme, French Summer. Cox Wea.

Thyme, Golden Variegated. Iow.

Thyme, Lemon. Kei.


Thyme, Sweet. Col HP Pт SC.


Waldmeister. See Asperula odorata.

Woodruff. Кen Mund Ptn S&F Wer.

SYNONYMS. Asperula odorata, Waldmeister, Sweet Woodruff, Woodruff.

Wormwood. Art Amb Brd Brk Ltd Brk Brd Bsg Bн Bn Buc Bar Brer Cht Cle C&B
Cоl Crs Cur Dw D&H Del DD Drr Drm Eas Ebe Elt RE Fur Fyr Fyr Fst Fyr Fer
Frd Ger GH Gra Ggy Gry Gry Grw Hm Ham Hrm Hrn Hen Hk C Hlм Hop H&P
Iow МВJ J&M Kei K&W Kei K&W Ken Kos Kra Lam LB Liv JL Mund Man May
Mel Mhl M&S Mzy Neb OV Old P PKs HP Pir Ptn Ptt Ptn Poo Por Pri Raw Rec
Ren Roc Sal S&R S&F S&O Shm Sim Spf Stk SB S&W Tat Thm Thb AGT Van
Vк Vin Wea W&D Wer WII Wdr Y&H.

HORSE-RADISH.

Horse-Radish. Ar Brd Bar D&H Drr Eic Elt Fyr Fst Ger Gry G&T Grw Ham
Hde Hly Iow МВJ J&S Kei K&F Lam Lan Lur LB Liv Mund Mgl Man JMM
McK McM Mls Mzy Neb Pk HP Pir Ptn Pot Pтг Raw Roc Sal SC S&W Shw Shm
Sim Spf S&H Tex Thr AGT T&B Van Vin W&D Wer.

KALE.

(Known also as Sprouts and Greens. Sea Kale is a form of beet, with thickened
leaf stems.)

Abergeldie. Kei.

American. Mns.

SIMILAR NAMES. Extra Curled American.

SEEDSMEN’S SYNONYMS. Long Standing, Mns.

Bloomdale. MWJ Lam Stw.

Brown Curled. Bdg Ptn Roc S&F.

SIMILAR NAMES. Dwarf Brown, Dwarf Brown Curled, Tall Brown Curled,
Tall Brown Scotch, Brown Dutch. See also Brown German.

SEEDSMEN’S SYNONYMS. Curled Purple, Bdg Ptn. Purple, Ebe.

Brown Dutch. Ebr.

Brown German. Man Nef Wea. For similar names see German.

Carter’s Thousand Head. Ggy.

SIMILAR NAMES. Salzer’s Thousand Head.
AMERICAN VARIETIES OF VEGETABLES.

Cow Cabbage. Thr.

Seedsman's synonyms. Jersey Winter, Thr.

Curled Dwarf German. Ken JMM RP Shw Sim TB Til Yng.

Similar names. See German.

Curled Dwarf Purple. Bai Crs Elt S&F. For similar names see Dwarf Purple.

Seedsman's synonyms. Dwarf Brown Curled, Elt S&F.

Curled German. Blg PM Mus. For similar names see German.

Curled Green German. S&O. For similar names see German.

Curled Intermediate. Bui. For similar names see Intermediate.

Curled Mosbach. Bri Bui Bur Frd Mgd Mus. For similar names see Mosbach.

Curled Purple. Bdg H&P Ptt Raw. For similar names see Dwarf Purple.

Seedsman's synonyms. Brown, Bdg Ptt.

Curled Purple German. Hen. For similar names see Dwarf Purple, German.

Seedsman's synonyms. Brown German Curled, Hen Raw.

Curled Purple Scotch. Wdr.

Similar names. See Dwarf Purple, Green Curled Scotch.

Curled Siberian. Ax Bdg Bui C&J Ebe Elt TG J&S Thr.

Similar names. See Siberian.

Seedsman's synonyms. German Greens, Ebe J&S. Hardy German Greens, Bdg. Winter Sprouts, Bdg.

Curled Striped. Thr.

Similar names. Striped Garmishing, Curled Variegated, Dobbie's Variegated.

Curled Variegated. Thr. For similar names see Curled Striped.


Dobbie's Variegated. Gra. For similar names see Curled Striped.

Dobbie's Victoria. Ewg Gra.

Dreer's Imperial Long-Standing. Entered as Imperial Long-Standing.

Dwarf Brown. Brkg S&W W&D. For similar names see Brown Curled.

Dwarf Brown Curled. Dlw Elt Thr. For similar names see Brown Curled.

Seedsman's synonyms. Dwarf German Purple, Roe. Dwarf Purple Curled, Elt S&F.

Dwarf Curled. Alr Bld Fax Ger Pac Pot Pri.

Similar names. See Dwarf Green Curled.

Seedsman's synonyms. German Greens, Alr Fax Ger Pac.


Dwarf Curled Erfurt. Bui Pot.


Dwarf Curled Scotch. Bak Ber Brg Bri Bui Drr Fer Gdn Ham Iml Jac Kg Lan

Lor LB Pq Raw Roc Slm Ten Tex Wyg Yng.

Similar names. See Green Curled Scotch.

Seedsman's synonyms. Dwarf German, Bur Ham NK. German Greens, Ber Fer Ham Iml Nk Pq, etc. Siberian, Bur. Sprouts, NK.

Dwarf Curled Slow Seeder. Lan. For similar names see Dwarf Green Curled.

Dwarf Erfurt. Sal. For similar names see Dwarf Curled Erfurt.


Similar names. See German.


Dwarf German Brown Curled. GH Mzy HP. For similar names see German.
**Dwarf German Green.** Eic low *Trn* IV Vin.

**Dwarf Green.** Pir. For similar names see Dwarf Green Curled.

**Dwarf Green Curled.** Bow Bng C&J Hol Emr RE Fgr Ggy Gry Hde Hrm Hrn Hrs Jus Kru Lar Mhl Xeb Rec S&F Sic S&H Wlt Y&H.

- **Similar names.** Tall Green Curled, Tall Green, Tall Curled, Dahlwig's Dwarf Green Curled, Improved Dwarf Green Curled, Half Dwarf Green Curled, Dwarf Green, Dwarf Curled, Dwarf Curled Slow Seeder, Green Curled, Tall's Favorite Green Curled, Early Green Curled, Favorite Green Curled.

- **Seedsmen's synonyms.** German Greens, Bow Bue Emr. Sprouts, Buc.

**Dwarf Green Curled Erfurt.** Ptt SC. For similar names see Dwarf Curled Erfurt.

**Dwarf Green Curled Scotch.** Btt Bkt Bng Brk Bgs Bui Brb Cm CF C&B CF Ccr Crs Ccr DD Ebr Elt Extr Ewg Frd Gls Hrn Hen Hly Hm Hop Lam Liv Mns May McK Mzy Ncf Pac Pks Ptt Poo Por Ren Rec S&R SC S&O Sim Spfl S&W Tat Thr T&B Vkl W&D Wdr Ws.

- **Similar names.** See Green Curled Scotch.

**Dwarf Green Curled Siberian.** CE Hop Rec Wd. For similar names see Siberian.

**Dwarf Green Erfurt.** Bdg. For similar names see Dwarf Curled Erfurt.

**Dwarf Green Extra Curled Scotch.** Alx.

- **Similar names.** See Green Curled Scotch.

**Dwarf Moss Curled.** Ptt. For similar names see Half Dwarf Moss Curled.

**Dwarf Purple.** Aub Emr NK Vkl.

- **Similar names.** Curled Purple, Tall Purple, Curled Dwarf Purple, Dwarf Purple German, Dwarf Purple Scotch, Tall Purple Scotch, Curled Purple Scotch, Curled Purple German, Purple Curled Dwarf German.

**Dwarf Purple German.** Btt Bw Bar CE Emr Fgr GII Ken Lam Lan LB Liv Rec.

- **Similar names.** See Dwarf Purple, German.

**Seedsmen's synonyms.** Dwarf Brown Curled, Rec.

**Dwarf Purple Scotch.** JMM.

- **Similar names.** See Dwarf Purple, Green Curled Scotch.

**Dwarf Scotch.** Del MWJ. For similar names see Green Curled Scotch.

**Dwarf Siberian.** EBC Gls Wdr. For similar names see Siberian.

**Seedsmen's synonyms.** Sprouts, Gls.

**Early Curled Blue.** No.

**Early Dwarf Siberian.** Wdr.

**Seedsmen's synonyms.** Dwarf German Sprouts, Wdr.

**Early Curled Siberian.** Wd WS. For similar names see Siberian.

**Early Green Curled.** 1st. For similar names see Dwarf Green Curled.

**Early Moss Curled.** Bri. For similar names see Half Dwarf Moss Curled.

**Early Short-Leaved White Vienna.** C&B.

**Extra Curled American.** G&T. For similar names see American.

**Extra Curled Dwarf German.** Gig Lan Loh MV Sox Til Yng.

- **Similar names.** See German.

**Extra Curled Mosbach.** 1ow. For similar names see Mosbach.

**Extra Dwarf Green Curled Scotch.** Bld GII J&S Nol.

- **Similar names.** See Green Curled Scotch.

**Seedsmen's synonyms.** Norfolk, Bld.

**Extra Early Dwarf German.** Pug. For similar names see German.

**Favorite Green Curled.** Tat. For similar names see Dwarf Green Curled.

**Frisby's Crested.** Kcl.

**German.** Alr Ber Bow Brk Bng C&B CF Emr Fgr Fgr Ger GN Gry Ham Lar LB Liv Mzy Nol Pac Pg Ptt Pot Raw Roe S&F.

- **Similar names.** Dwarf German, Extra Early Dwarf German, Holmes' Improved Dwarf German, Philadelphia Dwarf German, Curled Dwarf German,
American Varieties of Vegetables.

Green Curled Dwarf German, Purple Curled Dwarf German, Extra Curled Dwarf German, Curled German, Curled Green German, Curled Purple German, Dwarf Purple German, Half Dwarf German Moss Curled, German Brown Curled, Dwarf German Brown Curled, Tall German Brown Curled, Brown German.

Seedsmen's synonyms. Dwarf Curled, Air Fax Ger Pac. Dwarf Curled Scotch, Ber Fer Ham Iml LB Pg, etc. Dwarf German, Ham NK. Dwarf Green Curled, Bow Buc Emr. Siberian, Brk Buc Fer Ggy Por S&R, etc. Siberian Curled, Ebe J&S. Sprouts, Buc Fqr Fer Liv NK Pitt Raw, etc. Winter, Fqr Por Raw S&F.

German Brown Curled. CE Cle C&B Del Hen Hly Neb Raw.

Similar names. See German.

Seedsmen's synonyms. Purple German Curled, Hen Raw.

Green Curled. Ebe Hrv H&P Man Mic Min NI S&O AGT VI.

Similar names. See Dwarf Green Curled.

Seedsmen's synonyms. Scotch, H&P.

Green Curled Dwarf German. Cam Cox Drr Evr Fmr Gra Hrn Lwr HP Sim Tex Tpk Web.

Similar names. See German.

Seedsmen's synonyms. Sprouts, Sim. Siberian, Hrn.


Green Dwarf Curled Mosbach. RHJ. For similar names see Mosbach.

Half Dwarf Curled Mosbach. Dlw. For similar names see Mosbach.

Half Dwarf German Moss Curled. Roe.

Similar names. See German, Half Dwarf Moss Curled.

Half Dwarf Green Curled. Cur Wer. For similar names see Dwarf Green Curled.

Half Dwarf Green Curled Scotch. CF.

Similar names. See Green Curled Scotch.

Half Dwarf Mosbach. Roe. For similar names see Mosbach.

Half Dwarf Moss Curled. Col Del Fer Koe Lam Liv May VI.

Similar names. Semi-Dwarf Moss Curled, Half Dwarf German Moss Curled, Dwarf Moss Curled, Tall Moss Curled, Tall Green Moss Curled, Early Moss Curled.

Seedsmen's synonyms. Scotch, Col.

Half Dwarf Scotch. Col. For similar names see Green Curled Scotch.

Holmes' Improved Dwarf German. Entered as Dwarf German.

Imperial. Bri Fer J&S Mhl.

Similar names. Johnson & Stokes' Imperial, Dreer's Imperial Long-Standing, Imperial Long-Standing, Imperial Green Curled Scotch.

Seedsmen's synonyms. Long-Standing, Mhl J&S.

Imperial Green Curled Scotch. Man M&S.

Similar names. See Green Curled Scotch, Imperial.

Imperial Long-Standing. Drr Not.

Similar names. See Imperial, Long-Standing.


Similar Names. Curled Intermediate.

Jersey Winter. Thr. For similar names see Winter.

Seedmen's Synonyms. Cow Cabbage, Thr.

Johnson & Stokes' Imperial. Entered as Imperial.

Large-Leaved Jersey. Ggy.

Large-Seeded. Raw.

Seedmen's Synonyms. Spring, Raw.

Large-Seeded Spring. Fur Gry S&F. For similar names see Spring.

Late Siberian. Tat. For similar names see Siberian.

Long-Standing. Bri Bw J&S Mnd Mhl.

Similar Names. Very Curly Long-Standing, Improved Standing, Dreer's Imperial Long-Standing, Standing, Imperial Long-Standing.

Seedmen's Synonyms. American, Mns. Imperial, Mhl. Johnson & Stokes' Imperial, J&S.


Mosbach Winter. Vt. For similar names see Mosbach.

Norfolk. Big G&T MWJ.


Norfolk Dwarf Green Curled Scotch. Nol.

Norfolk Green Curled Scotch. M&S Wd WS.

Similar Names. See Green Curled Scotch.

Norwood Dwarf Curled. JMM.

Ostrich Plume. Mgd Man.

Pe-Tsai. Alx Fur Tat Thr Vaň Vin.

Seedmen's Synonyms. Chinese Cabbage, Alx Fur Tat Thr Vaň Vin.

Philadelphia Dwarf German. Lan. For similar names see German.

Philadelphia Green Curled Scotch. GH.

Similar Names. See Green Curled Scotch.

Phenix. Kei.

Plain. Tat.

Predeck's Winter. DD. For similar names see Winter.

Purple. Vt.

Purple Curled Dwarf German. Bkg.

Similar Names. See Dwarf Purple, German.

Salzer's Dwarf Erfurt. Entered as Dwarf Erfurt.

Salzer's Thousand Head. Sal. For similar names see Carter's Thousand Head.

Semi-Dwarf Moss Curled. Crs. For similar names see Half Dwarf Moss Curled.


Similar Names. Improved Siberian, Late Siberian, Dwarf Siberian, Curled Siberian, Dwarf Green Curled Siberian, Thorburn's Improved Curled Siberian, Early Curled Siberian.


Smooth. Kg Wd WS.

Seedmen's Synonyms. Spring, Kg Wd WS.
Spring. Bdg Kg Raw Tat Wd WS.

Similar names. Large-Seeded Spring.

Seedsmen’s synonyms. Large-Seeded, Raw. Plain. Tat. Smooth, Kg Wd WS.

Standing. Bri. For similar names see Long-Standing.

Striped Garnishing. Bdg. For similar names see Curled Striped.

Tait’s Favorite Green Curled. Entered as Favorite Green Curled.

Tall Brown Curled. Thr. For similar names see Brown Curled.

Tall Brown Scotch. Wer. For similar names see Green Curled Scotch.

Tall Curled. Bel Sox. For similar names see Dwarf Green Curled.

Tall Curled Scotch. Bon Bri CA Hus H&C Iml RHIJ Lan Lnr Min Por S&R Shm Stw Web Wyg Y&H.

Similar names. See Green Curled Scotch.

Tall German Brown Curled. GH. For similar names see German.

Tall Green. DD. For similar names see Dwarf Green Curled.


Similar names. See Dwarf Green Curled.

Seedsmen’s synonyms. Scotch, S&O.


Similar names. See Green Curled Scotch.

Tall Green Moss Curled. Crs. For similar names see Half Dwarf Moss Curled.

Tall Green Scotch. Fnr Hde Hrn Mnd.

Similar names. See Green Curled Scotch.

Tall Moss Curled. Gra. For similar names see Half Dwarf Moss Curled.

Tall Purple. Mnd. For similar names see Dwarf Purple.

Tall Purple Scotch. Mhl.

Similar names. See Green Curled Scotch, Dwarf Purple.

Tall Scotch. Bng Col H&P MWJ Ken Man May JMM Pks Put S&O.

Similar names. See Green Curled Scotch.

Seedsmen’s synonyms. Green Curled, H&P. Half Dwarf Moss Curled, Col. Tall Green Curled, S&O.

Thorburn’s Improved Curled Siberian. Entered as Curled Siberian.

Thousand Head. Low.

Very Curly Long-Standing. Bdg. For similar names see Long-Standing.

Welsh Curled. M&S.

Winter. Fqr Raw S&F Thr Wer.

Similar names. Jersey Winter, Predeck’s Winter.


Yale Curled Scotch. Bri. For similar names see Green Curled Scotch.

Kohl-Rabi.

Bohemian. CE.

Curled of Naples. Koe.

Dallwig’s Star of the Market. Entered as Star of the Market.

Earliest Erfurt. Drr Lnr Vau.

Earliest White Erfurt. DD Drr M&S Put SC.

Early Green. RE Kel. For similar names see Green.

Early Green Vienna. Drr N&W.

Similar names. Short-Leafed Early Green Vienna, Long Green Vienna, Vienna, Early Vienna, Extra Early Vienna. See also Early Purple Vienna, Early White Vienna.

Seedsmen’s synonyms. Early White Vienna, Drr.
Early Purple. Cvs Emr Hrn Kei K&W Maw May Net Fue.
SIMILAR NAMES. See Purple.

SIMILAR NAMES. Improved Early Purple Vienna, Short-Leaved Early Purple Vienna, Large Purple Vienna, Satzer’s Purple Vienna, Purple Vienna, Vienna, Early Vienna, Extra Early Vienna. See also Early Green Vienna, Early White Vienna.

Early Vienna. Cok Ebr Hop Sal.
SIMILAR NAMES. See Early White Vienna, Early Green Vienna, Early Purple Vienna.

Early White. Cox K&W. For similar names see White.

Early White Forcing. Y&H. For similar names see White.

AMERICAN VARIETIES OF VEGETABLES.

**Large Green Giant.** Frd. For similar names see White Giant.

**Seedsman’s synonyms.** *Large White Giant*, Frd.

**Large Late Green.** Crs Dvw Vin. For similar names see Green.

**Large Late Purple Goliath.** D&II. For similar names see Purple Goliath.

**Large Late White.** Crs. For similar names see White.

**Large Purple.** CF RE Gyy May Thr. For similar names see Purple.

**Large Purple Giant.** Aib Btl Hns. For similar names see White Giant.

**Large Purple Vienna.** Alr. For similar names see Early Purple Vienna.

**Large White.** Fqr Lnr Mnd Man SC Thr. For similar names see White.

**Seedsman’s synonyms.** *Large Green Giant*, Frd.

**Late Goliath.** Fst. For similar names see Purple Goliath.

**Late White Short-Leaved.** M&S. For similar names see White.

**Long Green Vienna.** TB. For similar names see Early Green Vienna.

**Mammoth.** Sal.

**Similar names.** Salzer’s Mammoth.

**Purple.** At Ebe Hnt Lan Stw.

**Similar names.** Early Purple, Smooth Early Purple, Large Early Purple, Large Purple, Smooth Purple, Smooth Purple Short-Leaved.

**Purple Giant.** Btl Ewg Gra. For similar names see White Giant.

**Purple Goliath.** Gyy Iow McK Ren Van.

**Similar names.** Large Late Purple Goliath, Improved Green Goliath, White Goliath, Late Goliath, Green Goliath.

**Purple Vienna.** Bai CE Gyy Hrm Loh Ren Ree RP Sal S&O Sie Sox.

**Similar names.** See Early Purple Vienna.

**Queen.** Bui.

**Salzer’s Mammoth, Salzer’s Purple Vienna.** Entered as Mammoth and Purple Vienna.

**Short-Leaved Early Green Vienna.** Bgs.

**Similar names.** See Early Green Vienna.

**Short-Leaved Early Purple Vienna.** Pri W&D.

**Similar names.** See Early Purple Vienna.

**Short-Leaved Early White Vienna.** Bui Cur Elt Hen Lnr Pri SC W&D.

**Similar names.** See Early White Vienna.

**Smooth Early Purple.** Bgs Hde NI. For similar names see Purple.

**Smooth Purple.** J&S Spf. For similar names see Purple.

**Smooth Purple Short-Leaved.** M&S. For similar names see Purple.

**Smooth White Short-Leaved.** J&S M&S Nol. For similar names see White.

**Star of the Market.** Dlw.

**Similar names.** Dallwig’s Star of the Market.

**Vienna.** GN Hop.

**Similar names.** See Early White Vienna, Early Purple Vienna, Early Green Vienna.

**White.** Bsl Bui Bur CE Ebe Ewg Hlm RHJ Lan Pnt Roc.

**Similar names.** White Short-Leaved, Smooth White Short-Leaved, Late White Short-Leaved, Early White, Early White Forcing, Extra Early White Forcing, Large White, Large Early White, Large Late White.

**Seedsman’s synonyms.** Green, Hlm.

**White Giant.** Btl Bkt Koe.

**Similar names.** Green Giant, Purple Giant, Large White Giant, Large Green Giant, Large Purple Giant.

**White Goliath.** Vau. For similar names see Purple Goliath.

**White Imperial.** Gra.

**Similar names.** Improved Imperial, Imperial.
White Short-Leaved. Brl. For similar names see White.

White Vienna. Alx Bel Cam CF CA Gry G&T Hrm RHJ Jns Ken Lan McM Stw WS.

Similar names. See Early White Vienna.

LEEK.

(Also called Flag.)

American. Bai Bow Bgg Bng Brw Cam C&B Exr Fred Ggy Gry Grw Tg Haw Hop Lnr JCM Mrs Nol Par Pir Pitt Por Pug Rec Rec Rs S&R S&O SIm T&B Vin Web Wer Wdr.

Similar names. Improved American, Broad American, Large American.

Seedsmen’s synonyms. Large Roman, Bow Por S&R Vin.

Brabanter. Diw.

Broad. D&H DD Fax Gyg Ggy H&P Mau Sim 17 Vd.


Broad American. Brw CE Cle CF Del Gls Hrn May Rec Sic Y&H.

Similar names. See American.

Seedsmen’s synonyms. Flag, Brr.

Broad London. Brn Bng Brr Cle Col D&H RE Fst Fax GH Hde Hlm Kei K&W PM McK Nel XI Sal SB.

Similar names. See London.

Seedsmen’s synonyms. Broad Flag, Fax, Large American Flag, Bur PM.

Broad Scotch. CF Drn Frd Ggy Hrv H&C Jns Liv Tem Van Yng.

Similar names. See Scotch Champion.


Buist’s Mammoth. Bui. For similar names see Mammoth.


Similar names. French Carentan, Giant Carentan, Monstrous Carentan, Large Carentan, Extra Large Carentan.


Champion. Brw Man. For similar names see Scotch Champion.

Seedsmen’s synonyms. Carentan, Brw. Large Scotch, Brr.

Dobbie’s Champion. Ewg. For similar names see Scotch Champion.

English. McK.

Extra Large. Big G&T. For similar names see Large.

Extra Large Carentan. Bru CF RE Ggy Raw. For similar names see Carentan.

French Carentan. McK Ren. For similar names see Carentan.

Giant Carentan. Bkt Dlw Drr RE Fqr Hrm Liv Mhl S&F Spf SB.

Similar names. See Carentan.

Giant Musselburgh. Mhl Mrs Thm Wat WS. For similar names see Musselburgh.

Giant Palermo. Ewg.

Godden’s Mammoth. Gdn. For similar names see Mammoth.

Improved American. Improved Italian Giant, Improved Large London. Entered as American, Italian Giant, and Large London.


Similar names. Improved Italian Giant.

Large. Bel Brk CE Cox CA RE McM MV Pot Sox Thr Til WS.

Similar names. Extra Large.

Seedsmen’s synonyms. Large London Scotch, Amb. London, Cox CE.
Large American. All Brd Big Bur Cox Cur DD Drr Eit Emr Fer GH Hrs Hen J&S Lam Lur LB JL Mnd Mgd PM Mas JMM Mzy Neb NI JMF Prn Poo Raw Stw S&W Tat Thm Wea W&D.

Similar names. See American.

Seedsman's synonyms. Broad London, Bur PM.

Large Carentan. Big Brg Cum CE Cle Crs DD Eic Eit GH Gtg TG Hst J&M Kg Mnd May MV Mzy Ree Sox Stk Stw S&W Tat Thr Wer.

Similar names. See Carentan.

Seedsman's synonyms. Musselburgh, Thr.


Similar names. See London.

Seedsman's synonyms. Flag, Btl CA. Scotch, Btl.

Large London Scotch. Amb Btl. For similar names see Scotch Champion, London.

Seedsman's synonyms. Large Flag, Amb.


Similar names. See Musselburgh.


Similar names. See Rouen.

Seedsman's synonyms. American Flag, Bow Por S&R Vin.

Large Scotch. Btu Brt Sim. For similar names see Scotch Champion.


Large Winter. Sar Thr Van.


Long. Fqr S&F.

Lyon. Gra Qkr.

Mammoth. Alx.


Similar names. See Carentan.

Seedsman's synonyms. Scotch Champion, Bur Ham Hlm D&H Ms S.


Similar names. Giant Musselburgh, Large Musselburgh, Scotch Musselburgh.


Similar names. Large Rouen, Salzer's Large Rouen.

Salzer's Large Rouen. Entered as Large Rouen.
LEEK—LETTUCE.  205

Scotch.  Fqr.  For similar names see Scotch Champion.


Scotch Champion.  Bar Cur D&H Fst Ham Hlm Hop J&S Liv Mns M&S HP Put
Sic.

SIMILAR NAMES.  Scotch, Broad Scotch, Large Scotch, Large London Scotch, Champion, Dobbie's Champion.

SEEDSMEN'S SYNONYMS.  Caretan, Drn J&S M&S. Large Musselburgh, Drm
Liv HP Put. Monstrous Caretan, Bar D&H Ham Hlm Mns Sic. Musselburgh,
Brd Cur Hen Rec.

Scotch Musselburgh.  Y&H.  For similar names see Scotch Champion, Musselburgh.

Sir Ayton Castle Winter.  M&S.

LETTUCE.

Advancer.  Mbl.

Alaska.  Bai.

All Cream.  Agn Hly May OV Sal Tpk.

SIMILAR NAMES.  See California Cream Butter.

All Heart.  Drv W&D.  For similar names see California All Heart.

All Seasons.  Col Lnr Por S&R S&H Van.

All Right Spring and Autumn.  Mbl Rim.  For similar names see Meyers' All Right.

All Year Round.  Agn Brd Brk Brk Bdg Bri CE Cle CF Crs Cur Emr Fqr Ger Gra
Gy Gyr TG Hvr Hst Hen RII J Kei Koe Lnr Mnd Man May JCM Mrs Neb Pac
Put Pri Ree Roh SC S&F Shw Shm SB Tat Tem Thm Til Wea W&D Wgy.

SEEDSMEN'S SYNONYMS.  Black-Seeded Butter, Yng.

American Gathering.  Agn Bdg Cox Crs GH TG Koe Lan May Mls MV Mzy Raw
Ree Ree Soc Thr.

American Oak-Leaved.  Tat.  For similar names see Oak-Leaved.

Arlington White-Seeded.  Raw.  For similar names see Black-Seeded Tennis Ball.

Arlington White-Seeded Tennis Ball.  Bui Brw J&S M&S.

SIMILAR NAMES.  See Black-Seeded Tennis Ball.

Asparagus.  Air Bai Buc Ewg Gra Shm Sim.

Atlanta Market.  McM.

SIMILAR NAMES.  McMillan's Atlanta Market.

Australian White Triumph.  M&S.  For similar names see Triumph.

Balloon Cos.  RE RIJ.

Baltimore Cabbage.  G&T.

Baltimore Oak-Leaved.  G&T J&S Mns Nol.  For similar names see Oak-Leaved.


Batavian Brown Head.  Ebe.  For similar names see Brown Head.

Bath Cos.  Mrs Raw.

Beckett's Brown Curled.  Bkt.  For similar names see Brown Head.

SEEDSMEN'S SYNONYMS.  Chartier, Bkt.

Beckett's Golden Curled.  Bkt Bri.  For similar names see Golden Curled.

Big Boston.  Agn Alx Alr Brd Brt Btl Bkt Bel Bg Brn Bou Brg Brk Bdg Bgs Bri
Brn Bng Buc Bui Brb Bur Brr Brw C&J Cam CE Cle C&B CF Cox Crg Crs Cur
CA Del DD Drr Dun Eic Eit Emr Exr Fqr Fst Fer Fle Ful Gls Gln GH Gra
Gry Gyr Gg G&T TG Hns Hde Ham Hrn Hrn Hrs Hrr Hst Hen H&O Hlm Hop
H&P Jae MJW J&J J&J Jns K& W Kg Lam Lan Lee Lnr LB Liv Mgd Man
PM Mns Mas Man May JCM JMM MeK McM Mhd M&S Mrs Mzy Nol NKB
OV Pac Py HP Pn Pn Ptt Poo Pot Pri Pri Raw Ren Ree Rim Roe Roh Rl Rs SC
S&F Shw Shm Sic Sim SB S&F Tat Tem Tex Thm Thr Til Tpk Trm Vl Vau
Vk Wat Wea Web W&D Whd Whd Wdr WS Y&H.

SIMILAR NAMES.  See Boston Market.
Big Boston Forcing. May. For similar names see Boston Market.

Big Head. Big G&T.

SEEDSMEN'S SYNONYMS. Large White Russian, Mrs.


SEEDSMEN'S SYNONYMS. All the Year Round, Yng.


SEEDSMEN'S SYNONYMS. Perpetual, Frd. White Paper, WS.

Black-Seeded Summer. Big G&T.

Black-Seeded Tennis Ball. Ar Agn Bk Bn Bti Brg Bsk Brg Bsw Brg Btr Brw Brw CE C&B CF CA Drw Drw Drw Dub EEl ER Fmr Fmr Fax Frd Ger Gls GH Ggy Gry G&T Grw Gw Tg Hrm Htn Hst Hwn Hkm Kg Lan Lnr LB Liv Mnd Mgd Mrs Mau May JCM JMM M&K McM MV Mrs Mzy NK OV JMP Prn Pot Raw Roc Roh Roj Rs RP S&R S&F S&O Sie Sox Tex Til Tpk Vau Wat Wia Wd Wdr Y&H.

SIMILAR NAMES. Early Black-Seeded Tennis Ball, Stone Black-Seeded Tennis Ball, Early Green Black-Seeded Tennis Ball, Improved Large Black-Seeded Tennis Ball, White-Seeded Tennis Ball, Arlington White-Seeded Tennis Ball, Arlington White-Seeded, Forcing White-Seeded Tennis Ball, Boston Forcing White-Seeded Tennis Ball, Early White-Seeded Tennis Ball, Tennis Ball, Early Tennis Ball.


SIMILAR NAMES. Golden Beauty, Blonde Blockhead.

SEEDSMEN'S SYNONYMS. Blonde Blockhead, Frd Fmr. Sunset, Frd Fmr Liv Yng.

Blonde Blockhead. Bug Brw Brw Cox Fmr Fmr Frd GH Ggy Hlb MWJ Mnd Mrs Neb NK Roc S&W Tat Tex Til Wat W&J.

SIMILAR NAMES. See Blonde Beauty.

SEEDSMEN'S SYNONYMS. Blonde Beauty, Frd Fmr. Sunset, Frd Fmr Mnd S&W W&J.

Blonde de Berlin. Mrs.

Blood Red. Fmr.

Bloomdale Butter. Lan Rm. For similar names see Bloomdale Reliable.

Bloomdale Early Summer. DLw Koe Rm.

SIMILAR NAMES. See Bloomdale Reliable.

Bloomdale Reliable. Gg MWJ Lan.

SIMILAR NAMES. Bloomdale Early Summer, Bloomdale Butter, Bloomdale White Cos.
BLOOMSDALE WHITE COS.  Lan.

Similar names. See Bloomsdale Reliable, White Cos.

Bolgiano's Early Spring, Bolgiano's White Forcings, Bolgiano's Big Head, Bolgiano's White Loaf, Bolgiano's Black-Seedled Summer. Entered as Early Spring, White Forcing, Big Head, White Loaf, and Black-Seedled Summer.

Bonanza.  Shw.

Bon Ton.  JL.

Similar names. Livingston's Bon Ton.

BOSTON CURLED.  Brk  Brb  Bur  CE  Cle  C&B  CF  Cox  Cur  DD  Dum  Fas  Ebe  Emr  Ewg  Fqr  Fst  Fox  GH  Gra  Ggy  Gry  Tg  Hrn  Hen  Hbt  H&D  K&W  Mm  Koe  Krs  Krr  Lnr  Mau  May  Mrs  Neb  Nl  JMP  Pfr  Pne  Pot  Pri  Rew  Ree  Ree  RP  S&O  Sox  S&W  Tm  17  Y&H.

Similar names. See Boston Market.

BOSTON EARLY CURLED.  Pag.  For similar names see Boston Market.

BOSTON EXTRA FINE CURLED.  Shm.  For similar names see Boston Market.

BOSTON FINE CURLED.  Emr  Fqr  Rs  SC  S&F.  For similar names see Boston Market.

BOSTON FORCING.  Vh.  For similar names see Boston Market.

BOSTON FORCING WHITE-SEEDLED TENNIS BALL.  Fqr.

Similar names. See Black-Seedled Tennis Ball.

BOSTON GLASS HOUSE.  Nol.  For similar names see Glass House, Boston Market.

BOSTON HEAD.  Ebr.  For similar names see Boston Market.

Seedsmen's synonyms.  Hodhouse, Ebr.

BOSTON HOthouse.  Bew.  For similar names see Boston Market, Hodhouse.


Seedsmen's synonyms. Tennis Ball, Brd  Bar  Hrn  Lea  PM  Vk, etc. White-Seedled Tennis Ball, Brg  Brg  Bar  J&S  Ptt  Rs, etc. White Tennis Ball, Ggy.


Briggs' Forcing and Garden.  Bgs  Thr.

Briggs' Prize Head.  Entered as Prize Head.

Bronzed Curled.  Lan.  For similar names see Bronzed Head.

Bronzed Head.  Brt.

Similar names. Hartford Bronzed Head, Bronzed Curled, Bronzed Red.

Bronzed Red.  Eas.  For similar names see Bronzed Head.

Bronzed Tomhannock.  TB.  For similar names see Tomhannock.

Brown Curled.  CF  Cox  Mrs.  For similar names see Brown Head.


Brown Head.  Dlw  Raw.

American Varieties of Vegetables.

Brown Speckled Dutch. Tat. For similar names see Dutch Butter.

Bruce's Nonpareil. Entered as Nonpareil.

Buckbee's Earliest Forcing. Buc. For similar names see Earliest Forcing.

Buckbee's Ice Drumhead, Buckbee's Superb. Entered as Ice Drumhead and Superb.

Buckeye. Til.

Buist's Perfection White Forcing. Entered as Perfection White Forcing.

Burnell's White Cos. D&H. For similar names see White Cos.

Burpee's Hard Head, Burpee's Prize Head, Burpee's Silver Ball, Burpee's Tomhannock, Burpee's White Heart Cos. Entered as Hard Head, Prize Head, Silver Ball, Tomhannock, and White Heart Cos.


Similar Names. Early Buttercup, Golden Buttercup, Golden Ball Buttercup.


Butter Head. Hns.

Seedsmen's Synonyms. Early Butter Salad, Hns.

Butter Salad. H&P. For similar names see Butter Salad.

Seedsmen's Synonyms. Philipps' Early White Cabbage, H&P.

California All Heart. Alt Bel D&H H&P Kei Mzy Ree Vl.

Similar Names. Dreyer's All Heart, All Heart.


Similar Names. Shumway's California Cabbage, Cox's California Cream Butter, Cream Butter, All Cream, All Cream, California Curled, California Giant White Forcing, California All Heart, California Passion.


California Curled. Sim W&D. For similar names see California Cream Butter.

Seedsmen's Synonyms. Green Fringed, Sim Tem Yng.

California Giant White Forcing. M&S Nol.

Similar Names. See White Forcing.

California Passion. Del. For similar names see Passion.


Similar Names. Parisian Celery Cos.


Champion. Brw. For similar names see Champion Spring and Summer.


Similar Names. Champion, Johnson & Stokes' Champion Spring and Summer, Moore's Champion Spring and Summer, Michell's All Right Spring and Autumn, All Right Spring and Autumn.

Chartier. Bkt Cle Ebe Lnr SaI Shm Wyg.

Seedsmen's Synonyms. Becket's Brown Curled, Bkt.

Chicago Forcing. Fmr.
LETTUCE.

Cincinnati Market. JCM.
Cold Frame. W&D. For similar names see Cold Frame White Cabbage.
Cold Frame White Cabbage. Lan MV See Thr.

Similar names. New York Cold Frame, Cold Frame.

Constitution. GV.

Continuity. Bar Low.

Cox’s California Cream Butter. Cox’s Improved Hanson, Cox’s Improved Large Passion, Cox’s Royal Summer, Cox’s White Cos. Entered as California Cream Butter, Hanson, Large Passion, Royal Summer, and White Cos.
Cream Butter. Bui Chl CF MWJ. For similar names see California Cream Butter.

Seedsman’s synonyms. Improved Royal Cabbage. Bui.

Crisp as Ice. Bur Cox Liv JI. Mau Mrs Shev Tem Vf Wd.

Crosman. Crs.

Curled Leaf. Brw Fqr Raw S&F.

Similar names. Rawson’s Curled Leaf.

Crystal Palace. Bar.

Similar names. Giant Crystal Head, Holmes’ Giant Crystal Head.


Similar names. See Black-Seeded Simpson.

Curled India. Lan Mel Shw. For similar names see India.

Seedsmen’s synonyms. Hanson, Tat.

Curled Silesia. Bt Brl RE Ewg Gra Liv VI.

Similar names. See Early Curled Silesia.


Similar names. See Black-Seeded Simpson.

Seedsmen’s synonyms. Perpetual, Wf.

Currie’s Prize Head. Entered as Prize Head.

Cut and Come Again. M&S.

Dallwig’s Defiance Summer. Entered as Defiance Summer.

Dammann’s Improved. Ewg.


Similar names. Improved Deacon.

Seedsmen’s synonyms. Nonpareil, JCM. San Francisco Market, Bue Bur Ren Sie Yng.

Defiance. Big Brf CE Cle Col Cur Drr Enw Ewg Fqr Fax Ggy Gry G&T Hlm Lnr Mhl Mrs Raw Rce S&F Tat.

Similar names. Defiance Summer, Dallwig’s Defiance Summer, Improved Defiance Summer, Mann’s Defiance Summer, Perpignan Defiance Summer.

Seedsmen’s synonyms. Perpignan, Bri.

Defiance Summer. Bel Dlw GH Hde J&S Kra Liv JI PM JMM Van W&D.

Similar names. See Defiance.

Seedsmen’s synonyms. Perpignan, J&S Liv Van.

Delicate. Pg.

Denham’s Mammoth Green. Hrv.

Density. Hra.

Denver Market. Alex Alr Anb Ar Baf Bak Brd Btt Bel Bow Btk Bri Bui Bur Brf C&J CE Chl Cle CF Cox Crs Cur CA D&H Del Drm Ebe RE Evr Ewg Fqr 1329—No. 21—02—14
AMERICAN VARIETIES OF VEGETABLES.


Detroit Market Gardener’s Forcing.  Bur Fer Loh Mrs Wat.

Dickmann’s Private Stock.  Dl.

Dickmann’s St. Louis Market White-Seeded.  Entered as St. Louis Market.

Dreer’s All Heart, Dreer’s Hanson, Dreer’s Improved Hanson.  Entered as All Heart and Hanson.

Drumhead.  Bui CF Cur Eic Fqr Gdn Ggy H-t Kei Mnd May Mrs Pac Ren SC Sim Stk SB Wct W&D.

Dutch Butter.  Bt Crg Fst Hnt MWJ Wat Wd WS.

Dwarf White Heart Cos.  Buc Brr Hbt Mau Roc.

Earliest Cutting.  Dlw Fer.  For similar names see Earliest Forcing.

Earliest Forcing.  MWJ Roc.

Earliest Black-Seeded Simpson.  Bow Ebr.

Earliest Black-Seeded Tennis Ball.  Ber Bow Brn Buc Dum Fer Lnr Lam LB JL Mhl Por S&R TG.

Early Boston Market.  Bow Buc Bie Roc.  For similar names see Boston Market.

Early Brown Cabbage.  HP.  For similar names see Brown Head.

Early Buttercup.  Bui.  For similar names see Buttercup.

Early Butter Head.  Ggy Hns.  For similar names see White Butter Head.

Early Butter Salad.  W&D.  For similar names see Butter Salad.


Denver Market Forcing, Barteldes’ Denver Market.


Seedsmen’s synonyms.  Similar names.

Seedsmen’s synonyms.  S&H.

Seedsmen’s synonyms.  Similar names.

Dutch Dwarf.

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Early.
Early Challenge. May.

Similar Names. May’s Early Challenge.

Early Curled. Hnt. For similar names see Black-Seeded Simpson.

Early Curled Black-Seeded Simpson. Brr CE, CF Del Ebe TG May Mic JMP Sim T&B.

Similar Names. See Black-Seeded Simpson.


Similar Names. See Black-Seeded Simpson.

Seedsmen’s Synonyms. Silesia, Inl Vn. White-Seeded Simpson, JCM.

Early Dutch Butter. Bui Gdn Jac. For similar names see Dutch Butter.

Early Golden Stone Head. Ebr. For similar names see Golden Stone Head.

Early Golden Yellow Stone Head. Qkr. For similar names see Golden Stone Head.

Early Green Black-Seeded Tennis Ball. Hrs.

Similar Names. See Black-Seeded Tennis Ball.

Early Green Summer. Bui. For similar names see Summer.

Seedsmen’s Synonyms. 

Early Hanson. Alx Bgs Bui Gdn Hde Jac HP SB. For similar names see Hanson.

Early Market. May.

Similar Names. Eichling’s Early Market.

Early Ohio. RE. For similar names see Extra Early Ohio.

Early Paris Market Forcing. RE.

Early Prize Head. Alr Btl Bel Ber Bow Brk Buc Bui Bar CE C& G Col Cok Cox Crgs Del Dun Emir Eri Fqr Fyl Fgr Ggy GnH TG Haw Hen Hbl Hlm Hse H&P lmw J&M J&S Kg Lam Lea LB Loh PM Mau JCM Mck Mic Mls Mv Pcs Pk Pks JMP Por R& K Rec Ren Rec Roe Roh Rs RP S& R SC S& O Sim Sox Spf SB S& H Thm Thb Tpk Trm T&B Vl Vn Vn Vn Vn Vn W& D Wdr Wfg Y& H.

Similar Names. See Prize Head.

Early Simpson. Sal. For similar names see Black-Seeded Simpson.

Early Speckled Dutch Butter. Drr M& S. For similar names see Dutch Butter.

Early Spring. Blg.

Similar Names. Bolgiano’s Early Spring.

Early Stone Head. Agn. For similar names see Golden Stone Head.

Early Tennis Ball. Amb Btl Fer GV Hns J& M K&W Mic Pcs Sal Shm.

Similar Names. See Black-Seeded Tennis Ball.


Early White Butter Head. Bak CF Drw SC.

Similar Names. See White Butter Head.

Seedsmen’s Synonyms. Early White Cabbage, Bak CF SC.

Similar names.  See White Cabbage.
Seedsmen's synonyms.  Early White Butter, Bak CF SC.  Butter Salad, HP.

Early White Head.  Anb Hde Lam LB Liv JCM Pks.

Early White-Seed Simpson.  Ebr Sal Tat.
Similar names.  See Black-Seed Simpson.

Early White-Seed Tennis Ball.  Anb Btl Bdg Brn Crs DD Dun Eyr Gls TG Lnr Pg Pnt Pug Roc RP Sal Shm VI Wil.
Similar names.  See Black-Seed Tennis Ball.

Early White Self-Folding Cos.  DD Fmr Fer Fie Gls Lam LB Neb NK JMP.

Eichling's Early Market.  Eic.  For similar names see Early Market.

Elliott's Hothouse.  Entered as Hothouse.

Emperor Forcing.  Drt Mhl Thr Van Wat.
Similar names.  Improved Emperor Forcing.

Emperor William.  Thr S&W.

Engel's Forcing.  Loh.
Seedsmen's synonyms.  Detroit Market Gardener's Forcing, Loh.

Eureka.  Crs.

Evans' Early Ohio.  Evans' Hamilton Market.  Entered as Early Ohio and Hamilton Market.

Everitt's Everlasting.  Entered as Everlasting.

Everlasting.  Evt.
Similar names.  Everitt's Everlasting.

Excelsior.  Ewg.
Similar names.  Kendel's Excelsior Head.

Express Cos.  Hen Van.  For similar names see White Cos.

Extra Early Curled Simpson.  Shm.  For similar names see Black-Seed Simpson.

Extra Early Ohio.  Brn.
Similar names.  Evans' Early Ohio, Ohio Cabbage.  Early Ohio.

Farquhar's Long-Standing.  Fqr.  For similar names see Standwell.

Faust's Queen.  Fst.  For similar names see Golden Queen.

Ferry's Early Prize Head, Ferry's Prize Head.  Entered as Early Prize Head and Prize Head.

First Early.  GN.

Florida Favorite.  Lan.  For similar names see Rudolph's Favorite.

Florida Header.  Crs Hst.  For similar names see Rudolph's Favorite.

Forcing Cabbage.  MWJ.  For similar names see White Cabbage.

Forcing White-Seed Tennis Ball.  Pot.
Similar names.  See Black-Seed Tennis Ball.

Forty Day.  Man.

Frankfort Head.  Bak Bri CE Cle Ken Loh Til Tpk.
Similar names.  Frankfort Head White-Seedled.

Frankfort Head White-Seedeed.  Bri.  For similar names see Frankfort Head.
Seedsmen's synonyms.  Salamander, Bak Loh Sox.

Frotscher's New Orleans Improved Large Passion.  Entered as New Orleans Large Passion.

Gardener's Favorite.  Brn Sim.  For similar names see Rudolph's Favorite.

Genezano.  Koe.

German Butter Head.  Sal.  For similar names see White Butter Head.

German Early Head.  Bdg.
German Incomparable. _Stalk._

Giant Crystal Head. Hlm Mhl Mrs S&F Shm Sie Thr Wea.

Similar Names. See Crystal Palace.

Giant Glacier. Brn Man Pac.

Giant White Cos. Brn Clw Crs Cur Mrs Nef NK.

Similar Names. See White Cos.

Glass House. C&B Brn Thr J&D.


Godden's Black-Seeded Forcing. _Stalk._

Godden's Early Butter Head. Gdn. For similar names see White Butter Head.

Seedsmen's Synonyms. Godden's Early Cabbage, Gdn.

Godden's Early Cabbage. Gdn. For similar names see White Cabbage.

Seedsmen's Synonyms. Godden's Butter, Gdn.

Golden Ball. Ber CE Ger GH Hrn Hop Ms Neb NK Sal Vi.

Similar Names. Northrup, King & Co.'s Golden Ball, Golden Head, Golden Heart, Golden Ball Buttercup.

Seedsmen's Synonyms. Buttercup, Hrn.

Golden Ball Buttercup. Spf. For similar names see Golden Ball, Buttercup.

Golden Beauty. Man Til. For similar names see Blonde Beauty.

Golden Butter. Wdr.

Seedsmen's Synonyms. Yellow-Seeded Butter, Wdr.

Golden Buttercup. Pat SC. For similar names see Buttercup.

Golden Curled. MWJ Lmn Mel Mrs.

Similar Names. Beckert's Golden Curled.


Golden Head. Tem. For similar names see Golden Ball.

Golden Heart. Cht Frd. For similar names see Golden Ball.

Seedsmen's Synonyms. Stone Head Golden Yellow, Frd.

Golden Heart Stone Head. Hns. For similar names see Golden Stone Head.

Golden Queen. Agn Blg Bdg Bur C&B Cur Elt Frd Hcn J&S Lbh PM Mhl Mrs Ree Rob Shw Sm Thr Vkn W&D WS.

Similar Names. Golden Queen Forcing, Faust's Queen, Yellow Queen.


Golden Queen Forcing. Drr GH. For similar names see Golden Queen.

Golden Spotted. Dlw.

Golden Stone Head. Ar Btl Bdg CE Clw Ebc Elt Ewg GH TG Mnd Man Mzy Pac Rce Sal S&W Thr Trm Van W&D.

Similar Names. Golden Heart Stone Head, Golden Yellow Stone Head, Early Golden Yellow Stone Head, Early Golden Stone Head, Early Stone Head.

Seedsmen's Synonyms. Yellow-Seeded Butter, Bdg.

Golden Sunset. Ewg. For similar names see Sunset.

Golden Yellow Stone Head. Btl Bur Dlw Frd Ggy TG Hlm Liv Mrs Nef. Mrs.

Similar Names. See Golden Stone Head.

Seedsmen's Synonyms. Golden Heart, Frd.

Gold Nugget. Buc Bur Frd Hlm Mrs Roc S&W.

Seedsmen's Synonyms. Golden Queen, Frd.


Similar Names. Grand Rapids Forcing, Grand Rapids Early Forcing.
Grand Rapids Early Forcing. RP. For similar names see Grand Rapids.

Grand Rapids Forcing. Ar Brk Bdg Brn Buc Bui CF Cox Dhw D&H DD Dtt Re Fpr Fpr Frd Hrn Hse Ind Jns Kra Lmr Mgd May JCM Mhl MV M&S Mzy Neb Nol Old Pac HP Por Png Reec Sal S&F Shm Swc Spf SB S&W Tex TB Thr Trm T&T Van Vg Wea W&D Wyg Y&H.

Similar names. See Grand Rapids.

Gray-Seeded Butter. Cle Mzy.

Similar names. Large Gray-Seeded Butter.

Green Cos. Lan M&K Ren.

Green Curled Silesia. Sim. For similar names see Early Curled Silesia.

Green Early Curled Silesia. SB. For similar names see Early Curled Silesia.

Green-Fringed. Alr Bur CE Cur Del Ebe Fst GIh Ggy Grw Hde Mau Mrs Nvb XI NK Raw Reec Reec RP Shm Sim Tem Van Web W&D Yng.

Seedsmen’s synonyms. California Curled, Sim Tem Yng. Red-Fringed, Ebe.

Green Winter. Sal. For similar names see Hardy Green Winter.

Griffith & Turner Co.’s Black-Seeded Summer, Griffith & Turner Co.’s White-Seeded Summer. Entered as Black-Seeded Summer and White-Seeded Summer.

Half Century. Bgs ChI.

Similar names. Childs’ Half Century.

Hamburger’s Butter Head. Thm. For similar names see White Butter Head.

Hamilton Market. Brn Brw RE.

Similar names. Evans’ Hamilton Market.

Hammersmith. Vkg. For similar names see Hardy Green Hammersmith.

Seedsmen’s synonyms. Hardy Green Winter, Bdg Vkg.

Hammersmith’s Summer Drumhead. M&S.

Similar names. See Hardy Green Hammersmith, Hammersmith.

Hammond’s Earliest Forcing. Ham. For similar names see Earliest Forcing.

Hammond’s Wonderful. Entered as Wonderful.

Hanson. Agn Alr Anb Ar Bsk Bak Brd Bdg Bdl Bkt Bcl Ber Bbg Brk Btt Brr Brn Bng Buc Brb Bur Brw Bwq CE Chl Cle Col CF Cox Crg Crs Cur GA D&H Del DD Dtt Drw Drm Ebe Ebr Flt Emr RE Ewr Fwr Fwr Fst Fx Fx Frd Fld Fle Frd Ger Gds GIh Gra Grg GN Gvy Gry Gry Ggt Grw TG Hns Ham Hrm Hrv Hst Haw Hen Hbt Hcy Hly Hlm Hop Hnt H&P Hml low Jer MWJ HJJ J&S Jns Kcl K&W Ken Kg Kos Kra Lmn Lan Lnr LB Lvw JL Lbh Mnd Mgd Mnt Pm Pms Man May JCM JMM McM McM Mel Mch Mhl MV Mrs Nbx Nef XI XN OL Old Pac Pg Pks JIP Pir Prn Pnt Ptt Poo Por Pot Pri Pug Qkr Rbl Raw Reec Ren Reec Reo Roh Rs RP Sal S&R SC S&F S&B Shw S&O Shm Snc Sin Sox Spf S&H Tat Tem Tex Thm Tnh Thb AGT Thl Til Tpk Trm T&B Vl Van Vg Vin Wat Wato Web W&D Wer Wll Wlt Wd Wdr WS Wyg Yng Y&H.

Similar names. Dreer’s Hanson, Dreer’s Improved Hanson, Cox’s Improved Hanson, Mane’s Improved Hanson, Improved Hanson, Improved Large Hanson, Large Hanson, Improved Early Hanson, Early Hanson.

Seedsmen’s synonyms. Curled India, Tat.

Hanson Hard Head. Mhl.

Hard Head. Bar Col D&C Frd Hlm Ms Mrs Reec Wll.

Similar names. Burpee’s Hard Head, Schwill’s Hard Head.

Hardy Green. Bdg. For similar names see Hardy Green Winter.

Hardy Green Hammersmith. The W&D.

Similar names. See Hammersmith, Hammersmith Summer Drumhead.

Hardy Green Winter. Bkt Crg Cur DD Mrs HP Pnt SC Shw.

Similar names. Hardy Green, Hardy Winter, Green Winter, Large White Winter, Hardy Red Winter, Hardy Green Hammersmith, Hardy White Winter.

Seedsmen’s synonyms. Hammersmith, Bdg Vkg.
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Hardy Red Winter.  RHJ.  For similar names see Hardy Green Winter.
Hardy White Winter.  RHJ.  For similar names see Hardy Green Winter.
Hardy Winter.  Mrs.  For similar names see Hardy Green Winter.
Harris' White Cos.  Entered as White Cos.
Hartford Bronzed Head.  C&J.  For similar names see Bronzed Head.
Hastings' Drumhead White Cabbage.  Hst.  For similar names see Drumhead.
Heat-Resisting Cos.  Est MWJ Lan Sw.


Heavy Weight.  Sal.

Hero.  Vk.

Similar names.  Vick's Hero.
Hittinger's Belmont.  Brk Raw Til.

Similar names.  See Hittinger's Belmont Forcing.
Hittinger's Belmont Forcing.  Brt Bur Drr Enr Fqr Gry Hlm KdF Rs S&F.

Similar names.  Hittinger's Belmont, Hittinger's Forcing.

Seedmen's synonyms.  Hothed, Bur.
Hittinger's Forcing.  Ggy.  For similar names see Hittinger's Belmont Forcing.

Holmes' Giant Crystal Head, Holmes' Improved Boston Market.  Entered as Giant Crystal Head and Boston Market.
Hornberger's Dutch Butter.  Brw J&S.  For similar names see Dutch Butter.

Hotbed.  Bur.  For similar names see Hothouse.

Seedmen's synonyms.  Hittinger's Belmont Forcing, Bur.

Hothouse.  Bkt Elt TG Hlm J&S Kra Mrs Raw Rex Tat Til Vl.

Similar names.  Rawson's Hothouse, Elliott's Hothouse, Boston Hothouse, Hothouse Forcing, Hotbed.

Seedmen's synonyms.  Boston, Ebr.

Hothouse Forcing.  Ggy.  For similar names see Hothouse.

Houston Market.  Thm.

Hubbard.  Cox May.  For similar names see Hubbard's Market.

Hubbard's Forcing.  Hry.  For similar names see Hubbard's Market.

Hubbard's Market.  Agn Bgs Cl CF Fer Gls Gdn GH TG Hlm Lan Lnr Mrs Ptt Ree Sal Shw S&W Thr Til.

Similar names.  Hubbard's Forcing, Hubbard.

Iceberg.  Alv Bkt Bel Brk Bri Bue Bar CE Col Cox D&H Elt Enr Frd Gdn Gm GN Gry Ham Hrs Hst H&C Hlm Hve H&P Incl low Jer MWJ J&J Sns Lnr LB Liv JI Lon Mgd Man PM Mau May Mek Mhl Ms Mrs Nef Nk Pac Pq HP Puc Pnt Poo Qkr Rec Ren Rec Roe Roh Sal S&W Shw Shm Se S&W Tce Thr Til Vl Vau Wat WS Yng.

Ice Cos.  Bdg.

Ice Drumhead.  Bdg Bue Cox Ebe Gdn Kei Pac Roe Sal Tat T&B Vl.

Similar names.  See Drumhead.

Seedmen's synonyms.  Malta, Bdg.  Royal Cabbage, Bdg.

Ice Head.  Gdn.

Icehead.  Pg.

Immensity.  Hen.

Similar names.  Henderson's Immensity.

Imperial Asiatic.  Dlw.  For similar names see Imperial Cabbage.

Imperial Cabbage.  Crg Lan Sw Ws.

Similar names.  Tait's Imperial Cabbage, Imperial White Cabbage, Imperial Asiatic.
Imperial White Cabbage. MWJ Vk. For similar names see Imperial Cabbage.

Improved Big Boston, Improved Black-Seeded Simpson, Improved Crosman, Improved Deacon, Improved Defiance Summer, Improved Early Black-Seeded Simpson, Improved Early Hanson, Improved Emperor William, Improved Hanson, Improved Hanson Hard Head, Improved Large Black-Seeded Tennis Ball, Improved Large Hanson, Improved Large Passion, Improved Mammoth Salamander, Improved New York, Improved Royal, Improved Salamander, Improved Silver Ball, Improved White-Seeded Simpson, Improved Yellow-Seeded Butter. Entered as Big Boston, Black-Seeded Simpson, Crosman, Deacon, Defiance Summer, Early Black-Seeded Simpson, etc.

India. ECB JWJ Mrs.

Similar names. Large India, Curled India, Large Curled India.

Seedsmen's synonyms. Prize Head, Ebe.

Italian Ice. Koe.

Jacob's Early Cabbage. Jac. For similar names see White Cabbage.

Johnson & Stokes' Champion Spring and Summer, Johnson & Stokes' Summerhead, Johnson & Stokes' Hothouse. Entered as Champion Spring and Summer, Summerhead, and Hothouse.

Kaiser Wilhelm. Sal.

Kansas City Market. Trm.

Kansas City White-Seeded Forcing. Pnt.

Similar names. See White-Seeded Forcing.

Keene. Th.

Kendel's Excelsior Head. Ken. For similar names see Excelsior.

King of the Garden. Nol.

Kingsholm Cos. Drr Mrs.

King's Royal. Entered as Royal.

Laciniated Beauregard. Sal.

La Crosse Market. Sal.


Landreth's Early Summer. Lan. For similar names see Summer.


Landreth's Heat-Resisting Cos, Landreth's Unsurpassed. Entered as Heat-Resisting Cos and Unsurpassed.

Large Black-Seeded Butter. Bdg.

Large Boston. Ggy Ken Nol. For similar names see Boston Market.

Large Boston Market. Thr. For similar names see Boston Market.

Large Butter Head. Col. For similar names see White Butter Head.

Large Curled India. Min. For similar names see India.

Large Drumhead. Bow Cle Ger Hrn Lam LB Min XI Pks Pug Shw.

Similar names. See Drumhead.


Large Gray-Seeded Butter. Thr. For similar names see Gray-Seeded Butter.

Large Hanson. Bow Bgg Hrn RHJ JMP. For similar names see Hanson.

Large Ice Drumhead. Shm. For similar names see Drumhead.

Large India. CF Crs W&D. For similar names see India.

Large Loaf. G&T Mrs.

Similar names. White Loaf, Bolgiamo's White Loaf, Large White Loaf, Sugar Loaf.

Large Passion. Bow Cox Eie Gra Pue Soe Tex T&B. For similar names see Passion.

Large Salamander. But. For similar names see Salamander.

Large White Cabbage. Mzy Shw. For similar names see White Cabbage.

Large White Loaf. Mns. For similar names see Large Loaf.
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Large White Russian. Mns. For similar names see Russian.

Seedsmen's synonyms. Big Head, Mns.

Large White-Seeded Tennis Ball. C&J.

Similar names. See Black-Seeded Tennis Ball.

Large White Summer Cabbage. CE C&B Cur Hen Mas Neb Ree VI. Similar names. See White Cabbage.

Large White Winter. RIH. For similar names see Hardy Green Winter.

Large Yellow Butter. Pri Til. For similar names see Yellow-Seeded Butter.

Large Yellow Market. Bnl Gdn.

Largest of All. MWJ Koe Lan Mel Stw.

Leaving. Lea.

Leaving's Improved. Entered as Leaving.

Lettuce No. 37. GN.

Leviathan. Elt.

Limagne Cos. Man.

Livingston's Bon Ton. Entered as Bon Ton.

London Cos. C&B.

Seedsmen's synonyms. Paris White Cos, C&B.


Longstreth's Earliest. Lon. For similar names see Earliest Forcing.

Longstreth's Prize Head. Entered as Prize Head.

Los Angeles Market. J&M.

McCullough's Nonpareil. Entered as Nonpareil.

McKenzie's Prairie Queen. Entered as Prairie Queen.

McMillan's Atlanta Market. Entered as Atlanta Market.

McMillan's Cabbage. McM.

Magnum Bonum. M&S NoI.

Similar names. Moore's Magnum Bonum.

Malta. Anb Bdg CF Cur Ger Hr Kei Lea Mnl Mrs Ren Sim SB W&D.

Seedsmen's synonyms. Drumhead, Cur CF Kei Mnl Mrs Ren W&D, etc. Ice Drumhead, Bdg. Large Drumhead, Ger. Royal Cabbage, Bdg.


Similar names. See Black-Seeded Butter.

Mammoth Cabbage. Jus.

Mammoth Erfurt Yellow. Dlw.

Mammoth Head. Pri.

Similar names. Price & Knickerbocker's Mammoth Head.


Similar names. See Salamander.

Mammoth Yellow-Seeded Butter. H&P Vl.

Similar names. See Yellow-Seeded Butter.

Mann's Defiance Summer. Mns. For similar names see Defiance.

Marblehead Mammoth. Bel CE Ggy Hst Liv Mrs Ree Thun Til.

Similar names. Shumway's Mammoth.

Market Garden Salamander. Brw. For similar names see Salamander.

Market Gardener's Forcing. Air.

Similar names. See Market Gardener's Private Stock.

Market Gardener's Private Stock. Btl Bdg Brg Bur C&B Ebr Fer Ggy TG Lan Mrs Mzy Shw Tex Thr Til Wdr WS.

Marvel. RHJ.

Seedsman's synonyms. Red Besson, RHJ.


Maule’s Improved Hanson. Entered as Hanson.

Maule’s Philadelphia Butter. Ma. For similar names see Philadelphia Butter.

Maximum. Bar Ebr Fyr Gyy Mau Mrs Mzy S&F Thr W&D Vau.

Similar names. Thorburn’s Maximum.

May’s Early Challenge. Entered as Early Challenge.

May’s Market Gardener. May OV Tpk.

Similar names. See Market Gardener’s Private Stock.

Mette’s Forcing Head. Dlw.

Meyers’ All Right. Bri Ggy J&S Mau Mrs Shw.

Similar names. Michell’s All Right Spring and Autumn, All Right Spring and Autumn.

Michell’s All Right Spring and Autumn. Entered as All Right Spring and Autumn.

Michell’s Very Best. Mhl.

Mignonette. Belg Buc Bur C&B Col Drr Elt Fyr Grw Hen Hlm 1ow MWJ J&S Lam Mas Mau Mrs Rtk Rce Rco Shw Sie S&W Thr Thl Wll.

Seedsman’s synonyms. Salad, Lam.

Mills’ Earliest. Mls. For similar names see Earliest Forcing.

Milly. Gra Vau.

Mongolian. J&S.

Moore’s Champion Spring and Summer, Moore’s Magnum Bonum, Moore’s Summer Gem. Entered as Champion Spring and Summer, Magnum Bonum, and Summer Gem.

Morse. Bkt Bur D&H Frd Ggy TG Ham Hlm 1ow J&S Lnr Mau McM Mrs NK Por Rce Sal S&R Van Wat.

Nansen. Bur Gry Mrs Mzy.

Neapolitan. MrK.

Neapolitan Sash. M&S.

Similar names. Simon’s Neapolitan Sash, Neapolitan.

New Orleans. Agn.

New Orleans Large Passion. Eie Stk. For similar names see Passion.

New York. Agn Alx Air Bkt Bou Bkr Belg Bgs Bri Bui Bur Cam CE Cle C&B CF Cox Crs Cur Del Ebe Ely Evr Upr Frd Ger GHG G&T HGr Hwn Hen Hbt Hlm J&S Lan Lnr Mnd Man Mse Mas Mau May Mrs Nol NK OK OP HP JMP Ple Ptt Poo Ptt Pri Rce Rco Rt Rs Shw Shm Sie S&H S&W Tem Thr Tpk VI Vau Wat Wea W&D Wer Wll Wdr WS Wyg Yng Y&H.


Seedsman’s synonyms. Wonderful, Frd Bur J&S.


Similar names. See New York, Black-Seeded Butter.

New York Cold Frame. Crs.

Similar names. See New York, Cold Frame White Cabbage.

New York Market. Ar Bt Buc Emr Gra Hns Lon Rce Sal Thm.

Similar names. See New York.

New York Market Gardener’s. Y&H.

Similar names. See New York, Market Gardener’s Private Stock.

Ninety and Nine. Crs.

Noll's Boston Glasshouse. Entered as Boston Glasshouse.
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**Nonpareil.** Bru RE Ewg Gra Gng Kei JJM McK Mrs Ren Sim SB.

**Similar Names.** Bruce's Nonpareil, McCullough's Nonpareil, Rennie's Nonpareil, Simmons' Nonpareil.

**Seedsmen's Synonyms.** Deacon, JCM.

**Norfolk Royal.** Lan. For similar names see Royal.

**North Pole.** Br Mrs.

**Northrup, King & Co.'s Golden Ball, Northrup, King & Co.'s Sterling.** Entered as Golden Ball and Sterling.

**Norwood.** JMM.

**Number One.** M&S.

**Number Thirty-Seven.** GN.


**Similar Names.** American Oak-Leaved, Baltimore Oak-Leaved, Southern Blunt Point Oak-Leaved.

**Ohio Cabbage.** SB Til. For similar names see *Extra Early Ohio.*

**Onondaga.** Br Mrs.

**Onondaga Market Garden.** Ebc. For similar names see Onondaga.

**Pan-American.** Ms.

**Paris Early White Cos.** RHJ. For similar names see Paris White Cos.

**Paris Green Cos.** Brd RE Ewg Gra Kei Pnt SC Sim.

**Similar Names.** See Paris White Cos.

**Seedsmen's Synonyms.** Romaine, Brdg.

**Paris Self-Closing White Cos.** Br Mrs.

**Similar Names.** See Paris White Cos.

**Paris Sugar.** Dlw.

**Paris White Cos.** Brl Brr Brd Bow Brk Bdg Bru Buc Bui Brr Cam CE Chl C&B Crs Drr Eic RE Ewg Fuir For Ger Gls Gra Gng Ggy Gry G&G T Hns Hrs Hst Hcn Hbr Hlm RJJ J&M Jns Kei Lnr Msd May JCM JMM McK MV Pac Pks Prn Ptt Por Pot Pri Ren Rec Rec Sc S&F Sim Sim SB Skk S&H Tem Thm Vau Vx Vin Wnx W&D Yng Y&H.

**Similar Names.** Paris Green Cos, Paris Early White Cos, Paris Self-Closing White Cos, Self-Closing Cos.

**Seedsmen's Synonyms.** Celery, Bui Hlm. London, C&B. Romaine, Bow Bui Ee For Vin Wnx, etc. Ice Cos, Brdg.

**Parisian Celery Cos.** M&S. For similar names see Celery Cos.

**Passion.** Bui Bak May Mrs Pac Pot Sal Shw Tem Thm Vin.

**Similar Names.** Large Passion, Improved Large Passion, Cox's Improved Large Passion, Frotscher's New Orleans Improved Large Passion, California Passion, San Francisco Passion, New Orleans Large Passion.

**Seedsmen's Synonyms.** San Francisco Market, Pac.

**Peer of All Summer.** Sal.

**Pennsylvania White Cabbage.** Shw. For similar names see White Cabbage.

**Perfected Salamander.** Entered as Salamander.

**Perfection White Forcing.** Bui. For similar names see White Forcing.

**Perpetual.** CE Frd Haw May Mrs Nol JMP Rec Wll.

**Similar Names.** Shumway's Perpetual.


**Perpignan.** Bdg Bui Ggy J&S Mnd Mrs Stk.

**Similar Names.** Perpignan Defiance Summer.


**Perpignan Defiance Summer.** Kra. For similar names see Perpignan, Defiance.
Philadelphia Butter. Agn Amb Bow Bnc CE Cle Cox GH TG Hde Hst H&C RHJ Lam LB Liv Loh Mgd PM Mns May JCM Mrs Pac Pks For Pug Rec Roe Roh S&K Sie Tex Thm Tpk Trm T&B Vkn Vin.


Philadelphia Cabbage. Wat. For similar names see Philadelphia Butter.

Philadelphia Early Butter. Pk. For similar names see Philadelphia Butter.

Seedmen's synonyms. Early White Head, Pk.

Philadelphia Early Cabbage. Pac. For similar names see Philadelphia Butter.


Similar names. See Dutch Butter.


Similar names. See Philadelphia Butter.

Philadelphia Late White Butter. Lan.

Similar names. See Philadelphia Butter.


Philadelphia Speckled Dutch Cabbage. GH J&S.

Similar names. See Dutch Butter.

Philadelphia White Dutch Butter. Min. For similar names see Dutch Butter.

Philips' Early White Cabbage. Entered as Early White Cabbage.

Pink-Edged Victoria. Kei. For similar names see Victoria.

Plant Seed Co.'s Early White Cabbage, Plant Seed Co.'s Standwell. Entered as Early White Cabbage and Standwell.

Prairie Queen. Mck.

Precocity. Hen.

Premier. Sim.

Similar names. Simmers' Premier.

Premium Cabbage. Brn CE Cle Eas Gls H&P Jns PM Mns Mrs Roe Shw Vkn.

Similar names. Vick's Premium Cabbage.

Price's Heat-Resisting. Pet. For similar names see Heat-Resisting Cos.

Price & Knickerbocker's Improved Early Curled Silesia, Price & Knickerbocker's Mammoth Head. Entered as Early Curled Silesia and Mammoth Head.

Prince of Wales Cos. Gra.

Private Stock. W&D Wer.

Prize Head. Agn Amb Ar Bai Bok Bnl Bov Bgg Brn Brr Cle CF Cey Cur Ebe Fpr Fst Fld Ger GH Gra Gry Grw Hns Hde Hrm Hrv Hst H&C Hly Hop Iow Jns Koe Kos Lan Lur Liv JL Lon Mgd Man May Mrs Bb XI NK OV HP Pir Put Pri Pug Roh Rs RP Sal SC Shw Shm Spl Tex Thm Thr Thr Tll Tpk Trm Vll Van Web Wer.

Similar names. Early Prize Head, Briggs' Prize Head, Burpee's Prize Head, Currie's Prize Head, Ferry's Prize Head, Ferry's Prize Head, Longstreth's Prize Head, Quaker City Prize Head, Red-Fringed Prize Head, Salzer's Prize Head, Shumway's Prize Head.


Quaker City Prize Head. Qkr. For similar names see Prize Head.

Rawson's Crumpled Leaf, Rawson's Hothouse. Entered as Crumpled Leaf and Hothouse.

Red Besson. Ggy RHJ.

Seedmen's synonyms. Marrel, RHJ.

Red-Edged Victoria. CE Cle RHJ Ren Rec Sim SB. For similar names see Victoria.
Red-Fringed. Ebe.

SEEDSMEN’S SYNONYMS. Green-Fringed, Ebe.

Red-Fringed Prize Head. Kei. For similar names see Prize Head.

Red Winter Cos. Ger.

Reichner’s Butter. Nol Tat Thr.

SIMILAR NAMES. Reichner’s White Butter, Reichner’s White Butter Forcing, Reichner’s Early White Butter, Reichner’s Forcing.

Reichner’s Early White Butter. J&S. For similar names see Reichner’s Butter.

Reichner’s Forcing. Rev. For similar names see Reichner’s Butter.

Reichner’s White Butter. Bkt. For similar names see Reichner’s Butter.

Reichner’s White Butter Forcing. Mrs. For similar names see Reichner’s Butter.

Relish. Iow.

Rennie’s Nonpareil. Entered as Nonpareil.


SIMILAR NAMES. See White Cos.


Rosedale. D&H.

Royal. Alx Bdg Bon Bdg Bui Bur Brv Cam Cle Crg DD Eic Gdn Kg Koe Lam Mel Min Stk Tat Tex Vk Vin.

SIMILAR NAMES. Improved Royal, Norfolk Royal, King’s Royal, Vick’s Royal, Royal Summer, Cox’s Royal Summer, Royal White Summer, Royal White Cabbage.


Royal Summer. Cox Fer Grw Mhl Mrs Nol Par Rec Shw Til T&B.

SIMILAR NAMES. See Royal.


Royal White Cabbage. GH Shw Tat. For similar names see Royal.

Royal White Summer. SC. For similar names see Royal.

SEEDSMEN’S SYNONYMS. Drumhead, SC.

Rudolph’s Favorite. Ftr Iow Vau.

SIMILAR NAMES. Gardener’s Favorite, Sutton’s Favorite, Florida Favorite, Florida Header.

SEEDSMEN’S SYNONYMS. Buttercup, Fur.

Russian. Mrs.

SIMILAR NAMES. White Russian, Large White Russian.

SEEDSMEN’S SYNONYMS. Large Black-Seeded Butter, Bdg. Turkish Cabbage, Bdg.

St. Louis. Brd Ewg Gra Lnr.

SIMILAR NAMES. St. Louis Butter, St. Louis Market, St. Louis Forcing Black-Seeded.

St. Louis Butter. Agn Cur DD Mrs Shw Vau War.

SIMILAR NAMES. See St. Louis.

St. Louis Forcing Black-Seeded. DD Ptu SC Wer.

SIMILAR NAMES. See St. Louis.

St. Louis Market. Brd DD Ehr Hde Neb Ptu SC Shw Tex Wyg Yng.

SIMILAR NAMES. See St. Louis.

Salad. Lam.

SEEDSMEN’S SYNONYMS. Mignonette, Lam.

Similar names. Perfected Salamander, Henderson's Perfected Salamander, Improved Salamander, Improved Mammoth Salamander, Mammoth Salamander, Large Salamander, Market Garden Salamander.


Salzer's Colossal Head: Sal. For similar names see Ta't's Colossal Cabbage.

Salzer's Earliest. Sal. For similar names see Earliest Forcing.

Salzer's Early Simpson, Salzer's German Butter Head, Salzer's Sunlight, Salzer's Wonderful. Entered as Early Simpson, German Butter Head, Prize Head, Sunlight, and Wonderful.

Sandahl. Pug.


San Francisco Passion. Bui. For similar names see Passion.

Satisfaction. Ar Bdg Bgs Brr CE Cle CF Cox Cur Ebe GI Gra Ggy TG Hst Inl Lan Loh Ptt Roe Sal Vk Vin.

Similar names. White-Seeded Satisfaction.


Saunders. Bkt.

Savoy. Chl Grw Kg.

Seedsman's Synonyms. Denver Market, Chl Grw Ham Kg.

Schwill's Hard Head. Shw. For similar names see Head Head.


Self-Closing Cos. Alx. For similar names see Paris White Cos.

Seedsman's Synonyms. Trinidad, Alx.


Shotwell's Brown Head. Bdg Mrs Mzy Prn Thr WS.

Similar names. See Brown Head.

Shumway's California Cabbage. Shm.

Similar names. See California Cream Butter.

Shumway's Mammoth. Shm. For similar names see Marblehead Mammoth.

Shumway's Perpetual. Shm. For similar names see Perpetual.

Shumway's Prize Head. Entered as Prize Head.


Similar names. Burpee's Silver Ball, Improved Silver Ball.

Simmers' Nonpareil, Simmers' Premier. Entered as Nonpareil and Premier.

Simon's Early Speckled Dutch Butter, Simon's Neapolitan Sash, Simon's Summer Queen Drumhead, Simon's White Peach. Entered as Early Speckled Dutch Butter, Neapolitan Sash, Summer Queen Drumhead, and White Peach.

Simpson's Curled Silesia. Bdg. For similar names see Early Curled Silesia.

Seedsman's Synonyms. Early Curled Salad, Bdg.

Slow Seeder. Gg Lan.
Solid-Headed Yellow Butter. Bgs. For similar names see Yellow-Seeded Butter.
Southern Blunt Point Oak-Leaved. Rec. For similar names see Oak-Leaved.
Southern Heart. Sal. For similar names see Yellow-Seeded Butter.

Speckled Dutch Butter. Cle Dlw Lan Mhl Mrs Nol Rim Stw TB.
Similar names. See Dutch Butter.
Seedsmen's synonyms. Early Cabbage, Dlw.

Spotted. Fpr.
Seedsmen's synonyms. Trout, Fpr.

Standwell. Del Pnt.
Similar names. Plant Seed Co.'s Standwell, Farquhar's Long-Standing.

Steckler's French Market. Sk.
Sterling. NK.
Similar names. Northrup, King & Co.'s Sterling.

Stinger's Early Hardy White Butter Head. M&S.
Similar names. See White Butter Head.

Stone Black-Seeded Tennis Ball. Nol Thr.
Similar names. See Black-Seeded Tennis Ball.

Stubborn Head. Bui Van Wer.
Similar names. Stubborn Head Yellow, Stubborn Seeder.

Stubborn Head Yellow. Dlw. For similar names see Stubborn Head.
Seedsmen's synonyms. Trotzkopf, Dlw.

Stubborn Seeder. Man. For similar names see Stubborn Head.

Sugar Loaf. Ggy Rec. For similar names see Large Loaf.

Summer. Bdg.
Similar names. Bolgiano's Black-Seeded Summer, Griffith & Turner Co.'s Black-Seeded Summer, Black-Seeded Summer, Landreth's Early Summer, Early Green Summer, Tait's Mid Summer, Summerlead, Johnson & Stokes' Summerhead.
Seedsmen's synonyms. Perpignan, Bdg.

Summer Drumhead. Tex. For similar names see Drumhead.
Seedsmen's synonyms. Royal Cabbage, Tex.

Summer Gem. M&S. For similar names see Toronto Gem.

Summer Queen Drumhead. M&S. For similar names see Drumhead.

Summerlead. Bur Haw J&S May. For similar names see Summer.

Sunlight. Sal. For similar names see Sunst.

Sunset. Fmr Frd Mhd Sal S&W W&D Yng.
Similar names. Golden Sunset, Salzer's Sunlight, Sunlight.

Superb. Buc Roe.
Similar names. Buckbee's Superb.

Sutton's Favorite. Mhl. For similar names see Rudolph's Favorite.

Sutton's Giant. Mhl.

Tait's Colossal Cabbage. Tat.
Similar names. Salzer's Colossal Head.

Tait's Imperial Cabbage. Tat Tem. For similar names see Imperial Cabbage.

Tait's Midsummer. Tat. For similar names see Summer.

Tender and True. Ms.

Tennis Ball. Bri Cam Crg Drw Ewg Gdn Hnt MHIJ RIIJ Kei Koe XI Pat Pri Shw Sim Thm Vin Web W&D.
Similar names. See Black-Seeded Tennis Ball.
Seedsmen's synonyms. Boston Market, Big Brk Hrn Lea PM Vk, etc.

Thick Head Yellow. Bur Hlm Mns Mau M&S Vk.


**Tilton's White Star.** Air Brd Bri Buc CE Cur Evr Fer Fle Frd GH HIm H&P J&S Kos Lam Lnr LB Liv Man Mrs Neb Por Ree Roe S&R S&O Slm Tem Thr Til Vl Vau WS.

**Similar Names.** White Star, White Star Forcing.


**Similar Names.** Burpee's Tomhannock, Bronzed Tomhannock.

**Tom Thumb.** Brr Ewg Fqr Gra J&S Mrs Pks Ren Wat.

**Similar Names.** Wheeler's Tom Thumb.

**Toronto Gem.** Fle Mc K SB.

**Similar Names.** Moore's Summer Gem, Summer Gem.

**Toronto Market.** Sim SB.

**Treasure.** J&S Min Nol.

**Trianon Cos.** Alx Air Brd Blg C&B RE Frd Gls GH TG Hrs Hen Hse MWJ RHJ J&S Kg Liv Man JMM Mrs Mzy Neb Prn Put Pot Pot Raw Ren Slm Spf SB Tat Tem Vau W&D Wd WS.

**Similar Names.** Henderson's Trianon Cos, Trianon Self-Closing Cos, White Trianon Cos.

**Seedsmen's Synonyms.** Self-Closing Cos, Alx. Celery, Hen Kg Liv Tem J&S Ren, etc.

**Trianon Self-Closing Cos.** Brk Bdg CE Crs Drr Ebr Elt Fqr Ger Grw Hrs Ken Mud Nol Ree S&F Slm S&W Thr Til Vin Wea.

**Similar Names.** See Trianon Cos.

**Seedsmen's Synonyms.** Celery, Ken. Romaine, Ken.

**Triumph.** Ms.

**Similar Names.** Australian White Triumph.

**Trocadero.** Alx Bui Cle Gdu Hrm H&C Pot Shw Stk Thr.

**Trotzkopf Large Brown.** Koe.

**Similar Names.** See Trotzkopf Large Yellow.

**Trotzkopf Large Yellow.** Koe.

**Similar Names.** Trotzkopf Large Brown.

**Trout.** Fqr.

**Seedsmen's Synonyms.** Spotted, Fqr.

**Turkish Butter.** M&S.

**Twentieth Century.** Nol.

**Unrivalled.** Brn Sim.

**Unsurpassed.** Lan.

**Vick's Hero, Vick's Premium Cabbage, Vick's Royal.** Entered as Hero, Premium Cabbage, and Royal.

**Victoria.** Bdg Ewg Gra Hrm Hrv K&W Lam LB Pks Shw.

**Similar Names.** Pink-Edged Victoria, Red-Edged Victoria.

**Seedsmen's Synonyms.** Large Drumhead, Lam LB Shw Pks. Red-Edged Cabbage, Bdg.

**Vincent's Passion.** Entered as Passion.

**Virginia Solid Head.** Koe Lan Stw.

**Waldorf.** Hen Mrs.

**Wheeler's Tom Thumb.** Entered as Tom Thumb.

**White Batavian.** RIHJ.

**White Butter Head.** Alx Brw Cle Mhl M&S Stk Yng.

**Similar Names.** White Dutch Butter Head, Salzer's German Butter Head, German Butter Head, Stinger's Early Hardy White Butter Head, Early White
Butter Head, Godden’s Early Butter Head, Early Butter Head, Large Butter Head, Hamburger’s Butter Head.

Seedsmen’s synonyms. Early Cabbage, Bui Mhl Stk Yng.


White Cabbage Forcing. May. For similar names see White Cabbage.

White Cabbage Winter. Cam. For similar names see White Cabbage.

White Chavigne. Bri Hrn Til.

White Cabbage. Bai Bdg Bri Cox Ebe Elt GH Hrn Koe Kra Lan Par RP Sal She Thm T&B.

Similar names. Early White Self-Folding Cos, Burdell’s White Cos, Cox’s White Cos, Harris’ White Cos, Dwarf White Heart Cos, Burpee’s White Heart Cos, Giant White Cos, White Romaine Cos, Romaine Cos, Bloomsdale White Cos, Express Cos.

White Dutch Butter Head. Min. For similar names see White Butter Head.

White Forcing. Bld.

Similar names. Buist’s Perfection White Forcing, California Giant White Forcing, Bolgiano’s White Forcing.

White Giant. Early.

White Heart Cos. Bur M&S. For similar names see White Cos.

White Loaf. Bld PM M&S. For similar names see Large Loaf.

White Peach. M&S.

Similar names. Simon’s White Peach.

White Romaine Cos. Elt Mzy Nol S&W Tat Thr.

Similar names. See White Cos.

White Russian. Hrn J&S Mhl Nol. For similar names see Russian.

White-Seedled Forcing. Bld Gdn.

Similar names. Kansas City White-Seedled Forcing.

White-Seedled Satisfaction. Cle. For similar names see Satisfaction.

White-Seedled Simpson. Bld Bkt Mud May JCM Nol S&O Thm VI.

Similar names. See Black-Seedled Simpson.

Seedsmen’s synonyms. Perpetual, Nol. Early Curled Simpson, JCM.

White-Seedled Summer. G&T.


Similar names. See Black-Seedled Tennis Ball.

Seedsmen’s synonyms. Boston Market, Bld Brd Bar Elt Ger Hrs, etc. Early Boston Market, Buc Bui.

White Star. Bld Hly Ken May NK. For similar names see Tilton’s White Star.

White Star Forcing. May. For similar names see Tilton’s White Star.

White Stone Head. Mic.

White Summer Cabbage. Agn Bdg Cle Elt Emr Emr For Ger Jl, Mnd Man MV Mrs Nol NK Par JMP Ptt Par Roh RP S&R Sox Spf SB Thm Thr T&B W&D.

Similar names. See White Cabbage.

Seedsmen’s synonyms. Stone Cabbage, Bdg. Winter Butter, Bdg.

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WHITE TRIANON COS.  Col.  For similar names see *Trianon Cos.*

WHITE WINTER CABBAGE.  *Lam.*


SIMILAR NAMES.  Hammond’s Wonderful, Salzer’s Wonderful.


WOOD’S CABBAGE.  Wd  WS.  For similar names see *White Cabbage.*

YELLOW BUTTER.  May.  For similar names see *Yellow-Seeded Butter.*

YELLOW QUEEN.  May.  For similar names see *Golden Queen.*


SIMILAR NAMES.  Improved Yellow-Seeded Butter, Mammoth Yellow-Seeded Butter, Large Yellow Butter, Yellow Butter, S-Did-Headed Yellow Butter.

SEEDSMEN’S SYNONYMS.  *Golden Butter, Wd.*  *Golden Stone Head,* Bdg.

YELLOW WINTER.  Thr.

SIMILAR NAMES.  Thorburn’s Yellow Winter.

MARTYNIA.

MARTYNIA.  Bkt  D&H  Ebe  Elt  Lam  May  Pne  Por  Rs  S&R  Shm.

CRANIOLARIA.  Bdg  Thr.

LUTEA.  Thr.

PROBOSCIDEA.  Brd  Brt  Brk  Buc  C&H  Crs  Cur  DD  Drn  Est  Fqr  Fst  Fer  Frd  Gdn  GH  Gg  Tg  Hde  Hn  Hlm  Hnt  Jc  JWM  J&S  Kj  Koe  Lam  Lan  Liv  Loh  PM  Mau  May  JCM  JMM  M&S  Neb  NK  OV  Old  Pac  Pn  Ptt  Por  Roc  Rob  Roc  Sal  S&R  Shw  Shm  Sox  Spf  Stw  Tat  Tex  Tpk  VI  Wd  WS.

SIMILAR NAMES.  Baltimore Acme, Tait’s Acme, Large Acme.


ALBANY MARKET.  Y&H.

SIMILAR NAMES.  Corning’s Albany Market.

AMBULANCE.  Koe.

AMERICAN BREAKFAST.  *Pri*  Y&H.

SIMILAR NAMES.  Price’s American Breakfast, Paris Breakfast.

ANNE ARUNDELL.  Ax  Bg  Bri  Gra  G&T  Hlm  MWJ  J&S  Kj  Lan  Lwr  M&S  Ptt  Rob  Shw  Stw  Tat  Tlh.

SEEDSMEN’S SYNONYMS.  *Acme,* Ptt.

ARABIAN SWEET.  Sal.

ARLINGTON GREEN NUTMEG.  GH  Hlm  Raw.  For similar names see *Arlington Nutmeg.*
Arlington Long Yellow. GH Raw.

Similar names. See Arlington Nutmeg, Long Yellow.

Arlington Nutmeg. Brt Cle Egw Fqr Fax Gry Pae Pot Rob S&F Shw Y&H.

Similar names. Arlington Green Nutmeg, Farquhar’s Improved Arlington Nutmeg, Arlington Long Yellow.

Atlantic City. MWJ Lam.

Augusta Market. Alg.

Baltimore. Alr Bk Bkt Bgs Bri Brn Buc Bar Cam CE C&B Cox Cur DD Dm

Evr Fqr Est Fre Frd GH Ggy G&T TG Hde Hrn Hlm J&S Kg Lam Lnr Ly

Loh PM Mnc Man May M&S Neb NK Ox HP Put Rec Roe Shw Sox Spf Tex V\n
Kn Wd W&S.

Similar names. Early Baltimore, Improved Large Baltimore, Large Balti-

more, Baltimore Market, Bolgiano’s Baltimore, Baltimore Acme.

Seedsmen’s synonyms. Acme, Buc Bar Fqr Fer Lan Man, etc. Baltimore

Citron, Lan Man. Large Baltimore, Shw.

Baltimore Acme. Lnr Vl. For similar names see Baltimore, Acme.

Baltimore Market. Rgg Bui Cle CF Gdn H&P Jac Ky MV Mzy Nef Shn Sox Tat

Thm Thr Y&H.

Similar names. See Baltimore.

Seedsmen’s synonyms. Acme, Bui Gdn Rob Tat Thm.

Banana. Alr Ar Bdl Bdl Bkt Bel Bar Rgg Bri Brn Bar Brr CE Chl Cle CCo Col

Cox Crs Del DD Ehr Ernr Evr Fsr Flr Flr GhG Gyr Gry G&T

Hns Hst Hren Hlm Hop Hsc Iow Jac J&S Kg Kra Lnr Lyv Mnd Man PM

May Jmm Mhl MV Mzy Neb NK Pae Jmp Puc Puc Raw Ren Rec Roc Roe Sf


Similar names. Improved Banana, Salzer’s Mexican Banana, Mexican

Banana.

Banquet. Bdl Btl Bdt Bel Bel Brr Bgg Bdg Bri Brn Buc Bar Brr Cam CE Cie Col

CF Cox Cur Del DD Ean Et, RE Eyr Egw Fqr Flr Flr Ghs Gdn Gra Gry G&T

Hns Hst Hren Hlm Hop Hsc Iow Jac J&S Kg Kra Lnr Lyv Mnd Man PM

May Jmm Mhl MV Mzy Neb NK Pae Jmp Puc Puc Raw Ren Rec Roc Roe Sf


Similar names. Henderson’s Banquet.

Bay View. Anb Bdl Bdt Bkt Bel Bow Bgg Brk Bdg Bri Brn Brn Bar Brr Cam CE

Chl Cle CF Cox Crs Cur Del Drr Ehr Ehr Enr Egw Fqr Fsr Fx Fx Fx Gdn Gra Gry

Gry TG Hns Haw Hbt Hlm H&P Iow J&S Jns K&S Kra Lnm Len Lnr LB

Lyv JL Mgd Man May Min MV M&S Mxz Neb Pcs Jmp Puc Puc Put Pot

Raw Ren Rec Roe Rob Roe Rs RP Sal SC Shw S&O Sim So Spf SB Tpk T&B Vl

Web Wyg.

Similar names. Burpee’s Bay View, Manle’s Bay View, Hybrid Bay View.

Beck’s Columbus. Beck’s Strawberry, Beck’s Triumph. Entered as Columbus,

Strawberry, and Triumph.

Beck’s Ideal. Shm. For similar names see Ideal.

Bell’s Improved Casaba. Entered as Casaba.

Berkeley. Mic.

Best of All. S&F.

Bijukdare. Egw Koe.

Bird’s Cantaloupe. Bgg Brn Emr Fqr.

Bishop’s Favorite. Thr.

Similar names. Royal Favorite, Starn’s Favorite, Newport Favorite.

Black Sap. Raw S&F. For similar names see White Japan.

Blenheim Orange. Mnd S&F Thr W&D. For similar names see Orange.

Bolgiano’s Baltimore. Blg. For similar names see Baltimore.
AMERICAN VARIETIES OF VEGETABLES.

Boston Mango. Bur PM. For similar names see Mango.


Breck's Improved Emerald Gem. Entered as Emerald Gem.

Buckbee's Ideal. Buc. For similar names see Ideal.

Buckbee's Prolific Green Nutmeg. Buc. For similar names see Nutmeg.


California Beauty. J&M Thm. For similar names see Long Island Beauty.

California Citron. Dw Fld Grr Lan.

California Large Nutmeg. Cox.

Cannon Ball. Bai Bak Bkt Buc Bur Eie Hde J&S Shw Tex Van.

Similar names. Texas Cannon Ball.

Seedsmen's synonyms. Cosmopolitan, Bak Eic.

Cape May. MWJ Rob 17. For similar names see Extra Early Cape May.

Carmes. Hen M&S.

Casaba. Btl Bkt Bel Bor Bzz Brk Buc Bui C&J CE Cle Col CF Cox Crs Der Evr Ewg Fpr Ger GH Ggy Gry TG Hn Hr Hst Inf MHJ J&M Koe Lam Lan Lor LB Liv JL Mgl Man JCM JMM Mhl Min JMP Por Rec Rob Rt RP Sal S&R S&F S&O Shw Sxk Sth SB Thm Tpk Trm Vin.

Similar names. Improved Casaba, Bell's Improved Casaba, Persian Casaba.


Champion. Chl Dw Rec. For similar names see Champion Market.


Similar names. Burpee's Champion Market, Champion.

Seedsmen's synonyms. Starw's Favorite, Man J&S.

Chicago Giant. Drm. For similar names see Chicago Market.


Similar names. See Chicago Market.


Similar names. Chicago Nutmeg, Chicago Giant, Chicago Prolific Nutmeg, Chicago Giant Market.

Seedsmen's synonyms. Nutmeg, Bui.

Chicago Nutmeg. GH. For similar names see Chicago Market.

Chicago Prolific Nutmeg. Lor. For similar names see Chicago Market.

Childs' Great Combination. Entered as Great Combination.

Christmas. Eav.

Christiania. Bai Brd Bkt Brb Cle C&B Col CF Ebr Elt Emar Evr Grw Kra Mnd Raw Rec Rob Sim 17 Vk Wca W&D.

Similar names. See Orange Christiana.


Christopher Columbus. Bri Evr. For similar names see Columbus.

Cincinnati Market. Lan.

Climbing Orange. Sal.

Similar names. Horny Climbing.
Colorado. Brk *Cam DD Puc.

Similar names: Giant of Colorado.

Seedsman's synonyms: Rocky Ford, Brk.

Columbia. *CE Tom. For similar names see Columbus.

Columbus. Alb Blk Bel Bue Bar Col Drr Frd Gg Ggy Hlm J&M Kra Ln Liv
     Man May JCM JMM Poe Ree Rob Roe S&H T&B Vk.

Similar names: Beck's Columbus, Christopher Columbus, Columbia.

Conqueror of Europe. W&D.

Coral-Fleshed Japan. W&D. For similar names see White Japan.


Corning's Albany Market. Entered as Albany Market.

Corning's Superb. Pri. For similar names see Superb.

Cosmopolitan. Alb Bak Bkg Bue Bar Crs Del Drr Eic RE Frd Gls Hde Hrs
     Hlm Ky Lmn Luv LB Ma- Mhl NX Ree Rob Roe Re S&R Shw Shm SB Tex Thr
     Vn Vk.

Similar names: Ferry's Cosmopolitan.

Seedsman's synonyms: Common Bull, Bak Eic.

Creole. Bui Cle Eic.

Seedsman's synonyms: New Orleans Market, Bui Cle Eic.

Currie's Osage. Entered as Osage.

Defender. Eng Per Fer Van.

Delmonico. Alb Blk Bel Bkg Bdg Bri Bru Bar Brr Cle CF Crs Cur Del DD Eit RE
     Eyr Fyr Fst Ger Gg Ggy Tg Hns Hop Lmn Mnd Man PM May JCM MV May
     Prn Ptt Ree Rob Sal S&R S&W Tat Tit Trm Van Vin Wca W&D Wdr Y&H.

Similar names: Improved Delmonico, Henderson's Improved Delmonico,
     Henderson's Perfected Delmonico, Perfected Delmonico.


Dickmann's Best. *DD.

Dominion Day. *SB.

Dominion Green-Fleshed. Sim.

Similar names: Simmers' Dominion Green-Fleshed.

Earliest of All. Ren. For similar names see *Extra Early.

Early Baltimore. Bow Por S&R. For similar names see Baltimore.

Seedsman's synonyms: *Aemr, Bow Por S&R.

Early Bristol. Lan.

Early Burlington. Lan.

Early Christiana. Alb Brk Bdg C&J Crs Eas Fgr Gg Pot S&F.

Similar names: See Orange Christiana.

Early Emerald Gem. Alx. For similar names see Emerald Gem.

Early Golden Netted Gem. H&P. For similar names see Netted Gem.

Early Grand Rapids. Bri Bue Bar Glrs. For similar names see Grand Rapids.


Similar names: See Grand Rapids.

Early Green Citron. CE Gg S&O. For similar names see Green Citron.

Early Green Nutmeg. Byg Col Hde Hrn Liv JL May Rob Spf.

Similar names: See Nutmeg.

Early Hackensack. Ar Alb Brw C&J Cam CE Cox Dlw DD Dmn Eic RE Fst Gdh
     Gg Gma Gmg Gmr TG Hde Hrn Hrs Hen Iml Low Jac RHJ J&S Ken K&F Kra
     Lnr Mnd Mas Mkn Xl Pks Ptn Poo Ren Roe RP Sal Shm Sim Stk SB S&H
     Thb Trm Wat Web W&D Wyg Y&H.

Similar names: See Hackensack.

Seedsman's synonyms: Turk's Orp, RP.

AMERICAN VARIETIES OF VEGETABLES.


SIMILAR NAMES. See Jenny Lind.

Early Jersey Hackensack. Gs. For similar names see Hackensack.

Early June. Mel Vl. For similar names see Extra Early June.

Early Matchless. M&S. For similar names see Matchless.

Early Netted Gem. Col G&T Hst JMM NK Old Pac Shw.

SIMILAR NAMES. See Netted Gem.

Early Nutmeg. Bur Kra Lnr Man Pac Vau. For similar names see Nutmeg.

SEEDSMEN'S SYNONYMS. Green Citron, Ggy.

Early Orange Christiana. Brn VI. For similar names see Orange Christiana.

Early Prolific Nutmeg. CE GI. For similar names see Nutmeg.

Early Rough. Min.

Early Round Yellow. GII. For similar names see Large Yellow.

Early Surprise. TG. For similar names see Surprise.

Early White Japan. DD Fer Put Stk Tat Wdr.

SIMILAR NAMES. See White Japan.

Early Yellow. Bow Sim Tpk. For similar names see Large Yellow.


SIMILAR NAMES. Burpee's Emerald Gem, Early Emerald Gem, Breck's Improved Emerald Gem.


Excelsior Nutmeg. Bdg. For similar names see Nutmeg.

Exquisite. SB.

Extra Early. Koe.


Extra Early Cape May. Cam Hde Hst Hlm Koe Lam Mil Rm Stw.

SIMILAR NAMES. Cape May.


SIMILAR NAMES. See Green Citron.

SEEDSMEN'S SYNONYMS. Nutmeg, NK Sal.

Extra Early Giant Prolific. Lnr. For similar names see Nutmeg.

Extra Early Grand Rapids. Bur D&H Hlm Man Neb Rob S&O Shm Tem Vl Wat Y&H.

SIMILAR NAMES. See Grand Rapids.


SIMILAR NAMES. See Grand Rapids.

Extra Early Green Citron. Cle CF GI Hns Hde Rob SP Tex Til.

SIMILAR NAMES. See Green Citron.

Extra Early Green Nutmeg. Del Jns. For similar names see Nutmeg.

JCM JMM Mic Mhl MV M&S Neb Nol NK OV Old Pac Pg HP Pir Ptn Por Pri Png Qkr Rik Raw Rec Rob RB RsR SC S&B Shw S&O Sic Sox Spf Stw S&W Tat Tex Thm Thr Thh Til Tpk VI Van Vk Wat Wea Wer Whl Wd Wdr WS Yug.

**Similar names.** See Hackensack.

**Extra Early Hanover.** Wd WS.

**Extra Early Jenny Lind.** Fst Mws Shw Sox Tat.

**Similar names.** See Jenny Lind.

**Extra Early Jenny Lind.** (New Jersey Improved Button Strain.) Bar.

**Similar names.** See Jenny Lind.

**Extra Early June.** Haw MWJ Koe Lan.

**Similar names.** Early June.

**Extra Early Netted Gem.** See Sim. For similar names see Netted Gem.

**Seedsman’s synonyms.** Rocky Ford, Sim.

**Extra Early Nutmeg.** Ken Lnr Qkr Van. For similar names see Nutmeg.

**Extra Early Orange Christiana.** H&P.

**Similar names.** See Orange Christiana.

**Extra Early Prize.** J&S M&S.

**Extra Early Round Netted Gem.** Blg.

**Similar names.** See Netted Gem.

**Farquhar’s Honey Drop.** Farquhar’s Improved Arlington Nutmeg. Entered as Honey Drop and Arlington Nutmeg.

**Ferry’s Cosmopolitan.** Entered as Cosmopolitan.

**Fine-Netted Nutmeg.** CE Rec Shw. For similar names see Nutmeg.

**French Cantaloupe.** M&S. For similar names see Large White French.

**French Perfection.** Thr. For similar names see Large White French, Perfection.

**Garden Lemon.** Buc Chi Col D&H RE Fmr Fld GN Iow Lnr Man Ms Rec Shw Sim SB Wzr.

**Gem.** Kg. For similar names see Netted Gem.

**Seedsman’s synonyms.** King’s Epicure, Kg.

**Germain’s Autumn.** Ger.

**Giant.** Alr Bai Bel Bri Cok Del Frd Ggy Hbt Jns Kra Lnr Liv MV Rec Rob RP Sal Shw S&O Shm Sox Thr VI Van Wbl Wbr Wyg.

**Similar names.** Giant of Colorado, Reedland Giant, Shumway’s Giant, Thorburn’s Giant, Hammond’s Mammoth Giant, Western Giant, Northern Giant, Mammoth Giant.

**Seedsman’s synonyms.** Giant of Colorado, J&S.

**Giant of Colorado.** J&S. For similar names see Giant and Colorado.

**Seedsman’s synonyms.** Giant, J&S.

**Gilbert’s Green Flesh.** Mnd Thr.

**Glass Melon.** Wd WS.

**Golden Eagle.** Bar D&H Frd Hrs NK Pac Shw Tem Vk Yng.

**Golden Gem.** CE Crg CA Fqr Fst GH Man Tat.

**Similar names.** See Netted Gem.

**Seedsman’s synonyms.** Golden Jenny, Bui. Netted Gem, Bkt CE CA Fst GH. Rocky Ford, Bkt.

**Golden Jenny.** Bui C&B Drr Lan Mhl. For similar names see Jenny Lind.


**Golden Mango.** M&S. For similar names see Mango.

**Golden Netted Gem.** Alr Ber Bdg Bgs Bri Buc Bui C&J CE Cle CF Cox Eas Ggy TG Hlm Hse Mnd Mic MV M&S Myz Nef Pac Pnt Ptt Pot Pri Rec Rce Rch Shm Sox Spf Tem TB Trn T&B 17 Vk Wyg.

**Similar names.** See Netted Gem.

American Varieties of Vegetables.

Golden Perfection. Bdg. For similar names see Perfection.
Golden Triumph. May. For similar names see Triumph.
Grand Rapids. Alr Btl Bkt Ber Brn Ccr Evr Hns Ham Hrs Hvn Hvm low J&S Kos Ren Rec Sal Sc Seattle TB Trm Y&H.


Grand Rapids Market. Ebe Lur VI. For similar names see Grand Rapids.

Grand View. Pri.

Similar names. Price & Reed’s Grand View.

Granite State. Eas.

Great Combination. Chl.

Similar names. Childs’ Great Combination.


Seedmen’s synonyms. Every Nutmeg, Ggy.


Similar names. See Osage.

Green-Netted Provence. Thr.

Green Gage. M&S.

Green-Netted. Min. For similar names see Green Citron.


Similar names. See Green Citron.

Green Nutmeg. Brd RE Ewg Gna TG Hrn Hrs Iow May JCM JMM MV XI JSP Ren Roe Rs RP Sal Shw Shm Sox Spf Tpk Vin.

Similar names. See Nutmeg.

Green Persian. Inl Lam LB Rec RP SB. For similar names see Persian.

Seedmen’s synonyms. Casaba, Evr Inl Lam Rec RP LB SB.

Grower’s Pride. Bri Evr. For similar names see McCutler’s Pride.


Similar names. Large Hackensack, Late Hackensack, Improved Hackensack, Early Hackensack, Henderson’s Early Hackensack, Improved Early Hackensack, Early Jersey Hackensack, Extra Early Hackensack, Improved Extra Early Hackensack.

Seedmen’s synonyms. Turk’s Cap, Bur Fer Lan LB Liv PM, etc.

Hamilton Market. RE

Hammond’s Grand Rapids, Hammond’s Mammoth Giant. Entered as Grand Rapids and Mammoth Giant.

Hammond’s Superb. Ham. For similar names see Superb.

Hardy Ridge. Mau.


Hero of Lockinge. W&D.

Holmes’ Improved Nutmeg. Entered as Holmes’ Nutmeg.

Holmes’ Nutmeg. Hlm. For similar names see Nutmeg.
Honey Drop.  Ewg Fqr S&E.

Similar names.  Farquhar’s Honey Drop.

Hoosier.  Ext.


Similar names.  Horned Climbing.

Hybrid Bay View.  Tat Thr.  For similar names see Bay View.


Similar names.  Beek’s Ideal, Backbee’s Ideal, Tait’s Ideal.


Improved Cantaloupe.  Ber Buc Cle DD Ebe Kg Lnr Man JCM JMM XI Roc Tpk Trm.

Seedsmen’s synonyms.  Large Nutmeg, Etc.

Improved Citron.  Hst.  For similar names see Green Citron.

Improved Delmonico.  Hen Pri Shn.  For similar names see Delmonico.

Improved Yellow.  Rob.  For similar names see Large Yellow.

Invincible Scarlet.  Mnd Thr.

Iowa Mastodon.  low.


Similar names.  Vaughan’s Ironclad.

Irondequiot.  Bkt Bgs Drr Gls Ggy Hrs Lnr Loh Ren Rob Sal Sib SB TB Vg Web.

Similar names.  Vick’s Irondequiot.

Island Beauty.  Ken.  For similar names see Long Island Beauty.

Ivy Gem.  J&S.  For similar names see Netted Gem.

Jackson First Market.  Jns.

Jenny.  Lan.  For similar names see Jenny Lind.

Jenny Lind.  Alr Bai Bkt Bgr Brg Brg Buc Cnj CE Cle C&B CF Cox Csr Cur

Dlw DD Drr Eas Ert Etn Evr Ewg Fqr Fer Fli Gm G&T Hde Htn Hst Hen Hlm MWJ J&S Ken Kg Kra Lam Lan Lnr LB Liv Loh Mnd Mgd Man Mns JCM JMM Mhl Mls Min MV Mzy Nef NK Pg JMP Prt Por Pot Raw Reo Ren Rec Rob RP Sal S&R S&O Shn Sfp Stw S&H S&W Tex Thm Thn AGT Trm

Van Vlg Vin Wat Wea W&D Wd WS Y&H.


Jenny Lind (Button Strain).  Mzy.  For similar names see Jenny Lind.

Jersey Belle.  Bkt Brl Bru Bur CE Cle Csr D&H Drr RE Ewg Frd Gls Gra Giy

TG Hde Htn Hse Jer J&S Lnr Liv JL MV M&S Neb Pae Reo Rob S&O Sis Sim

Tem Thn Til Wea Yng.

Similar names.  Texas Belle.

Jerusalem Pickle.  Liv.

Jewel.  Tat.

Similar names.  Tait’s Jewel.

Johnson & Stokes’ Superb.  Drn.  For similar names see Superb.
American Varieties of Vegetables.

Khiva. Brl.  
Seedsman's synonyms. Winter, Brl.

King's Epicure. Kg.  
Seedsman's synonyms. 

Kinsman's Queen. Bkt Bar Der Hes Hlm MWJ J&S Liv JMM Rob Shw.

Kihee. Ax.

Klondike. Gdn.

Landreth's Early Citron. Vau. For similar names see Green Citron.

Landreth's Extra Early. TB. For similar names see Extra Early.

Landreth's Extra Early Green Citron. Mic. For similar names see Green Citron.

Large Acme. Lan Stw. For similar names see Acme.

Large Baltimore. Shw. For similar names see Baltimore.

Seedsman's synonyms. Improved Baltimore, Shw.


Large Green Citron. MWJ Ken Wd. For similar names see Green Citron.

Large Green Nutmeg. Bow Brn Drn Gdn Haw H&P Lam Lea LB Liv Loh Til Tpk Wd.

Similar names. See Nutmeg.

Large Hackensack. Amb Ar Bgg Bgs Brn Bru Buc Bui Cle Cox DD Ger J&M J&S Msv May JCM Mic Neb OV Pac Spf SB Tpk Vk Wd Wdr WS.

Similar names. See Hackensack.

Seedsman's synonyms. Turk's Cup, Ar Cle Cox J&S WS Wd, etc.

Large Montreal Market. Shm. For similar names see Montreal.

Large Netted Cantaloupe. Bai Bow.

Large Nutmeg. Air DD. For similar names see Nutmeg.

Seedsman's synonyms. Improved Cantaloupe, Ebe.

Large Persian. Btl Cts JCM. For similar names see Persian.

Seedsman's synonyms. Casaba, Btl Cts JCM.

Large Round Yellow. Dm Hrn K&W. For similar names see Large Yellow.


Similar names. French Perfection, French Cantaloupe.

Large Yellow. Brk Cox Ewg Ger Gls GH Hrn Hop K&W Lam Msd Mas Pac For Rec Rce S&F S&O SB T&B Vin W&D.

Similar names. Arlington Long Yellow, Improved Large Yellow, Long Yellow, Improved Yellow, Round Yellow, Early Round Yellow, Large Round Yellow, Yellow Cantaloupe, Early Yellow.

Late Hackensack. MV Sox. For similar names see Hackensack.

Seedsman's synonyms. Turk's Cap, Sox.

Little Gem. Min. For similar names see Netted Gem.

Little Heath. Mnd Thr.

Similar names. Monroe's Little Heath.

Livingston's Market. Amb Frd MWJ Liv JL.

Livingston's Tiptop. Entered as Tiptop.

Lone Star. J&S M&S.

Long Green Nutmeg. Jns. For similar names see Nutmeg.

Long Island Beauty. Brd Brl Bgd Brk Bdg Bri Bru Bug Bui Bur CE C&B CF 
Crs Ebr Elt Fqr Fpx Frd Ggy Gry TG J&S Lmr Liv Man May Mzy Nef NS Nol NK 
Rdr Rob Shw S&O Stk S&W Tat Thr Thh Thl Vin W&D Wl Y&H.

Similar names. Island Beauty, Netted Beauty, Southern Beauty, California Beauty.

Long Persian. Buc Shm. For similar names see Persian.

Seedsman's synonyms. Casaba, Buc.

Long Yellow. Bow Brb CE Cle CF Emr Fqr Fer Gra Ggy Gry Grw May MV 
Mzy Nef HP Rs RP Sal S&F S&O Sox S&W Thr Wer Wll.

Similar names. See Large Yellow.
MUSKMELON.

Lord Beaconsfield. Mud Thr.
McGrealry's Improved Jenny Lind. Entered as Jenny Lind.
McCotter's Pride. CE D&H Fer Gls Gdn low Lam Lar Pg Ree Vk.
Similar names. Grower's Pride.
Malta Winter. Est. For similar names see Winter.
Mammoth Giant. Ham. For similar names see Giant.
Mammoth Montreal. Wll. For similar names see Montreal.
Similar names. Early Matchless, Burpee's Matchless.
Matthew's Prize. Shw.
Maule's Perfection. Cle Man. For similar names see Perfection.
Similar names. See Vine Peach.
Melrose. Air Bkt Bel Bag Buc Bur CF Cox CA Ebr Frd TG Hrs Hbr Hm Hm Hop J&W J&S Kg Lar Mgd JMM Neb NK Pri Ree Ren Ree Rob Roe S&O Spf Tem Thr Vr Wtr.
Similar names. Burpee's Melrose.
Memphis Market. Shw.
Mexican Banana. Sal. For similar names see Banana.
Miller's Cream. Alx Alr Ar Bai Brl Brl Bir Bkt Ber Bow Bgg Brr Brr Bir Bru Brr Brr C&J Cam CE Ckle Col CF Cox Crs CA DLW D&H Del DD Drn Ele Emt Frd Gbr Gls Gdn GH Gra Ggy Gvy 3&T Grw TG Hns Hrn Hrs Hen Hm Hse Hm Hm J&K J&M JK J&S Koo Koe Kra Labi Liv Mud May JCM JMM J & S Mxxy Neb OV Pac HP Ptt Poo Por Pot Pri Qkr Raw Ree Ren Ree Rim Rob Rt Rm RP R&R SC S&F Shw S&O Shm Sim Sox Spf SB Tem TB Tpk Trn Vr Vm Wat W & D Wil Wdr Yng YH.
Similar names. Improved Miller's Cream.
Seedsman's synonyms. Orange, Buc Fer NK JMM Raw Wd, etc. Red-Fleshed Orange, J&S. Princess, Kg S&F.
Mills' Earliest. Ms. For similar names see Extra Early.
Minnesota Perfection. May. For similar names see Perfection.
Missouri. Lan.
Model. Man Thh.
Monroe's Little Heath. Entered as Little Heath.
Montreal. Ar Bow Brr Brr Brr Brr Chl CF Cox DLW Ebr Emar RE Ewg Frd Frd Fax Flt Ger Gls Gm Ggy Gry TG Hde Hrm Hbt Hlm Hse H&P Him J&S K&W Ken Lan LB Man May MV M&S Nol NK OW Old Pg Pir Por Pot Raw Ree Ren Ree S&R S&F Sim Sox SB Sw' S&W Tat Thr Tlp Trm Vm Wat Wtr.
Seedsman's synonyms. Outremon Beauty, Gra.
Montreal Market. Alx Aln Brl Brl Bgg Bdg Bgs Bri Buc Bui LB CE Cle C&B Crg Crs CA D&H Del DD Drn Ele Ely Ewg Frd Gdn GH Gng Hrn Hrs Hst
Henlow Jer J&M Jns Kg Lam Liv Loh Man May JCM Mhl Mls MV Mzy Neb Pac HP JMP Prn Prt Pri Rec Rob Roe Rs Sal SC Shw S&O Spf Thm AGT T&B Vi Van Vk Web W&D Wd Wdr Yng Y&H.

Similar names. See Montreal.

Moore & Simon's Perfect Gem. Entered as Perfect Gem.

M. & W. Surprise. Entered as Surprise.

Neapolitan. Egg.

Netted Beauty. Bel Cle C&B DD Gdn J&S Man MV HP Rob Shw Sor.

Similar names. See Long Island Beauty.


Similar names. See Nutmeg.

Netted Pineapple. Rh Rl.

Seedsmen's synonyms. Nutmeg, Mhl.

Nevers' Warted. Thr.

New Orleans. Cle. For similar names see New Orleans Market.


Similar names. New Orleans.

Seedsmen's synonyms. Creole, Bui Cle Eic.


Similar names. Henderson's Newport, Newport Favorite.

Newport Favorite. Fr. For similar names see Newport, Bishop's Favorite.

Nixon. Ax CA Hst MJJ McM Wlt.


Northern Giant. GN. For similar names see Giant.

Northrup, King & Co.'s Cream. NK.

Northrup's Yellow-Meated Japan. Entered as Yellow-Meated Japan.


Similar names. Large Nutmeg, Improved Large Nutmeg, Large Green Nutmeg, Small Green Nutmeg, Improved Large Green Nutmeg, Long Green Nutmeg, Green Nutmeg, Improved Green Nutmeg, Early Green Nutmeg, Extra Early Green Nutmeg, Prolific Green Nutmeg, Buckbee's Prolific Green Nutmeg, Prolific Nutmeg, Improved Prolific Nutmeg, Early Prolific Nutmeg, Vick's Prolific Nutmeg, Prolific Netted Nutmeg, Extra Early Giant Prolific, Early Nutmeg, Extra
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Oblong Netted Gem. Big Bur Mls No1 S&O Thr.

Similar names. See Netted Gem.

Onondaga. Ebe.

Orange. Wea.

Similar names. Blenheim Orange, Vegetable Orange, Vine Orange.

Orange Christiana. Bow Bri CE Ebe TG Haw JCM MV Mzy No1 Por Pri Rec RP Sal S&R S&O Srr Tat Thr Til Web Y&H.

Similar names. Early Orange Christiana, Extra Early Orange Christiana, Improved Orange Christiana, Early Christiana, Christiana.

Seedsmen's synonyms. Boston Pet, TG.

Ornamental Pomegranate. Bur Col Low Lyr Mls Rob Sim Val.

Similar names. See Pomegranate.


Similar names. Osage Gem, Currie's Osage, Vaughan's Osage, Green-Fleshed Osage, Red-Fleshed Osage, Yellow-Fleshed Osage.

Seedsmen's synonyms. Hybrid, S&F. Improved Miller's Cream, Buc Fer JMM NK. Miller's Cream, Alx Bui Bur Drr Fqr Hen, etc. Miller's Hybrid, Hvrv, Princess, Hvrv S&F.

Osage Gem. Drr Lyr Liv Mau Van. For similar names see Osage, Netted Gem.

Our Own. Amb.

Oval Netted Gem. Brn Im1 Jns Rob Van. For similar names see Netted Gem.

Paris Breakfast. Mhl. For similar names see American Breakfast.


Similar names. Vaughan's Paul Rose.

Seedsmen's synonyms. Improved Netted Gem, Pac. Petoskey, Bui Bur Drr Fer Man Ptt, etc.

Perfect Gem. M&S. For similar names see Netted Gem.


Similar names. See Delmonico.

Perfected Gem. Entered as Gem.
SMALL FRUITS.


Seedsmen's synonyms. Princess, Brt Bkt Frd Mls Pir Wyg, etc.

Perfection Montreal. Bed. For similar names see Montreal.

Persian. Bkt Bui TG Mhl Sim Stk Vin.


Seedsmen's synonyms. Casaba, Bkt Bui Lam Mhl Mgd Rt Sim, etc.

Persian Casaba. Ren. For similar names see Persian, Casaba.

Persian Giant. M&S. For similar names see Persian.

Persian Monarch. J&S Sal. For similar names see Persian.

Petoskey. Axk Air Ar Bui Bar Brr CE Cox Dwj Fgr Fer Ger Gng GN Grw TG Ham Hmu Ini J&S Lam PM Mns Man Mek MV M&S Old JMP Pnt Ptt Por Qkr Rs Sal Shm SIm Sim Sox Th Vk Wea Yng.

Seedsmen's synonyms. Paul Rose, Bui Bar Drr Fer Lam Man, etc.

Pineapple. Bri Bui CE Cle Crs Dwj Ebe Eic Fer Gdn Hns Hrn Haw Hnt H&P Jae K&W Koe Lnr Mnd May Min MV Nef Pac Ren Rec Sal Shw &O Sox Stk Tl Tpk Web Wyg.


Pocket. Brr.

Pomegranate. Brk MWJ Mzy Sal Shw &O Thr.

Similar names. Ornamental Pomegranate.

Ponce de Leon. Hst.

Price's American Breakfast. Entered as American Breakfast.

Price & Knickerbocker's Surprise. Entered as Surprise.

Price & Reed's Grand View. Entered as Grand View.

Princess. Air Brr Bt Bkt Bdl Bgg Bri Brn Bru Brr CE Chi Cle Cur CA Ebr RE Fdl Frd TG Hns Hmu Iow J&S Kg Kos Kra Lnr Loh Lon Mnd Man PM May JMM Mie Mls MV Neb HP Prr Pnt Pri Ren Rec Rob Roc Sal &O Shm Sim Sox SB Stw S&H Thl Tl Trm Vk Wer Wdr Wyg Y&H.

Seedsmen's synonyms. Miller's Cream, Kg S&F. Miller's Hybrid, Hrv.

Osage, Hrv S&F. Perfection, Brt Brr Cur Frd Wdr, etc.

Prize Jenny Lind. Man. For similar names see Jenny Lind.

Prolific Green Nutmeg. Evr Roe VI. For similar names see Nutmeg.

Prolific Netted Nutmeg. Ar Brk Shw. For similar names see Nutmeg.

Prolific Nutmeg. Brk Bgs Bri Bue Brur Cle CA Fst Ger Gls TG Hbt Hlm Kg Mnd Man PM Neb XI Rob Tem Web Wer Wdr.

Similar names. See Nutmeg.

Queen Anne Pocket Melon. Liv.


Queen Anne Sweet-Scented Pocket Melon. Drw.

Queen of All. Sal.

Similar names. Salzer's Queen of All.

Rajah. D&H.

Red-Fleshed Lyons. Thr.

Red-Fleshed Osage. Hmu J&S. For similar names see Osage.

Seedsmen's synonyms. Miller's Cream, J&S.

Reedland Giant. MWJ J&S Lan Liv PM Stw. For similar names see Giant.

Roberts. Lan.


Rocky Ford Gem. AIX Web. For similar names see Rocky Ford, Netted Gem.

Rocky Ford Netted Gem. OV Tpk Wd.

Similar Names. See Rocky Ford, Netted Gem.

Rocky Ford Pineapple. Brt Btl. For similar names see Pineapple.


Similar Names. See Netted Gem.


Similar Names. See Large Yellow.

Royal Favorite. Thr W&D. For similar names see Bishop's Favorite.

Royal Sovereign. S&F.

St. Louis Market. Pue Pnt SC.

Salmon and Green. Lan Mie.

Salzer's Mexican Banana, Salzer's Queen of All. Entered as Mexican Banana and Queen of All.

Santa Claus. Frd.

Seedsmen's Synonyms. Winter Pineapple, Frd.

Shipper's Delight. Bri Brw J&S.

Shumway's Giant, Shumway's Silver Netted. Entered as Giant and Silver Netted.

Silver Netted. Air Sal Shm.

Similar Names. Shumway's Silver Netted, Silver Netted Gem.

Silver Netted Gem. Buc Roc. For similar names see Silver Netted, Netted Gem.

Simmers' Dominion Green-Fleshed. Entered as Dominion Green-Fleshed.

Skillman's Early. Brn. For similar names see Skillman's Netted.


Similar Names. See Skillman's Netted.

Skillman's Netted. Amb Bkt Bui Brer C&J CE Cox Cur Enmr Ewg GH Kg Lnr Mnd Mas JCM MV Pac Prr Ren Rec Rob RP Sal S&R Sgr SB TB Wb W&D Wl WS.


Skillman's Netted Gem. Bggy May S'O.

Similar Names. See Skillman's Netted, Netted Gem.

Small Green Nutmeg. Ber Bow Fer Iml Lam LB Loh Por S&R SB.

Similar Names. See Nutmeg.
Southern Beauty. Gig G&T Hst MWJ Tex.

Similar names. See Long Island Beauty.

South Jersey. Lan.

Starr’s Favorite. Male. For similar names see Bishop’s Favorite.


Similar names. Beck’s Strawberry.

Sugar Nutmeg. GN. For similar names see Nutmeg.

Superb. J&S PM.

Similar names. Cornings’ Superb, Hammond’s Superb, Johnson & Stokes’ Superb, Sutton’s Superb.

Superior. Bur CF Frdl GH Hlm J&S PM Man Ree Rob Shw Wdr.

Similar names. Manue’s Superior.


Similar names. Improved Surprise, Early Surprise, M. & W. Surprise, Price & Knickerbocker’s Surprise.

Sutton’s A 1. S&F.

Sutton’s Invincible. S&F.

Sutton’s Perfection. S&F. For similar names see Perfection.

Sutton’s Scarlet. Mhl.

Sutton’s Scarlet Masterpiece. S&F.

Sutton’s Superb. S&F. For similar names see Superb.

Sutton’s Triumph. S&F. For similar names see Triumph.


Syracuse. Van.

Tait’s Acme, Tait’s Jenny Lind, Tait’s Jewel. Entered as Acme, Jenny Lind, and Jewel.

Tait’s Ideal. Tat. For similar names see Ideal.

Texas Belle. Hst. For similar names see Jersey Belle.

Texas Cannon Ball. Hst Hly May Rob Stk Thr.

Similar names. See Cannon Ball.

Theropial. Koe.

Thorburn’s Giant. Entered as Giant.


Similar names. Livingston’s Tiptop.

Togoodo Spanish Winter. J&S. For similar names see Winter.

Toledo Early Market. HP.

Trevoux Orange-Fleshed. Thr.


Similar names. Triumph Hybrid, Beck’s Triumph, Golden Triumph, Sutton’s Triumph.

Triumph Hybrid. May. For similar names see Triumph.

Turk’s Cap. Ar Bri Bui Bur CE Cle Cox Fer Gdn Grw TG Hlm Iml Jae J&S Ken Lan LB PM Ms Sox Stw Til Vl Wd WS.

Seedsmen’s synonyms. Early Hackensack, RP. Hackensack, Bur Fer Lan Liv LB PM, etc. Large Hackensack, Ar Bui Cox J&S Vl Wd, etc. Late Hackensack, Sox.
Unsworth's Perfect.  Brn.  For similar names see Perfection.

Vandalia.  Bgg.

Vaughan's Ironclad, Vaughan's Osage, Vaughan's Paul Rose.  Entered as Ironclad, Osage, and Paul Rose.

Vegetable Orange.  Air Drr Ham Raw Rob Shm Vk.

Similar names.  See Orange.


Vegetable Peach.  Buc Cok D&H RE Evr Ewg GN J&S Pwt Roc Sim Trm.

Similar names.  See Vine Peach.

Seedsmen's synonyms.  Mango, Buc Elt Evr RE J&S Thr, etc.  Vine Orange, Elt Frd Thr.  Vine Peach, Ham Sim SB.

Vegetable Vine Peach.  Wer.

Very Early Jenny Lind.  Qkr.  For similar names see Jenny Lind.

Vick's Irondequoit.  Entered as Irondequoit.

Vick's Prolific Nutmeg.  Brb CE Ree Vk.  For similar names see Nutmeg.

Vine Orange.  Elt Kg MV Sze Thr.  For similar names see Orange.

Vine Orange Vegetable Peach.  Shw.

Vine Peach.  Air Chl Col Cur Fmr Ggy Ham Iow Koc Lue Mbs M&S Pac Rob Sal Shn Sim Thm Thr.

Similar names.  Vegetable Peach, Melon Peach.

Seedsmen's synonyms.  Mango, Brd Col Cur Elt Ggy Sal Sim etc.  Vegetable Orange, Cur Rob Sal.  Vegetable Peach, Elt Ham Sim SB.

Waldorf.  Bui.

Ward's Nectar.  Bgg CE Fqr Ggy Ree Thr W&D.


Western Giant.  Buc Roc.  For similar names see Giant.


Wilson's Extra Early.  Ber Sox.  For similar names see Extra Early.

Winter.  Bri.

Similar names.  Malta Winter, Togoodo Spanish Winter.

Seedsmen's synonyms.  Khira, Btl.


Similar names.  See Pineapple.


Wood's Perfection.  Wd.  For similar names see Perfection.

Yellow Cantaloupe.  Web.  For similar names see Large Yellow.

Yellow-Fleshed Japan.  May NK Van.

Yellow-Fleshed Osage.  M&S Nol.  For similar names see Osage.

Yellow-Fleshed Perfection.  Gdn.  For similar names see Perfection.

MUSTARD.

Black.  Anb Ar Brd Bt Bon Bgg Brk Bdg Bgs Buc Brb Bur CE Cle C&R CA Drm Ebr Emr Fmr Fst Frd Ger GH TG Ham Hde Hrm Hrv Hen Hlн Hmt J&S K&W Kg Lnr Liv JL Man Mau May MC&M Mel Mls MV Mzy Neb NEL OY Pac Pir

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AMERICAN VARIETIES OF VEGETABLES.


Fordhook Fancy. Bui.

Georgia. CA. Seedsmen’s synonyms. Mammoth Curled, CA.

Giant Ruffled.  Ar.

SEEDSMEN'S SYNONYMS.  Curled, Ar.

Giant Southern.  Hop-Sal.  For similar names see Southern Curled.


SIMILAR NAMES.  See Southern Curled.

SEEDSMEN'S SYNONYMS.  Chinese, Evr Lnr Pir Vau. Creole, Alx.


Large Curled.  Sk.  For similar names see Curled.

London.  Hop.


Mammoth Curled.  CA Gdn Jac.  For similar names see Curled.

SEEDSMEN'S SYNONYMS. Georgia, CA.

Mammoth Ostrich Plume.  Bui.  For similar names see Ostrich Plume.

Mammoth Southern Curled.  Bui Grw.  For similar names see Southern Curled.

Ostrich Plume.  Cam low MWJ Mgd May 'K Wl Wd.

SIMILAR NAMES. Mammoth Ostrich Plume.

Silver Curled.  CE Rec.  For similar names see Curled.


Southern Creole.  Bui.  For similar names see Southern Curled, Creole.

Southern Creole Curled.  Gdn.  For similar names see Southern Curled, Creole.

Southern Curled.  DD Eic low J&M May Spf.

SIMILAR NAMES. Mammoth Southern Curled, Giant Southern Curled, Giant Southern, Chinese Southern Curled, Southern Creole Curled.

SEEDSMEN'S SYNONYMS. Chinese Southern Curled, Spf.


SIMILAR NAMES. White American, White English, White London.

SEEDSMEN'S SYNONYMS. English, Axl Crs. Yellow, Bai Bdg Col Elt RE S&F, etc.

White American.  Mnd.  For similar names see White.


SIMILAR NAMES. See White.

SEEDSMEN'S SYNONYMS. White London, Iow. Yellow California, Bow.


SIMILAR NAMES. See White, London.


Yellow.  Bai Bdg Col Eic Elt RE Fax Ggy K&F May Mhl Nol OV Pae Raw S&F Spf Tpk T&B.

SIMILAR NAMES. Yellow California, Yellow London.

SEEDSMEN'S SYNONYMS. White, Bai Bdg Elt RE Ggy K&F, etc.
Yellow California. Bow. For similar names see Yellow.

Yellow London. Bui Gdn Neb Pnt.

Similar names. Yellow, Yellow California. See also London.

Okra.

(Also called Gumbo.)

Buis's Dwarf. Bui. For similar names see Dwarf.

Creole. Mhl S&F.

Similar names. White Creole.

Density. Bng Frd Hlm J&S Lar Mns Nol Ptt 17 Wd WS.

Similar names. White Density.

Dreer's Little Gem. Entered as Little Gem.

Dwarf. Anb Ar Brd Btt Bkt Bow Bri CA DD Fst Hns Hnt Lea Lar Mcl McM Pac Prl Tat TB T&BG Vuy Yg Hl.

Similar names. Improved Dwarf, Buis's Dwarf, Early Dwarf, Extra Early Dwarf, Dwarf White, Early Dwarf White, Improved Dwarf White, Dwarf Green, Early Dwarf Green, Improved Dwarf Green.


Similar names. See Dwarf.

Dwarf Prolific. Bng Brr CE Ck&B Crg Frd GH GT Hn Hmt Hlm Lar Mnd HP 17 Vin Wat Wd WS.


Similar names. See Dwarf.


Similar names. See Dwarf.

Dwarf White Velvet. Bcr Bgt Cam Crs DD Gdn Grw Ttu low Jac.

Similar names. See White Velvet.

Early Dwarf. Drn Eic Ger Ggy Mv Sal Sdx. For similar names see Dwarf.

Early Dwarf Green. Bdg Shw. For similar names see Dwarf.

Early Dwarf White. CE Rec Rec. For similar names see Dwarf.

Extra Early Dwarf. CE Rec. For similar names see Dwarf.

Extra Long Green. Bdg. For similar names see Long Green.

French Market Dwarf Prolific. Etc Stk. For similar names see Dwarf Prolific.

Green Dwarf Prolific. Alv Bg Cam Gdn Jac J&S Kg Mns Nol Ptt Stk Thr Wll.

Similar names. See Dwarf Prolific.

Green Dwarf Prolific Extra Early. Etc.

Holt's Stringless Early Green Dwarf Prolific.  M&S.

**Improved Dwarf.** Improved Dwarf Green, Improved Dwarf Prolific, Improved Green Dwarf Prolific, Improved Dwarf White, Improved Long Green, Improved White, Improved White Velvet. Entered as Dwarf, Dwarf Green, Dwarf Prolific, Green Dwarf Prolific, etc.

**Lady Finger.**  Bue Bur CE Del Frd GII Hde Hlm 113e J&S Lur Mgd Man Put Qkr Rec Roc Vl.

**Landreth's Long Green, Landreth's Long White.** Entered as Long Green and Long White.

**Little Gem.**  Drt.

**Similar names.**  Drer's Little Gem.

**Long Green.**  Alx Alr Brr Bon Bgg Bui Cam CE Cle C&B Cox Cur CA Drr Elt RE Ewg Frr Ger Gdn GH Gra Ggy Ggt GwGw Tg Hde Hen Hly Jac MWJ Kei Ken Koe Lan Lan Man MV May Neb Pri Ren Rec Roe Sal SC Shw Sox Spf S&W Tat Tex Thr Trm Vk W&D Wlt Yng.

**Similar names.**  Extra Long Green, Improved Long Green, Pale Long Green, Griffing's Long Green, Landreth's Long Green.

**Seedsmen's synonyms.**  Long White, Neb SC. Mammoth Long Pod, Spf. Tall, Gdn Hly Jac. Tall Green, Bui.

**Long White.**  Ar CE Lan M&S Neb Pac Rec Roc. For similar names see White.

**Seedsmen's synonyms.**  Long Green, Neb SC.

**Mammoth Green Pod.**  Mgd. For similar names see Perkins' Mammoth Long.

**Mammoth Long.**  Spf. For similar names see Perkins' Mammoth Long.

**Seedsmen's synonyms.**  Long Green, Spf.

**New South.**  Lan.

**Pale Long Green.**  Sim. For similar names see Long Green.

**Perfection White.**  Shw. For similar names see White.

**Perfection White Velvet.**  Shw.

**Perkins' Mammoth Green Pod.**  Alr Bui Bur Man.

**Similar names.**  See Perkins' Mammoth Long.

**Perkins' Mammoth Long.**  Crs Fer Hst J&S Lan M&S Nol Pnt Thr Vf Wd. Wd.

**Similar names.**  Perkins' Mammoth Green Pod, Mammoth Green Pod, Mammoth Long.

**Round White.**  Thr. For similar names see White.

**Tall.**  Btd Bng Bui CE Crg DD Eic Fst Gdn Hns Hly Jac Lan Lar Rec Roc Shw Thm Van WS Y&H.

**Similar names.**  Tall Green, Tall White, Tall White Velvet.

**Seedsmen's synonyms.**  Long Green, Gdn Hly Jac.

**Tall Green.**  Brk CF Eic Elt Env Fqr Lur May McM OV Pac Stk Tpk Wd. Wd.

**Similar names.**  See Tall.

**Seedsmen's synonyms.**  Long Green, Bui.

**Tall White.**  Cle GH Tg Min NI Pug. For similar names see Tall.

**Tall White Velvet.**  Gdn Jac. For similar names see White Velvet.

**White.**  Hly MWJ RP SC.

**Similar names.**  Improved White, Perfection White, Round White, Long White, Landreth's Long White.

**White Creole.**  Drt.

**Seedsmen's synonyms.**  White Velvet, Drv Evr Vk.

**White Density.**  Ebr. For similar names see Density.

**White Velvet.**  Alx Alr Bak Brr Brr Bbr Btt Btl Bnt Bnt Bow Bgg Brk Bri Bng Bui Bur Brr C&J CE Cle C&B CCo CF Cok Cox Crg CA Del Drw Drm Eic Evr Fnr Fqr Fst Fer Frd Ger Gls GII Ggy Gry Gtg G&I Hns Hde Hrm Hrs
Adriatic Barletta. C&B Fqr Jns Mud Mas Mzy HP For S&F SB S&W Vin Wea W&D.

Similar names. White Adriatic, White Adriatic Barletta, Small White Barletta, Extra Early White Barletta, Early White Barletta, Hammond's White Barletta, White Barletta, Barletta Pickling, Extra Early Barletta, Early Barletta, Barletta.


American Silverskin. Bow Dun Lam LB May NK OV AGT Van Vk Wyg.

Similar names. See Silverskin.

Seedsmen's synonyms. White Portugal, Bow Fer Lam NK Van Vk, etc.

Archias' Improved Extra Early Red. Entered as Extra Early Red.

Aroostook Improved Extra Early Flat Red. Jer. For similar names see Extra Early Red.


Australian Early Golden Globe. Cor. For similar names see Australian Brown.

Barletta. Bkt CE Chl Cle Ger Ggy Gry Grw Hbt Mzy Pir Prn Pne S&O Vk Yng.

Similar names. See Adriatic Barletta.

Seedsmen's synonyms. Early Radish, Chl. Extra Early Pearl, Ger.

Barletta Pickling. Pks Sox. For similar names see Adriatic Barletta.

Barnard's Yellow Globe Danvers. Entered as Yellow Globe Danvers.

Beaulieu's Hardy Winter White. Entered as Hardy Winter White.


Bloomsdale Danvers, Bloomsdale Early Danvers, Bloomsdale Early Red, Bloomsdale Early White Pearl, Bloomsdale Extra Early Dark Red, Bloomsdale Extra Early Red, Bloomsdale Extra Early White Pearl, Bloomsdale Large Yellow Strasburg, Bloomsdale Silverskin. Entered as Danvers, Early Danvers, Early Red, Early White Pearl, Extra Early Dark Red, Extra Early Red, etc.

Bloomsdale Extra Early Gold Seal. Lan.

Similar names. See Bloomsdale Gold Seal.

Bloomsdale Extra Early Red Seal. Lan. For similar names see Extra Early Red.
Bloomdale Gold Seal. Bri.
  Similar names. Bloomdale Extra Early Gold Seal, Extra Early Gold.

Bloomdale White. Lan.

Bloomdale Yellow. Dlw. For similar names see Giant Yellow.

Bolton. Mrs.
  Similar names. Brownish Pink Bolton.

Breck's Yellow Globe Danvers. Entered as Yellow Globe Danvers.

Bronze King. GH. For similar names see Copper King.

  Similar names. Livingston's Brown Beauty.

Brownish Pink Bolton. Thr. For similar names see Bolton.

Brown Wonder. Mrs.


Buist's Yellow Globe Danvers. Entered as Yellow Globe Danvers.

Button. Brk Bdg.

California Early Red. Ebe Mrs.

California Early White Globe. Illy. For similar names see White Globe.

Campbell's White Dutch Winter. Entered as White Dutch Winter.

Canary Island. Iow.
  Seedsmen's synonyms. Bermuda, Iow.

Challenge Yellow Globe Danvers. Egg. For similar names see Danvers.

Chicago High Yellow Globe. Red. For similar names see Southport Yellow Globe.

Chicago Silverskin. Ghi. For similar names see Silverskin.

Colorado Yellow Danvers. Hns. For similar names see Yellow Danvers.

Copper King. CE Col DD Iow Kg Luc Ree Shm Spf Vin Wd Ws.
  Similar names. Mammoth Copper King, Bronze King. See also Silver King, Spanish King.

Covent Garden White Pickling. Kei. For similar names see White Pickling.

Creole. Ax Bon Cam Eic Hde Hst Roc Shw Stk Tex Thm Wd.
  Similar names. Thompson's Creole, Louisiana Creole.

Seedsmen's synonyms. Louisiana, Ax Hde Stk Tex.

Crystal Wax. Cam Hst.
  Similar names. Hastings' Crystal Wax, Griffing's White Wax, White Wax.

Danvers. Lan Liv. For similar names see Yellow Danvers.

Dobbie's Ailsa Craig. Ewg.

Early Barletta. Bow Bri Hrs. For similar names see Adriatic Barletta.

Early Cracker. Brk McK.

Early Danvers. Bri. For similar names see Yellow Danvers.

Early Eight Weeks. Koe.
  Similar names. King's Early Eight Weeks.

Early Flat Red. Bug Ggy Jns MV NI Pac Pot Sox Thr T&B.
  Similar names. See Extra Early Red.

Early Flat White Italian Tripoli. Crs Vk.
  Similar names. See Giant White Tripoli.

Early Flat Yellow Danvers. Kra Lwr HP Ren SB.
  Similar names. See Yellow Danvers.

Similar names. See White Dutch.

Early Italian White Globe.  M&S.  For similar names see White Globe.

Early Italian Yellow Globe.  M&S.  For similar names see Southport Yellow Globe.

Early Large Red.  Hrs Pnc Pot.  For similar names see Early Red.

Early Large Red Globe.  Alr For S&K.  For similar names see Red Globe.

Early Large Red Wethersfield.  Bgs Enr.

Early Marzajola.  Glr.  For similar names see Neapolitan Marzajola.

Early Neapolitan Marzajola.  Fer.  For similar names see Neapolitan Marzajola.

Early Paris Silverskin.  Ked.  For similar names see Silverskin.

Early Queen.  Myz.  For similar names see Queen.

Early Radish.  Chl.

Seedsmen's synonyms. Barletta, Chl.

Early Rad.  Anb Ebc Elt Fqr Mrs Myz Rim Vin.

Similar names. Large Red, Early Large Red, Early Round Red, Extra Early Round Red, California Early Red. See also Extra Early Red.


Similar names. See Red Globe.

Seedsmen's synonyms. Danvers, Liv.


Similar names. See Red Globe, Yellow Danvers.

Early Round Rad.  K&W.  For similar names see Early Red.

Early Round Red Globe.  EBC.  For similar names see Red Globe.

Early Round Yellow Danvers.  Ggy.  For similar names see Yellow Danvers.

Early Silverskin.  McK Ren.  For similar names see Silverskin.

Early Silver White Paris.  HP.  For similar names see Extra Early Paris.

Early White Barletta.  Alr Bui Col Ewg Tg McK Ree Ren Roe Thr.

Similar names. See Adriatic Barletta.

Early White Naples.  Sal.  For similar names see Naples.

Early White Nocera.  Mnd.  For similar names see White Nocera.


Similar names. White Pearl, Extra Early White Pearl, Bloomsdale Extra Early White Pearl, Bloomsdale Early White Pearl, Mammoth White Pearl.

Early White Pickling.  Vau.  For similar names see White Pickling.


Similar names. See Queen.


Early White Spanish.  M&S.  For similar names see White Spanish.

Early Yellow Cracker.  Bur Fle Ggy Gry Mau Pg Raw Rs &S Fie Tm Vau Vk Wdr.

Similar names. See Yellow Cracker.

Early Yellow Flat.  Fqr.

Seedsmen's synonyms. Cracker, Fqr.

Early Yellow Globe Danvers.  Hop.  For similar names see Yellow Danvers.

Ebenazer.  J&II.

Egyptian.  Bur SpI.

Egyptian Queen.  Can.  For similar name, see Queen.

Eichling's Yellow Queen.  Ele.  For similar names see Queen.

El Paso.  Amb Bui Btl Bow Cox Crs DD Ger SC Shm Tex Vin.

Similar names. White El Paso.

English Potato. Gng. For similar names see Potato.

English White Pickling. GH. For similar names see White Pickling.


Extra Early Australian Brown. SB. For similar names see Australian Brown.


Seedsmen's synonyms. Earliest White Queen, Pg J&M. Early Radish, Bur. Improved Early White Queen, Bur. White Queen, Him.


Extra Early Dark Red. Lan. For similar names see Extra Early Red.


Extra Early Gold. MWJ. For similar names see Bloomsdale Gold Seal.


Extra Early Pearl. Col Dru Evr Frd Low Lor Man Tpk Tat. Seedsmen's synonyms. Silver White Etna, D&H Lic.

Extra Early Queen. Buc D&H Grw Hys Res. For similar names see Queen.


Extra Early Red Seal. MWJ. For similar names see Extra Early Red.

Extra Early Red Wethersfield. Ewg Gra. For similar names see Red Wethersfield.

Extra Early Round Red. H&C. For similar names see Early Red.

Extra Early White Barletta. Brr Evr Mie Qkr. Similar names. See Adriatic Barletta.

Seedsmen's synonyms. White Queen, Qkr.

Similar names.  See Early White Pearl.


Extra Early White Queen.  Tat Wat.  For similar names see Queen.

Extra Early Yellow Cracker.  Lnr Sim.  For similar names see Yellow Cracker.


Similar names.  See Red Wethersfield.

Flat Danvers.  Agn Cox RE Kg Lnr.  For similar names see Yellow Danvers.

Flat Red.  May.  For similar names see Extra Early Red.

Flat Red Bermuda.  MV Mzy.  For similar names see Red Bermuda.

Flat White Bermuda.  MV Mzy Tat.  For similar names see White Bermuda.

Flat White Portugal.  Shm.  For similar names see White Portuguese.

Flat Yellow Danvers.  Btl Bkt Brn Brn Buc Del D&H Evr Frd Hns Hrn H&P Iml RIJJ J&M Lum Lum LR Liv Ms Lns May Mrs Neb OV Pac Pnt Roh Rp SC Sox Spf TB Tpk Vl Vnr Web.

Similar names.  See Yellow Danvers.


Flat Yellow Dutch.  Bgs Shm.  For similar names see Yellow Dutch.

German’s Yellow Globe Danvers.  Entered as Yellow Globe Danvers.

Giant Blood Red Vesuvius.  Gra.  For similar names see Giant Vesuvius.

Giant Brown Rocca.  RE Fmr Mgd Sim SB Vnr.  For similar names see Giant Rocca.

Giant Madrid.  Frd.

Giant Pompeii.  Mau.  For similar names see Mammoth Pompeii.

Giant Prize Taker.  Ar Brn D&H RE Ewg Gra Kei McK Ren.

Similar names.  See Prize Taker.

Seedsmen’s synonyms.  Mammoth Prize Taker, Kei.

Giant Red Garganus.  (CE C&B Lum JMM Rec W&D).


Seedsmen’s synonyms.  Mammoth Pompeii, W&D. Pompeii, Lum.

Giant Red Italian Tripoli.  Bow Frd SB.

Similar names.  See Giant Red Tripoli.

Seedsmen’s synonyms.  Bermuda Red, Frd.

Giant Red Rocca.  Air Bel Brk Bui Bur Cle DD Fst Gdn Lnr May Nol Pnt SC Shw Shm Tmr Thr Wat.

Similar names.  See Giant Rocca.

Giant Red Tripoli.  Alx Mau Ren Sal Shw.


Giant Red Vesuvius.  Mau Mbs Shm.  For similar names see Giant Vesuvius.


Similar names.  Large Giant Rocca, Giant Rocca of Naples, Giant Rocca, McMillan’s Rocca King, Red Rocca, Giant Red Rocca, Light Red Giant Rocca, White Rocca, Giant White Rocca, Yellow Rocca, Giant Yellow Rocca, Tripoli Giant Yellow Rocca, Giant Brown Rocca, Lemon Rocca.

Seedsmen’s synonyms.  Red Globe, Rec.
Giant Rocca of Naples. Bdg Bar Crs Frd Glb Hst Kei Lur Man Roe Vk.

Similar names. See Giant Rocca.

Giant Silver King. Sal. For similar names see Silver King.

Giant Vesuvius. Iow.


Giant White Garganus. CE C&B Ekt Frd Glb Lan Rec Shm Stw W&D.


Giant White Italian Tripoli. Btl Bow Bui Bar Crs CA Evr Fst Fer Frd Glb Gry J&S Lur LB Pug Raw Rec SB S&H.

Similar names. See Giant White Tripoli.


Giant White Rocca. DD Lur Wea. For similar names see Giant Rocca.

Seedsmen’s synonyms. Silver Ball, Bar.


Similar names. White Tripoli, Large White Tripoli, White Italian Tripoli, Large White Italian Tripoli, Early Flat White Italian Tripoli, Large Flat White Italian Tripoli, Large Flat White Italian, Giant White Italian Tripoli.

Seedsmen’s synonyms. El Paso, Hst Lam. Large Mexican, Hst.

Giant White Victoria. Hrn. For similar names see White Victoria.

Giant Yellow. Kg Sim SB.

Similar names. Giant Yellow Tripoli, Large Yellow, Improved Large Yellow, Bloomsdale Yellow.

Giant Yellow Prize Taker. Bui Hde Pnc SC. For similar names see Prize Taker.

Giant Yellow Rocca. Bui Bar DD Fst Lur May MV Ren SC Shm Sox SB Thr Van Wat.

Similar names. See Giant Rocca.

Seedsmen’s synonyms. Spanish King, Bui Bar DD. Giant Lemon Rocca, Sim.

Giant Yellow Tripoli. Gdn. For similar names see Giant Yellow.

Giant Yellow Zittau. Mnd. For similar names see Giant Zittau.

Giant Zittau. Shm.

Similar names. Giant Yellow Zittau.

Gigantic Gibraltar. Bar Mau McK Rt Sim Spf.

Gladiator. Sal.

Similar names. Salzer’s Gladiator.

Golden Ball. J&S. For similar names see Silver Ball.


Golden Globe Danvers. Buc. For similar names see Golden Globe.

Golden Oregon. Cok.

Similar names. Oregon Danvers Long Keeper, Oregon Yellow Danvers.

Golden Queen. Est Will. For similar names see Queen.

Golden Rono. Thm.

Globe Red Wethersfield. Fld Kra Neb. For similar names see Red Wethersfield.

Globe Wethersfield. Fur LB Mgd MV Mrs Sox.

Similar names. See Red Wethersfield.


Griffing’s White Wax. Entered as White Wax.

American Varieties of Vegetables.


Hardy Winter White. MWJ See Spf Tem W&D.

Hardy Round Golden. Liu.

Hardy Round Silverskin. Col J&S Nol. For similar names see Silverskin.

Seedsmen's synonyms. White Pickling, Col.

Hardy Round White Dutch. Thr Til. For similar names see White Dutch.

Harris' Large Red Globe. Entered as Large Red Globe.

Hastings' Crystal Wax. Entered as Crystal Wax.


Holmes' Improved Yellow Globe Danvers. Entered as Yellow Globe Danvers.

Ideal White Globe. Van. For similar names see White Globe.

Imperial. May OV.

Similar names. May's Imperial.

Improved Early White Queen, Improved Large Yellow, Improved Large Yellow Globe, Improved Red Bermuda, Improved Red Globe, Improved White Bermuda, Improved Yellow Globe Danvers. Entered as Early White Queen, Large Yellow, Large Yellow Globe, Red Bermuda, Red Globe, etc.

Italian May. Bur.


Italian Queen. Koe Lan Stw. For similar names see Queen.

Italian Silverskin. Thr. For similar names see Silverskin.

Seedsmen's synonyms. White Bunching, Thr.

IVory Ball. J&S. For similar names see Silver Ball.

James' Long-Keeping. RHJ Koe McK. For similar names see Long Keeper.

James' Long-Keeping Yellow. M&S. For similar names see Long Keeper.

King of the Earliest. Sal.

Similar names. Salzer's King of the Earliest.

King's Early Eight Weeks. Entered as Early Eight Weeks.


Large Blood Red Italian Tripoli. Kei Vk.

Similar names. See Giant Red Tripoli.

Large Extra Early Red Globe. Bow. For similar names see Red Globe.

Large Flat White Italian. Ggy. For similar names see Giant White Tripoli.

Large Flat White Italian Tripoli. Kei Vk.

Similar names. See Giant White Tripoli.

Large Flat Yellow Danvers. Sim Sim. For similar names see Yellow Danvers.

Large French. Sim.

Seedsmen's synonyms. Welch, Sim.

Large Giant Rocca. RHJ. For similar names see Giant Rocca.

Large Late Red Globe. Sal. For similar names see Red Globe.

Large Mexican. Bow Cox Crs DD Ger SC Tex Vin.

Similar names. White Mexican, Mexico.

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Large Pompeii.  Vk.  For similar names see Mammoth Pompeii.
Large Portugal.  Yng.  For similar names see White Portugal.

Seedsmen's synonyms.  Silverskin, Yng.

Large Red.  Hnt.  For similar names see Early Red.

Large Red Bermuda.  Drm Hns Mhl Shm.  For similar names see Red Bermuda.

Large Red Globe.  Anb Ar Bld Bld Bel Bld Brag Brag Brag Bar &B Col Cur D&H
DD Ehr Est GH Ham Hrs Hly K&F Lam Liv JMM MV Pvt Pri Ree Ren Sal
Shw Shm Sor S&H Term Thr Wfa.

Similar names.  See Red Globe.

Seedsmen's synonyms.  Southport Red Globe, Brg.

Large Red Italian Tripoli.  C&B W&D.

Similar names.  See Giant Red Tripoli.

Large Red Madeira.  Sim.

Large Red Tripoli.  Drr RE.  For similar names see Giant Red Tripoli.

Large Red Wethersfield.  Agn Air Anb Ar Bat Bak Brd Bl Bel Bev Big Bow Brg
Brg Brd Brd Brd Brg Brg C&J CE Chl EBC Cle C&B Col CF
Cok Crg Crg Crg CA Dsw D&H DD D&C Drr Drn Dun Ebr Ehr Ftt RE Exr
Exy Furn Fqr Fat Fax Fry Fre Frd Guy Gls Gdn GH Gra Gsg Gsy Gsy Grw
TG Hns Ham Hde Hrd Hrd Hrs Hvy Hst Haw Hen &C Hly Hop Hse iml
Iow Jac MWJ J&J Mns Kei K&W Ken K&F Kg Koe Kos Lam Lan Lnr LB
Liv JI. Loh Lon Mnd Mgj Mas Man JCM JMM Mck Mcl Mic Mil Ws Min
MV Mzy Xef Xol XI XI Ok Lod Pac Pks HP JMP Prn Pue Pnt Poo Pnr
Pot Pri Png Qkr Rlk Raw Rec Ren Dee Rec Roh Ru RP S&R SC &F &B
Shw S&O Shm Sue Sim Sox Sf Sf Sf S&W Tata Tem Tex TB Thr Thb
AG Tl Tpk Trm VI Van Vk Wea Web W&D Wil Wd Whd WS Wgy Y&H.

Similar names.  See Wethersfield.

Large White Bermuda.  Hns Mhl Shm.  For similar names see White Bermuda.

Large White Globe.  Ar Ber Bng Bar Cur D&H Ebr GH H&P Iml Tow Liv JI.

Mns May JMM MV Neb Roc S&B Shw Sow S&W Thr Til 17.

Similar names.  See White Globe.

Large White Italian Tripoli.  CE C&B Cox M&S JMV Vk Vin W&D.

Similar names.  See Giant White Tripoli.


Large White Portugal.  Ebr RE Mnd MV Sim Soc Thr.

Similar names.  See White Portugal.

Seedsmen's synonyms.  Silverskin, Y&H.

Large White Tripoli.  RE Hns.  For similar names see Giant White Tripoli.

Large Yellow.  Gsy Hnt.  For similar names see Giant Yellow.

Seedsmen's synonyms.  Yellow Strasburg, Gsy.

Large Yellow Dutch.  Bel RE Fer Lam Liv Loh JCM Vk.

Similar names.  See Yellow Dutch.

Seedsmen's synonyms.  Strasburg, Fer G&T Loh Lam Vk.


Similar names.  See Southport Yellow Globe.

Large Yellow Globe Danvers.  Gdn Hly Jac Lan SC Shw Shm Sim.

Similar names.  See Yellow Danvers.

Large Yellow Spanish.  Ptt.

Similar names.  Mammoth Yellow Spanish, Yellow Globe Spanish.


Large Yellow Strasburg.  Bur Dsw Fer Lan Sim.

Similar names.  See Yellow Strasburg.

Seedsmen's synonyms.  Dutch, Sim.

Lemon Rocca.  Sim.  For similar names see Giant Rocca.

Seedsmen's synonyms.  Giant Yellow Rocca, Sim.

Light Red Giant Rocca. MV. For similar names see Giant Rocca.


Long Keeper. LB.

Similar names. Oregon Danvers Long Keeper, James' Long-Keeping, James' Long-Keeping Yellow, Moore & Simon's James' Long-Keeping Yellow.

Seedsmen's synonyms. Yellow Danvers, LB.

Louisiana. Ax Cam Hde Stk Tex Wd.

Similar names. Louisiana Creole.

Seedsmen's synonyms. Creole, Ax Hde Stk Tex.

Louisiana Creole. Cvs Eic Gg Jor. For similar names see Louisiana, Creole.

McMillan's Rocca King. Entered as Rocca King.

Madeira Red Globe. Thr.

Similar names. Large Red Madeira, White Madeira.

Mammoth Copper Garganus. Lnr JL. For similar names see Copper King.

Mammoth Garganus. Cle.

Similar names. See Giant Red Garganus, Giant White Garganus.

Seedsmen's synonyms. Silver King, Brk Nol.

Mammoth Pompeii. Air Bel Bur Chl C&B Col Cur DD Fst Iow MWJ Lan Lnr Liv JMM Rec Ren Sal Shw Shm Sim Spf Wat W&D.

Similar names. Giant Pompeii, Large Pompeii, Mammoth Red Pompeii.


Similar names. See Prize Taker.

Seedsmen's synonyms. Giant Prize Taker, Kei. Large Yellow Spanish, Wdr. Spanish King, Ger.

Mammoth Red Garganus. Thr.

Similar names. See Giant Red Garganus.

Mammoth Red Pompeii. CE Frd Hse Lnr Ms Rce Wer.

Similar names. See Mammoth Pompeii.

Seedsmen's synonyms. Copper King, Bgs Rce.


Similar names. See Giant Red Tripoli.

Seedsmen's synonyms. Bermuda Red, DD.


Similar names. See Red Victoria.

Mammoth Silverskin. Ber Jac Jer Lnr Loh RP Vk.

Similar names. See Silverskin.


Similar names. See Silver King.

Seedsmen's synonyms. Giant White Garganus, Ekt Frd W&D. White Garganus, Hrn Spf.

Mammoth Spanish King. Alr Lnr Shm. For similar names see Spanish King.
Mammoth White Garganus. Brk Crs Md Thr Vk.
Similar names. See Giant White Garganus.
Seedsmen's synonyms. Silver King, Crs Thr.

Mammoth White Pearl. Ren. For similar names see Early White Pearl.

Mammoth White Prize Winner. Tov. For similar names see Prize Taker.

Mammoth White Silver King. Ar Bui May Put SC Shw Wer.
Similar names. See Silver King.
Seedsmen's synonyms. White Garganus, Put.

Mammoth White Victoria. Bui Bur Shm. For similar names see White Victoria.

Mammoth Yellow Prize Taker. J&S Mhl M&S.
Similar names. See Prize Taker.

Mammoth Yellow Spanish. For Jus Vnl.
Similar names. See Large Yellow Spanish.
Seedsmen's synonyms. Prize Taker, For Jus Vnl.

Market Favorite. RIJ.

Marzajola. CE Ger Rce Sal Thm. For similar names see Neapolitan Marzajola.
Seedsmen's synonyms. Neapolitan, Ger.


Medium Early Red Globe. Gw TG May Thb.
Similar names. See Red Globe.

Medium Yellow Danvers. Eas. For similar names see Yellow Danvers.

Mexican. Aub Bui Sim. For similar names see Large Mexican.

Michigan Globe Danvers. Bri Sim. For similar names see Yellow Danvers.

Michigan Yellow Globe. Bnl Brn Br Gw Ebl For GH TC Ham J&S Jus Lnr
Loh Mgd May Mrs Pr Roe Sic.
Similar names. See Southport Yellow Globe.
Seedsmen's synonyms. Ohio Yellow Globe, Bar.


Minnesota Red Globe. Mic NK. For similar names see Red Globe.

Minnesota White Globe. J&S NK. For similar names see White Globe.

Moore & Simon's Early White Spanish, Moore & Simon's James' Long-Keeping Yellow, Moore & Simon's Yellow Globe Danvers. Entered as Early White Spanish, James' Long-Keeping Yellow, and Yellow Globe Danvers.

Naples Ext Fat
Similar names. Early Naples.

Neapolitan. Ger Vin. For similar names see Neapolitan Marzajola.
Seedsmen's synonyms. Marzajola, Ger.

Neapolitan Marzajola. Bur CKB DD Lnr Liv Man Pir Vkl
Similar names. Neapolitan, Marzajola, Early Neapolitan Marzajola, Early Marzajola, White Marzajola.
Seedsmen's synonyms. Italian May, Bur Liv.

Nebraska Seed Co.'s White Pickling. Entered as White Pickling.

Neckless Yellow Globe Danvers. Sal. For similar names see Yellow Danvers.

North Land. McK.

Ohio Globe Danvers.  Bri Frd Lon.  For similar names see Yellow Danvers.
Similar names.  See Southport Yellow Globe.
Seedsmen’s synonyms.  Michigan Yellow Globe, Bur

Opal.  Tat.
Similar names.  Tait’s Opal.
Oregon Danvers: Long Keeper.  Hns Rev.  For similar names see Long Keeper.
Oregon Yellow Danvers.  Btl Bow Lam Por S&R AGT.

Similar names.  See Yellow Danvers.

Page’s Perfection.  Pg Vl.
Pale Rad Bermuda.  Kei M&S Tat W&D Yng.
Similar names.  See Red Bermuda.

Paris Silverskin.  CE CF Roe Sal.  For similar names see Silverskin.

Paris Silverskin Pickling.  D&H GH.  For similar names see Silverskin.

Paris White Pickling.  May Neb OV Tpk.  For similar names see White Pickling.

Seedsmen’s synonyms.  Small Silverskin, Neb.

Paris White Silverskin.  Brd CE NK.  For similar names see Silverskin.

Peerless White Globe.  May OV.  For similar names see White Globe.

Perennial Tree.  Bur Spl Tem.

Perfection Rad Globe.  May OV.  For similar names see Red Globe.

Philadelphia Early White Bunch.  M&S.  For similar names see White Bunch.

Philadelphia Extra Early Flat Red.  J&S M&S.

Similar names.  See Extra Early Red.

Philadelphia Extra Large Early Red Wethersfield.  M&S.

Similar names.  See Silverskin.


Similar names.  See Silverskin.

Seedsmen’s synonyms.  Portugal, J&S.  White Portugal, M&S.

Philadelphia Yellow Dutch.  CE Drr J&S Rec.

Similar names.  See Yellow Dutch.

Seedsmen’s synonyms.  Strasburg, Drr J&S Rec.

Philadelphia Yellow Globe Danvers.  M&S.
Similar names.  See Yellow Danvers.

Similar names.  See Yellow Strasburg.

Seedsmen’s synonyms.  Dutch, M&S.

Pickling Queen.  Bri.  For similar names see Queen.


Similar names.  English Potato.

Powhatan.  GN.

Price & Reed’s Improved Yellow Globe Danvers.  Entered as Yellow Globe Danvers.

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Similar Names. Henderson’s Prize Taker, Manic’s Prize Taker, Giant Prize Taker, Giant Yellow Prize Taker, Mammoth Yellow Prize Taker, Yellow Prize Taker, Mammoth Prize Taker, White Prize Winner, Prize Winner, Mammoth White Prize Winner, Prize Taker Red Globe.


Prize Taker Red Globe. RE SB. For similar names see Prize Taker, Red Globe.

Prize Winner. Rec Tll. For similar names see Prize Taker.

Pure White Bermuda. M&S. For similar names see White Bermuda.


Similar Names. Early Queen, Extra Early Queen, White Queen, Early White Queen, Improved Early White Queen, Tait’s Extra Early White Queen, Extra Early White Queen, Silver White Queen, Golden Queen, Will’s Golden Queen, Eichling’s Yellow Queen, Pickling Queen, Small Queen, Egyptian Queen, Italian Queen.

Seedsmen’s Synonyms. Earliest White Queen, Frd.

Rapid White Pickling. Bel. For similar names see White Pickling.

Red Bassano. Thr.


Seedsmen’s Synonyms. Giant Red Italian Tripoli, Frd. Mammoth Red Tripoli, DD.

Red Cracker. Fqr Van. For similar names see Yellow Cracker.

Red Etna. Thr. For similar names see Etna.

Red Garganus. Lan. For similar names see Giant Red Garganus.


Red Giant. Buc Roc.

Similar Names. Buckbee’s Red Giant.

Red Globe. Ber Brk Bai Cle Del DD Drw Elt Ewg Fmr Fqr Fld Lur Man May McK Mcm Old Ptn Ptt Pot Tat.


Seedsmen’s Synonyms. Giant Rocca, Ree.

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Red Globe Danvers.  Eas.  For similar names see Red Globe, Yellow Danvers.
Red Globe Tripoli.  Gng RHJ.  For similar names see Giant Red Tripoli.
Red Italian Tripoli.  Brk CE Cle Mts Rec.
Similar names.  See Giant Red Tripoli.
Red Rocca.  Lrp Pat.  For similar names see Giant Rocca.
Red Tripoli.  May Sim.  For similar names see Giant Red Tripoli.
Red Victoria.  Frd Lrp Liv Ms Mrs Ren Shw Sim Thr Vat.
Similar names.  Mammoth Red Victoria.
Red Welsh.  Brk RE SB.  For similar names see Welsh.
Red Wethersfield.  Alx Brt Btl Bkt Bri Buc Cum Chl Cox Del DD Drw Fld Gls GN Hrs Hbt RHJ Kra Man Mns May McM Mic Mrs Puc Pg Pir Rs Sal Sic Stk Thm Tlh T&B Vin Wat Yng.
Red Wonder.  May OV.
Similar names.  May's Red Wonder.
Rennie's Yellow Danvers.  Entered as Yellow Danvers.
Similar names.  See Yellow Cracker.
Rocca King.  McM.  For similar names see Giant Rocca.
Rose-Colored Delicatessen.  Evr.
Round White Dutch Pickling.  Dlw.  For similar names see White Dutch.
Round White Silverskin.  Dlw Fer Liv Loh Mic M&S Pg Pks.
Similar names.  See Silverskin.
Round Yellow Danvers.  Agn Alr Bel Big Buc Brr Cle CE C&B Cur Fst Hrs Hen Hop J&S Man M&S Nef Poo Roc Roe Vh.
Similar names.  See Yellow Danvers.
Seedsman's synonyms.  Flat Yellow Danvers, Buc Brr.
Silver Ball.  Brf Fst Rfn.
Similar names.  Ivory Ball, Golden Ball.
Silver King.  Bai Cle C&B CF Crus Del Ebr Ewg Fqr Fld Gra Hbt H&C H'y Kg Lnr McM Nef Roc Roe RC SC S&O Tat Thm Thr Vin Yng.
Similar names.  Mammoth Silver King, Mammoth White Silver King, Buckbee's Mammoth Silver King, Salzer's Giant Silver King, Giant Silver King.
Silver White Etna. Grw. For similar names see Etna.

Silver White Queen. Bui Dnm. For similar names see Queen.

Sixty Day. Sal.

Small Queen. Por S&R. For similar names see Queen.

Small Silverskin. RE SB. For similar names see Silverskin.

Small White Barletta. For similar names see Adriatic Barletta.

Small White Nocera. RE Sim. For similar names see White Nocera.


Southport Early Red Globe. Crs Fnr Grs Ggy Hrs HP Vk.

Southport Large Early Red Globe. M&S. For similar names see Red Globe.


Southport Large White Globe. Bel J&S Jns M&S HP Sic VI Y.&H.

Southport Large Yellow Globe. Evr Fst J&S M&S Nol HP Vau Y.&H.

Southport Late Red Globe. Ggy. For similar names see Red Globe.

Southport Red. Thm. For similar names see Red Globe.


Similar names. See White Globe.

Seedsmen's synonyms. Large Red Globe, Bng.


Spaller's Yellow Oval Globe. Ebe. For similar names see Southport Yellow Globe.

Spanish King. Alx Brt Bkt Bel Bow Bng Bui Cle D&H Evr Ger GH Iml Kg Kos Lnr Liv May Nx Rp Spf SB Tat Tb Trm Web Wd. WS.

Similar names. Mammoth Spanish King. See also Silver King, Copper King.


Steele-Briggs' Giant Yellow. Entered as Giant Yellow.

Straw-Colored. Vin.

Seedsmen's synonyms. Yellow Dutch. Vin.

Sultan. May OV Tpk.

Similar names. May's Sultan.

Tait's Extra Early White Queen, Tait's Opal. Entered as Extra Early White Queen and Opal.

Thompson's Creole. Entered as Creole.


Top. Brk Bdg.

Tripoli Giant Yellow Rocca. Gng. For similar names see Giant Rocca.

Up-to-Date Yellow Globe Danvers. D&H. For similar names see Yellow Danvers.


Wampum. Brc Roc.

Similar names. Buckbee's Wampum.

Welsh. Gra Kel Sim Thr.

Similar names. Red Welsh, White Welsh.

Seedsmen's synonyms. Large French, Sim.

White. CA Htt Lan Mas Mhl M&S.

Similar names. White Mildness.

Seedsmen's synonyms. Silverskin, CA Mas Mhl.

White Adriatic. Cle. For similar names see Adriatic Barletta.

Seedsmen's synonyms. White Barletta, Cle.

White Adriatic Barletta. CE DD J&S Kra Raw Ree Shm Sie.

Similar names. See Adriatic Barletta.


Similar names. See Adriatic Barletta.

Seedsmen's synonyms. Earliest White Queen, Man. White Adriatic, Cle. White Queen, Vk Yng.

White Bermuda. Alx Btl Bkt Bld Bon Bui Cam CE Cle Cox Crs Drv Eic GH Gig G&T Grv Hst Iow MWJ J&M Kel Kg Lan Lnr Liv May NK Pir Raw Ree Rt Smx Stk Tex Thm Thr W&D Wer Wt Wd Yns.

Similar names. Pure White Bermuda, Large White Bermuda, White Wax Bermuda, Improved White Bermuda, Flat White Bermuda.

Seedsmen's synonyms. Canary Island, Iow.
**White Bunch.**  *Our Hen* J&S Poo Thr W&D.

**Similar Names.**  Henderson's White Bunch, Philadelphia Early White Bunch, Winter White Bunch.

**Seedsmen's Synonyms.**  *Italian Silverskin*, Thr.

**White Dutch.**  Ggy *Val*.

**Similar Names.**  Campbell's White Dutch Winner, White Dutch Winter, Hard Round White Dutch, Round White Dutch Pickling, Early Hard Round White Dutch.

**White Dutch Winter.**  Y&H.  For similar names see *White Dutch*.

**White El Paso.**  *Shw*.  For similar names see *El Paso*.

**White Garganus.**  Hrn Nef Spf.  For similar names see *Giant White Garganus*.


**White Globe.**  *Anb Bgl Bld Bow Brk Brn Bruc Clg Clol Cox Crs Del Dd Drw Elt RE Ewg Fur For Fst Fer Ftd Ger Gts GN Gry Hs Ham Hrv Ken Lam Lnr LB Loh Lon Man May JCM McM NK Old Pgs Pir Ptt Por Pot Pri Sal S&R S&F Shm Sic Tmt T&C Vl Vin Wea Wfl.*


**Seedsmen's Synonyms.**  *Southport White Globe*, Fer Pg.

**White Italian Tripoli.**  Bgd Cle Thm.  For similar names see *Giant White Tripoli*.

**White Lisbon.**  Hs Hsn.

**White Madeira.**  M&S.

**White Mammoth Flat.**  Mnd.

**White Marzajola.**  *Shw Thm*.  For similar names see *Neapolitan Marzajola*.

**Seedsmen's Synonyms.**  *Italian May*, Shw.

**White Mexican.**  Shm.  For similar names see *Large Mexican*.

**White Mildness.**  Sal.  For similar names see *White*.

**White Multiplier.**  Brk Bgd Buc Bur Ham M&S Spf Ten.

**Similar Names.**  Yellow Multiplier.

**White Nocera.**  Kei.

**Similar Names.**  Early White Nocera, Small White Nocera.

**White Pearl.**  *Bgs Cle Dlw Drw Drm Gry G&T Kj Man May Pnt Rce Shm Sim Thm Thr Wfl.*

**Similar Names.**  See *Early White Pearl*.

**White Philadelphia.**  Cle Ggy.

**White Pickling.**  *Alr Brl CE Col Ham Hrv Hse Mls Neb NK OV Sal.*


**Seedsmen's Synonyms.**  *Hard Round Silverskin*, Col.

**White Portugal.**  *Agn Alr Anb Ar Brl Brl Brt Brr Bow Brg Brk Brg Bgs Brn Bru Bur Brr CJ CE EBC Cle C&B Col CF Cox Crg Crs Dlw Drw Drp Elt Enr Evt Ewg Fnr Fqr Fst Fax Fer Fld Frd Ger Gls GH Gra Gyg Gry Grw TG Hde Hrn Hrn Hrs Hrv Hwn Hen H&C Hhn H&H Imd LOW RHJ J&S Jns Kei K&W Koe Kos Kra Lam Lan Lea Lnr LB Liv JL Loh Mgd May JCM JMM Mls Min M&S Mrs Mzy Nef Nol NI NK OV Old Pac HP Pir Ptn Ptt Poo Por*


White Portugal Silverskin. Bri. For similar names see White Portugal, Silverskin.

White Prize Winner. J&S. For similar names see Prize Taker.


Similar Names. See Queen.

Seedsmen's synonyms. Extra Early Barletta, Hlm. Extra Early White Barletta, Qkr. White Barletta,Vk Yng.

White Rocca. Fst. For similar names see Giant Rocca.

Seedsmen's synonyms. Silver Bull, Fst.


Similar Names. See Silverskin.


White Spanish. May.

Similar Names. Moore & Simon's Early White Spanish.

White Tripoli. Anb Bri Lnr May Sim Thr. For similar names see Giant White Tripoli.

Seedsmen's synonyms. Mexican, Sim.

White Victoria. CE Drr Frd Lnr Liv Mls Ren Rt Sim Thr Van.

Similar Names. Mammoth White Victoria, Giant White Victoria.

White Wax. Gff. For similar names see Crystal Wax.

White Wax Bermuda. Lan Thr. For similar names see White Bermuda.

White Welsh. Bru RE Ren. For similar names see Welsh.

Will's Golden Queen. Entered as Golden Queen.

Winter White Bunch. Drr. For similar names see White Bunch.

Yellow Cracker. Bfd Cox Fqr H&P Lam Mrs Ree Thr 17 Van.

Similar Names. Rhode Island Yellow Cracker, Early Yellow Cracker, Extra Early Yellow Cracker, Leonard's Extra Early Cracker, Red Cracker.

Seedsmen's synonyms. Early Yellow Flat, Fqr.


Similar Names. Medium Yellow Danvers, Rennie's Yellow Danvers, Bloomdale Danvers, Bloomdale Early Danvers, Early Danvers, Colorado Yellow Danvers, Oregon Yellow Danvers, Michigan Globe Danvers, Ohio Globe Danvers, Philadelphia Yellow Globe Danvers, Yellow Globe Danvers, Auneer's Yellow Globe Danvers, Barnard's Yellow Globe Danvers, Breck's Yellow Globe Danvers, Caemin's Yellow Globe Danvers, Hammond's Yellow Globe Danvers, Henderson's Yellow Globe Danvers, Mcclellan's Yellow Globe Danvers,

**Seedsman's synonyms.** *Long Keeper, LB.*

**Yellow Dutch.** *Brd Bkt Bdg Bri Bru Buc Cle Cox Crs CA D&H DD Elt Frd Gls GH TG Hen Hut H&P RJH Lan Lur JL Mgd PM Man JMM Mhl Ms M&I Mrs Nef Nol XK OV HP JMP Ptt Pri Roc Roh RP SC Sie Sim Sox Tem Thr Til Trn 17 Vin Wat W&D Wdr Yng Y&H.*

**Similar names.** Large Yellow Dutch, Philadelphia Yellow Dutch, Flat Yellow Dutch.

**Seedsman's synonyms.** *Large Yellow Strasburg, Sim. Philadelphia Yellow Strasburg, M&S. Yellow Strasburg, Buc Bri Bnr Mth Tem Thr, etc. Strasburg, Bkt Brd Cox Frd JL Mls, etc. Straw-Colored, Vin.*

**Yellow Egg.** *M&S.*

**Yellow Globe.** *Btl Brk Brn Crg Elt Hst Fax Lnr Pac HP Pnc Ptt Roc Sie.*

**Similar names.** See Southport Yellow Globe.

**Yellow Globe Danvers.** *Agn Alx Alr Anb Ar Bai Bak Brd Brt Bdl Bkt Bel Ber Bow Bgg Brk Bgs Brn Bng Buc Bri Brh Brw C&J Cma CEChl EBC Cle C&B Col CF Cok Cox Crs Cur CA Dlw D&H Del DP D&C Drw Dru Dun Eas Elt Emr RE Evr Ewe Fmr Fgr Fst Fer Fnd Fle Frd Ger Gls GH Gra Gng Gyy Gry G&K Grw TG Hns Ham Hde Hrh Hrn Hrs Hrv Hst Hwv Hen H&C Hop Hsc Hut H&P Iml low Jer MWJ RJH J&M Jns Kei K&W Ken K&F Kg Koc Kos Kra Lam Lan Lcr Lnr LB Liv JL Loh Lnr Mnd Mgd Man PM Mns Mas Man May JCM JMM M&K MeM MeM Mel Mls MV M&S Mrs Mzy Neb Nef XI XK OV Old Pac Pg Prr Prn Pnc Pnt Ptt Poo Pos Pri Png Qkr Yll Raw Rec Ren Rec Rm Roc Roh Rt Rs RP S&F S&B Shw S'O Sox Spf Stk SB S'tw S'H S&W Tat Tem Tex TB Thr Thb Tbl Tplk Trn T&B VL Vau Vkc Wat Wea Web W&D Whl Wd WS W'yg Y&H.*

**Similar names.** See Yellow Danvers.

**Yellow Globe Spanish.** *Ebr Ken Nol Qkr S&W Thr.*

**Similar names.** See *Large Yellow Spanish.*

**Seedsman's synonyms.** *Prize Taker, Brk Ebr Ken Qkr Nol S&W Thr.*

**Yellow Multiplier.** *Buc.* For similar names see *White Multiplier.*

**Yellow Prize Taker.** *Bai Maj.* For similar names see *Prize Taker.*

**Yellow Rocca.** *Lnr.* For similar names see *Giant Rocca.*

**Yellow Strasburg.** *Agn Bai Bkt Bow Bdg Bri Bru Buc Bri Bnr Cle CF Cox Crs Cur CA D&H DD Drr Elt Fnr Frd Gls GH Gra Ggy Hen H&P Kra Lam Lan Lur JL Loh Mnd Mgd PM Mns Man May JMM Mhl Ms Min MV M&I Mrs Nef Nol XK OV Pac HP JMP Ptt Pri Roc Roh SC&H SC Shw Shm Sie Sox Tem TB Thr Til Tplk Trn Vau Vkc Wat Wdr Yng.*

**Similar names.** Philadelphia Yellow Strasburg, Large Yellow Strasburg, Bloomdale Large Yellow Strasburg.

**Seedsman's synonyms.** *Dutch, Buc Bui Bnr Cur Mth Thr, etc. Large Yellow, Ggy, Yellow Dutch, Man Sie Van.*
AMERICAN VARIETIES OF VEGETABLES.

ORACH.

(Also known as French Spinach.)

Orach.  Bdg Mnd Sim.

Dark-Red.  Ken.

Large Mountain.  Sim.

Red.  Thr.

White.  Thr.

OYSTER PLANT.  (See SALSIFY.)

PARSLEY.

Alnee's Emerald Beauty.  Entered as Emerald Beauty.

Arlington Double Curled.  Raw.  For similar names see Double Curled.

Beauty.  Buc Roc.

Similar names.  Beauty of the Parterre, Emerald Beauty, Alnee's Emerald Beauty.

Beauty of the Parterre.  Bgs CE Chl Ccr Crr Fqr Gra Ggy Mnd Roc Thr Til Vl.

Similar names.  See Beauty.

Seedsmen's synonyms.  Emerald, Vl.

Buist's Garnishing.  Bui.  For similar names see Myatt's Garnishing.


Champion.  S&W Vau.  For similar names see Champion Moss Curled.

Champion Curled.  Y&H.  For similar names see Champion Moss Curled.

Champion Double Moss Curled.  Sic.

Similar names.  See Champion Moss Curled, Moss Curled.

Champion Dutch Erfurt.  M&S.  For similar names see Champion Moss Curled.


Seedsmen's synonyms.  Covent Garden Garnishing, Sim.  Fern-Leaved, Por S&R.

Chappell's Matchless.  Entered as Matchless.

Common.  CF.

Seedsmen's synonyms.  Plain, CF.

Covent Garden.  Bui Ewg.

Similar names.  Double Curled Covent Garden, Covent Garden Garnishing, Carter's Covent Garden Garnishing.

Seedsmen's synonyms.  Double Curled, Bui.

Covent Garden Garnishing.  Ggy Kr Kc Sic.

Similar names.  See Covent Garden, Myatt's Garnishing.

Seedsmen's synonyms.  Champion Moss Curled, Sim.
Curled. Bdg Buc CF Crg CA Ext Hnt Lan Pug Shw.


Seedsmen’s synonyms. Double, CF Eic Pug Shw.

Curled Emerald. Cam GH J&S. For similar names see Emerald.

Curled Perpetual. Ewg. For similar names see Perpetual.

Dark Double Curled. Thm. For similar names see Double Curled.

Dark Moss Curled. Mgd. For similar names see Moss Curled.

Dobbie. Pyp Gra Raw.


Similar names. Arlington Double Curled, Extra Double Curled, Improved Double Curled, Large Double Curled, Dark Double Curled, Fine Double Curled.


Double Curled Covent Garden. Mhl. For similar names see Covent Garden.

Double Curled Dwarf. DD.

Double Moss Curled. Air Bou. For similar names see Moss Curled.

Dreer’s Dwarf Perfection. Drr.

Similar names. Weaver’s Dwarf Perfection.

Dreer’s Green Summer. Entered as Green Summer.

Dwarf Curled. GH Gra Ggy Gry Hop Sim. For similar names see Curled.

Dwarf Extra Curled Emerald. CE. For similar names see Emerald.

Dwarf Extra Curled Perpetual. Bui Drr. For similar names see Perpetual.

Dwarf Perfection. Gra.

Early Moss Curled. Dlw. For similar names see Moss Curled.

Early Turnip-Rooted. Dlw. For similar names see Turnip-Rooted.

Elliott’s Emerald. Entered as Emerald.


Seedsmen’s synonyms. Beauty of the Parterre, Vk. Extra Curled Dwarf, Buc Bur Cox Frd J&J M&S, etc.

Emerald Beauty. Air. For similar names see Emerald, Beauty.

Emerald Gem. MWJ Lan Rim Sie. For similar names see Emerald.

Evergreen. W&D.

Exquisite. Grw Liv.

Similar names. Taber’s Exquisite.


Similar names. See Curled.

Seedsmen’s synonyms. Double, Put.

Extra Curled Emerald. Drm Hlm Liv. For similar names see Emerald.

Extra Curled Perpetual. Mhl. For similar names see Perpetual.


Similar names. See Moss Curled.
Extra Double Curled.  Alx Bai Bug Chl Crs Cur Ebe Hrs Hen J&S K&W Ken Mnd Mas JMM Mzy Nol NK HP Poo Pri Rs S&W Tat W&D Y&H.  
Similar names.  See Double Curled.

Similar names.  See Curled.

Seedsmen's synonyms.  Emerald, Bue Bar Cox D&C Ham Roc, etc.

Extra Early Dwarf Curled.  VI.  For similar names see Curled.

Extra Fine Curled.  Pne Raw.  For similar names see Fine Curled.

Extra Fine Moss Curled.  Shm.  For similar names see Moss Curled.

Extra Moss Curled.  Hst Png S&W W&D.  For similar names see Moss Curled.

Extra Triple Curled.  Mrs.  For similar names see Triple Curled.


Fine Curled.  Af Lan Rf Stw.  
Similar names.  Extra Fine Curled.

Seedsmen's synonyms.  Double, Ext Stw.

Fine Double Curled.  Brd Bar CE Liv Mss Wat.  For similar names see Double Curled.

Fine Triple Curled.  Fie Pg Pnt Sim SB Tpk Vg Vin.  
Similar names.  See Triple Curled.

French Monitor.  M&S.  
Seedsmen's synonyms.  Giant, M&S.

Garnishing.  Eic Stk.  For similar names see Myatt's Garnishing.

German.  Spf.  
Seedsmen's synonyms.  Turnip-Rooted, Spf.

Giant.  M&S.  
Seedsmen's synonyms.  French Monitor, M&S.

Giant Curled.  Bel.  For similar names see Curled.

Green Curled Emerald.  Shm.  For similar names see Emerald.

Green Summer.  Drr.  
Similar names.  Dreer's Green Summer.

Half Curled.  Drr.  For similar names see Curled.

Hamburg Large Turnip-Rooted.  Hse Ken Rec.  
Similar names.  See Turnip-Rooted.

Similar names.  See Turnip-Rooted.

Henderson's Emerald.  Entered as Emerald.

Holmes' Ideal.  Hlm.

Improved Double Curled, Improved Garnishing.  Entered as Double Curled and Garnishing.

Large Double Curled.  Gdn Jac.  For similar names see Double Curled.

Large Leaf Garnishing.  Gdn Jac.  For similar names see Myatt's Garnishing.
LARGE TURNIP-ROOTED. Cur Ken RP. For similar names see Turnip-Rooted.

SEEDSMEN'S SYNONYMS. *Hamburg*, Cur Ken RP.

LATE TURNIP-ROOTED. DLW. For similar names see Turnip-Rooted.

LONG TURNIP-ROOTED. TIL. For similar names see Turnip-Rooted.

MARKET GARDENER'S. Bri *Eve Low* J&S *Kei* M&S *Noi.*

MARKET GARDENER'S *Extra Curled*. LAN. For similar names see Curled.

MARKET GARDENER'S *Triple Curled*. BLG. For similar names see Triple Curled.

MATCHLESS. FPR.

SILMARIL NAMES. Chappell's Matchless.


MOSS CURLED. *Ar Bai* BAK *Btl Bow* Buc *Brr CF Del Dw* Eas *Brr Ewg Flg* Flg GN Ggy Ggy Ggy G&T Has Hly Hop Hun J&M Ken Koe Lan JMM Min M&S Mzy Mrs *Put Pri Rec* Sal SC Stw Tat Thm Thr Til Trm Wea Wyg.

SILMARIL NAMES. Early MOSS Curled, Double MOSS Curled, Triple MOSS Curled, Extra MOSS Curled, Dark MOSS Curled, Extra Dark MOSS Curled, Extra Fine MOSS Curled, Champion MOSS Curled, Carter's Champion MOSS Curled, Champion Double MOSS Curled.


**MYATT'S GARNISHING.** CRS DLW DD Fer Fle Gis Ggy Kvi K&F LB Pks Ptt SC Thm Tpk Trm Vk.


PERPETUAL. ELT *Ewy* Fpr Ggy.

SILMARIL NAMES. Carter's Perpetual, Curled Perpetual, Extra Curled Perpetual, Dwarf Extra Curled Perpetual.


SEEDSMEN'S SYNONYMS. *Common*, CF. *Single*, Bui Bur Eic HP Sie Shw, etc.

SHEEP. Gra.

SILMARIL NAMES. Sheep Field Fern-Leaved.

SHEEP FIELD FERN-LEAVED. M&S. For similar names see Sheep, Fern-Leaved.


SEEDSMEN'S SYNONYMS. *Plain*, Bui Bur Eic J&S Stw Vin, etc. *Smooth-Leaved*. Ewg *Gdn*.

SUTTON'S GARNISHING. Mbl. For similar names see Myatt's Garnishing.

TABER'S EXQUISITE. D&H. For similar names see Exquisite.

TRIPLE CURLED. Btl Bow Bgs CF DLW DD Ewg Fqr Fer Gng Hns Hde Jns Koe Lam LB Loh Mns M&K PKS Por Ren S&R S&O Tex Thm Trm.

SILMARIL NAMES. Market Gardener's Triple Curled, Fine Triple Curled, Extra Triple Curled.

SEEDSMEN'S SYNONYMS. *Moss Curled*, Btl Hns Koe Trn. *Myatt's Garnishing*, DLW DD Fer Lan LB PKS, etc. *Triple Moss Curled*. Bel Hrs. For similar names see Moss Curled.
Turnip-Rooted.  Brk  Bur  Cam  C&B  DD  Ebr  Elt  Fqr  Fer  Frd  Ger  GH  HrH  Hrn  I&P  Koe  Kos  Lam  LaM  Mnd  MV  Mzy  Neb  Nef  NK  Pks  HP  Pmt  Per  Sal  S&R  S&P  Sie  Sox  Spf  Thr  Vl  Vr  Vl  Wea  W&D  Wer  Yng.

Similar names.  Early Turnip-Rooted, Late Turnip-Rooted, Long Turnip-Rooted, Hamburg Large Turnip-Rooted, Hamburg Turnip-Rooted.

Seedsmen's synonyms.  German, Spl.  Hamburg, BurDrr  Fqr  Fer  Hen  J&S, etc.

Weaver's Dwarf Perfection.  Wea.

Similar names.  See Dreer's Dwarf Perfection.

Parsnip.

Abbott.  Ebr  Hrn  K&W  Rce  S&F  Thr.


Seedsmen’s synonyms.  Long Smooth, Dun  Hrn  K&W.

Abbott’s Hollow Crown.  Eas  RE.

Similar names.  See Abbott, Hollow Crown.


Similar names.  See Abbott, Hollow Crown.


For similar names see Abbott.

Arlington Long Smooth.  Raw  RE.

For similar names see Long Smooth.

Arlington Long White.  Fqr  Gry  S&F.

For similar names see Long White.

Arlington Smooth Long White.  EBC.

For similar names see Long White.

Bloomsdale.  Ar  Dlw  Lan  Mel  Mic  Rim  Stw.

Similar names.  Bloomsdale Half Long.

Bloomsdale Half Long.  MWJ.

For similar names see Bloomsdale.

Breck’s Market Garden.  Brk.

For similar names see Market Gardener’s.

Bruce’s Improved Hollow Crown.  Entered as Hollow Crown.


Buckbee’s Sugar.  Buc.

For similar names see Sugar.

Burr’s Mammoth.  Brr.

Carter’s Maltese.  Bgs  Kei.

For similar names see Maltese.

Champion Hollow Crown.  C&J.

Similar names.  See Cooper’s Champion, Hollow Crown.

Cook’s Perfection.  Cok.

Similar names.  Pearce’s Perfection.

Cooper’s Champion.  Gra.


Similar names.  See Cooper’s Champion.

Crown.  Evr  Sal.

For similar names see Hollow Crown.

Cup.  Ar  Ar  Crs  Dlw  Lan  Mzy  Stw  TB.

Similar names.  Improved Cup, Guernsey Cup.


Delmonico.  Sal.

Similar names.  Salzer’s Delmonico.

Dobbie.  Ewg  Fqr  Gra.

Dutch Large Smooth Long Hollow Crown.  Sim.

Similar names.  See Long Dutch, Hollow Crown.
Early Round.  Brd Brk Elt Fqr Gry Hen Mnd NK Pks Rec Rec Sim S&W Thr W&D.


Seedsmen’s Synonyms.  Turnip-Rooted, Brk.

Early Short Horn.  Tbl.

Early Short Round.  Man Vk.  For similar names see Early Round.

Early Short Round French.  Bur Jer May.  For similar names see Early Round.

Elcombe’s Giant.  SB.


Farquhar’s Market Model.  Fqr.  For similar names see Market Gardener’s.


Similar Names.  Guernsey Cup, Improved Table Guernsey, Hammond’s Improved Guernsey, Improved Guernsey, Long Guernsey, Half Long Guernsey, Table Guernsey.


Guernsey Cup.  Pri.  For similar names see Cup, Guernsey.

Seedsmen’s Synonyms.  Hollow Crown, Pri.

Hadlock.  LB.

Half Long.  Brw Fld Fle Mau Pks Qkr Sim.

Similar Names.  Improved Half Long.


Half Long Guernsey.  CF Hrs Y&H.  For similar names see Guernsey.

Half Long Maltese.  Air GH Liv.  For similar names see Maltese.

Half Long Short Round.  Spf.  For similar names see Early Round.

Hammond’s Improved Guernsey.  Entered as Guernsey.


Hollow Crown.  Als Air Anb Bai Bak Brd Bt Bk Bbl Bui Brr Bg Bgg Brk Bgs Brl Brn Brn Bng Buc Bui Brb Bur Cam CE EBC Cle Ck&C Col Cok Cox Cyr Csr Cuc CA Clw D&H DD D&C Drr Dnm Ebe Ebr Eic Elt Emr RE Ewg Fnr Fqr Fst Fer Fld Fle Frd Ger Gdn GH Gra Gng Gry Gg G&T Grw TG Hns Hde Hrn Hrv Hst Hw Hn Hop Hse Iml Iow Jac Jer RHI J&M Jns Kei K&W Ken Kg Koe Kos Kra Lam Lan Lar LB Liv JL Loh Lon Mnd Mgd Man PM Mns Maw May JCM McK Mic Mls Min MV Mrs Mzy Neb Nol NI NX OV Old Fg HP JMR Prr Ptn Pue Pat Pit Poo Por Pot Pri Pug Qkr Rlk Raw Rec Ree Rec Roc Rs RP S&R SC S&B Shw S&O Shx See Sox Spf Stk Stw S&H S&W Tat Tem Tex TB Thm Thr Thb Tbl Tlp Trm T&b VI Vnr Vin Wat Wea Web W&D Wer Wll Whl Wd Wdr WS Wfg Yng Y&H.


### Ideal Hollow Crown

J&S M&S.  For similar names see Hollow Crown.

### Improved


**Intermediate.**  MeK Ren.

**Seedsmen's synonyms.**  *Improved Half Long*, McK Ren.

### Large Dutch

Ggy Hrv.  For similar names see *Long Dutch*.

### Large Hollow Crown

H&C.  For similar names see Hollow Crown.

### Large Improved Sugar

Entered as *Large Sugar*.

### Large Smooth Sugar

TG.  For similar names see *Sugar*.

### Large Sugar


**Similar names.**  See Sugar.


### Large White Sugar

*DD* May OV Tpk.  For similar names see Sugar.

### Leonard's Market Garden

Lnr.  For similar names see *Market Gardener's*.

### Long Dutch

Bow Tpk.

**Similar names.**  Long White Dutch, Large Dutch, Dutch Large Smooth Hollow Crown.

### Long Guernsey

Kei Pac.  For similar names see Guernsey.

### Long Hollow Crown

Bel Gls Hrs H&P Lea 17 Vk.

**Similar names.**  See Hollow Crown.

**Seedsmen's synonyms.**  *Long White Dutch*, Vkg.  Sugar, Vkg.

### Long Smooth


### Long Smooth Hollow Crown

Chl Ham Hlm JMM.

**Similar names.**  See Hollow Crown.

**Seedsmen's synonyms.**  *Large Sugar*, J&S Nol.

### Long Smooth White


**Similar names.**  See Long Smooth.

### Long Sugar

*Ehr* low JCM Mdl Sgl Smn Trm.  For similar names see Sugar.

**Seedsmen's synonyms.**  *Hollow Crown*, Iow.

### Long White

C&J Mdl MV Mzy Thr AGT Vin Wyg.

**Similar names.**  Arlington Smooth Long White, Arlington Long White,

**SEEDSMEN'S SYNONYMS.** Cup, Bdg. Guernsey, Bdg. Hollow Crown, Bdg. Sugar, Bdg Brr.

**Long White Dutch.** Aub Brn Crs Fer Gls Jns Lum Lnr LB Llv Loh Min Pq JMP.

**Similar Names.** See Long White, Long Dutch.

**SEEDSMEN'S SYNONYMS.** Long Hollow Crown, Vk. Sugar, Fer Gls Loh LB Wyg, etc.

**Long White Sugar.** Air Buc Gnu. For similar names see Long White.

**SEEDSMEN'S SYNONYMS.** Hollow Crown, Air. Improved Hollow Crown, Buc.

**Magnum Bonum.** Brd Bd Brh Cle Dw Del DD Gbn Gra Jac Kg Man Mas May Ms OV Pat Sic Sox Tpk Trn Vau.

**Maltese.** Buc DD Emr RE Fqr Ggy Hrv May MY Roe Sim Sox Thr.


**Manitoba Prize Intermediate.** McK.

**Market Gardener's.** Roe.

**Similar Names.** Breck's Market Garden, Leonard's Market Garden, Farquhar's Market Model.

**Pearce's Perfection.** DkII. For similar names see Cook's Perfection.

**Round.** Ger. For similar names see Early Round.

**SEEDSMEN'S SYNONYMS.** Turnip-Rooted, Ger.

**Salzer's Crown.** Salzer's Delmonico. Entered as Crown and Delmonico.

**Short Neck Hollow Crown.** WS. For similar names see Hollow Crown.

**Short Round French.** DD Iow J&M Raw Ren.

**Similar Names.** See Early Round.

**Smooth Long Hollow Crown.** J&S JMM Nol Pac.

**Similar Names.** See Hollow Crown.

**Student.** Bgr Brn Bui Cur Del DD Drr Ett Emr Ewg Fmr Fqr Gtg TG RHJ May JMM Mhl Ms Mt Nol Sal S&F Sor SB Wea W&D Yng.

**Similar Names.** Sutton's Student.

**SEEDSMEN'S SYNONYMS.** Guernsey, Bui Drr Mhl Nef. Hollow Crown, Bgg.

**Sugar.** Alx Ar Bui Brb Cam Col CF Crg Fer Gdn GN G&T Haw Hnt Jac J&M Ken Lan Lum Lnr LB Mhl Min Pq Roe Shw S&O Sie Stk Stw TB Thm Til Wt Wd WS Wyg Y&H.

**Similar Names.** Buckbee's Sugar, Wood's Sugar, Improved Sugar, Wood's Improved Sugar, Large Improved Sugar, Large Sugar, Long Sugar, Large Smooth Sugar, Large White Sugar.

**SEEDSMEN'S SYNONYMS.** Hollow Crown, Alx Bui Bd Col G&T Ken Mhl, etc.


**Sugar Cup.** TB.

**SEEDSMEN'S SYNONYMS.** Hollow Crown, TB.

**Sutton's Student.** Bdг CE RE Gng Hse Kei M&S Pri Ren Ree.

**Similar Names.** See Student.

**SEEDSMEN'S SYNONYMS.** Long Smooth, M&S.

**Table Guernsey.** Iow. For similar names see Guernsey.

**Thorburn's Hollow Crown.** Entered as Hollow Crown.

**Turnip-Rooted.** Brk Eas Ger MWJ Stw.

**SEEDSMEN'S SYNONYMS.** Early Round, Brk. Round, Ger.
American Varieties of Vegetables.

**White.** Roc. For similar names see **Long White.**

*Seedsmen's synonyms.* *Improved Hollow Crown,* Roc.

**White Maltese Hollow Crown.** M&S.

*Similar names.* See *Maltese, Hollow Crown.*

**Wood’s Improved Sugar.** Entered as **Wood’s Sugar.**

**Wood’s Sugar.** Wd. For similar names see **Sugar.**

**Zimpfer.** JL

*Similar names.* Zimpfer’s **Long White.**

**Zimpfer’s Long White.** Liv. For similar names see **Zimpfer, Long White.**

**PEA.**


**Abbot of Bardney.** Bkt Gnu Rog.

**Abbot of Reading.** Bkt.


*Similar names.* Bliss’ **Abundance.**

**Acme.** Wd.

*Similar names.* Wood’s **Acme.**

**Admiral.** All Bai Bgs Buc Bar Cle Fer Frd Gls GH Grn G&T Hrm Hrv Hen Hlm Hme Jim J&S Lan Lnr Liv Man Ptt Rec Rcr Rog Shw Sqr SB Vr Wit.

*Similar names.* Admiral Dewey, Allan’s **Admiral Dewey.**

**Admiral Dewey.** All Anb Brd Btt Bgg Frd Ggy TG H&P K&W Ken Lnr JMM Rs Tlb VI Van Wea.

*Similar names.* Allan’s **Admiral Dewey,** Admiral.

**Advancer.** *Ake* All Air Ar Bai Bak Brd Brt Bel Bon Bow Bgg Brk Bdg Bgs Bri Brn Brn Buc BuB Bar-Brr Brw & Cam CE Cle C&A Col CF Cox Crs Cur Chm Del Del DD Dr Drn Ebe Elt Emr RE Ewg Fmr Fst Fax Fer Frd Ger Gls GH Gya Grn Gyr G&T TG Ham Hrm Hrn Hrs Hrv Hen H&C Hlm Hme Iml M/WJ RIJJ J&S Jns Kel K&W Ken Kg Kra Lam Lea Lnr LB Liv JL Loh Mnd Mgd Man Mas Mas Man May JCM JMM Mie Min MV M&S Myz Neb Nil NK NO Pnt Prt Prt Puf Puf Qtr Raw Rec Rcr Rog Rs RP Sal &R SC &F Show S&O Shm Sox Spf Sqr Stk SB S&H S&W Tat Tem Thr Thb Tlb Trn VI Van Vr Wea Wd Wf Wt Wd WY W.H.

*Similar names.* McLean’s **Advancer,** Vincent’s **Advancer.**

*Seedsmen’s synonyms.** Dwarf **Champion,** Vr Tm.

**Alameda Sweet.** Cox Vr.

*Seedsmen’s synonyms.* *Yorkshire Hero,* Cox.

**Alaska.** *Aix* All Anb Bak Brd Brt Btl Bkt Bel Ber Bon Bow Bgg Brk Bdg Bgs Bri Bng Buc BuB Brb Brr Brw C& Cam CE Chl Cle C&B CF Cox Crs Cur CA Chm Dlw Del DD Dr Drn Ebe Elt Emr RE Ewr Ewg Fmr Fst Fer Fbl Fle Frd Ger Gls Gh Gh Ggy Grn Gyr G’T Grw TG Hrm Hrn Hrs Hrv Hst Hen H&C Hlm Hm Hm Hm &P Tow JAC M/JJ J&S Jns Kel K&W Ken K&F Kg Koe Kos Kra Lam Lan Lea Lnr LB Lv Loh Mnd Mgd Man Mps Mas Man May JCM JMM Mxk Mxk Min MV M&S Myz Neb Nil NK NO Pac Pg JMP Pir Pir Pne Pnt Ptt Poo Por Pot Pri Pug Qkr Raw Rec Rcr Rog Rr Rr RS RP Sal &R SC &F &F S&O Shm Sic Sic Som Sqr SB
S&H S&W Tat Tem Tex TB Thm Thr Tlh Til Tpk Trm Vi Van Vk Wfa W&D Wer Wd Ws Wyg Y&H.

**Similar names.** Early Alaska, Extra Early Alaska, Cleveland’s Alaska, Cleveland’s Early Alaska.

**Seedsmen’s synonyms.** Earliest of All, Buc Bow Fqr Fer Lam Raw, etc. Laxton’s Earliest of All, Bur Elt Tg.

**Alderman.** Bur.

Allan’s Admiral Dewey, Allan’s Dwarf Telephone, Allan’s Gradus, Allan’s Improved Telephone, Allan’s Maud S., Allan’s Sanol. Entered as Admiral Dewey, Dwarf Telephone, Gradus, Telephone, Maud S., and Sanol.

**Allan’s Number One.** All.

**Alliance.** Bui Jac.

**Seedsmen’s synonyms.** Eugene, Bui Gdn.

**Ameer’s First and Best.** Entered as First and Best.

**Alpha.** All Brk Rdg Rgs Bui CE Cle C&B Cs D&H DD Dun Ebr Eic Elt Emr Ewg Fer Ggy Grn Gry TG Hrm Hen H&t’ Hume K&W Ken Lam Lar Mund Mas JMM MV May Pg Pir Prn Rec Sim S&H Tat Thr W&D.

**Similar names.** Improved Alpha, Laxton’s Alpha.

**Ameer.** Drr Hme J&S.

**American Champion.** All Big Brk Bui Brr CE C&B Elt Frd G1 H Grn Hrm Hen Hse Mns JCM JMM Prn Pot S&W Tl Vk W&D Wdr.

**Similar names.** See Champion of England.

Seedsmen’s synonyms. Duke of Albany, Bkt Brk Fqr Rec Thr Vk, etc.

**American Tom Thumb.** Crs Hme. For similar names see Tom Thumb.

**American Wonder.** Aix All Alr Anb Ar Bai Bak Brd Brt Btl Bel Ber Big Bn Bow Brg Brk Bdg Bgs Brn Bng Buc Bui Bur Brr Brw C&J Cam CE Chl Cle C&B Col CF Cox Crg Crs Crv CA Chrm Dlw D&H Del DD Drr Drw Drz Dun Eas Ebe Ebr Eic Elt Emr ER Fqr Fst Fax Fer Fie Frd Ger Gdn G1 H Grn Gry Ggy Grn Gry Gyi GT Grw TG Hrm Hse Hui Hvy Ist Hw Haw Hn H&C Hm Hop Hse Hme Hnt Hnu Hw Jac MWJ RJH J&M J&S Jns Kei Kel K&W Ken Kg Koe Kos Kra Lam Lan Lea Lar LB LiV LJ Luh Lon Mud Mgd Man PM Mas Man May JCM JMM McM Mic Mie Mls Min MV M&S Myz Nef Nol XI NK OV Old Pac Pk Pks HP JMP Fis Prn Pne Put Ptt Poo Pot Pug Rtk Raw Rec Rec Rog Rt Rs RP S&R SC S&F S&B Shw S&O Sht Sim Sox Spf Sqr Stk SB Stw S&H S&W Tat Tem Tex TB Thm Thr Thb AGT Til Tpk Trm T&B VI Van Vk Vn Wat Wea W&D Wer Wd WS Wyg Yng Y&H.

**Similar names.** Bliss’ American Wonder, Improved American Wonder.

**Anticipation.** RE.

**Arthur Field.** SB.

**Barnard’s Leader.** Brd.

**Barrett’s Maud S.** Entered as Maud S.

**Bell’s Extra Early.** Entered as Extra Early.

**Bergen Fleetwing.** All Ebe Ggy Haw Rec.

**Similar names.** Grenell’s Extra Early Bergen Fleetwing, Fleetwing, Extra Early Bergen Fleetwing.

**Bishop.** Sqr.

**Bishop’s Dwarf Long Pod.** Stk. For similar names see Bishop’s Long Pod.

**Bishop’s Improved.** Entered as Bishop.

**Bishop’s Long Pod.** Hme.

**Similar names.** Bishop’s Dwarf Long Pod, Bishop’s Improved.

**Black-Eyed Marrowfat.** Aix All Alr Anb Bai Bak Brd Brt Btl Bkt Bel Bon Bow Brg Brk Bdg Bni Brn Bru Bng Bui Brb Bur Brr C&J Cam CE Cle C&B Crg Crs Crv Drr Dun Eas Ebe Ebr Eic Elt Emr ER Evr Ewg Fqr Fst Fax Frd Ger Gls Gdn

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American Varieties of Vegetables.


Seedsman’s synonyms. 

Bliss’ Abundance, Bliss’ American Wonder, Bliss’ Everbearing, Bliss’ Stratagem.

Entered as Abundance, American Wonder, Everbearing, and Stratagem.

Bliss’ Wonder. Tpk. For similar names see English Wonder.

Bloomdale. MWJ Lan.

Blue Beauty. All Baf Bru Bui Drs Del Drr Drm Eic GH Hen Hme Lar Mhl M&S Nol Put Rce SC Stk Thr.

Similar names. See English Beauty. Seedsman’s synonyms. Perfection, All.

Blue Field. Lar.

Blue Imperial. Bgg Bdg Brm Cle Crg Drr Dun Ewg GH Gra Grn Hme MWJ J&S Kei Lan Lar Mhl Rce Rtg Sim Tat W&D.

Similar names. Dwarf Blue Imperial.

Blue Peter. All Brl Bow Bdg Brm C'E Cle Cox Crg Crs DD Ebe RE Ewg Fer GH Ggy Gry G&T Hrs Haw H&C Hme J&S Kei Lan Lar May JCM JMM Mzy Pks JMP Put Rce RP Sal S&F Sim Trm Vin Wra W&D Y&H.


Blue Prussian. Ger GH Hme J&M Lam Pug S&R Sqr SB Wer.

Seedsman’s synonyms. Green Field, Pug.

Blue Tom Thumb. Bow Lar Vin. For similar names see Tom Thumb. Seedsman’s synonyms. Blue Peter, Bow Fer G&T H&C J&S RP Vin.


Bountiful. M&S.

Similar names. Moore’s Bountiful.

Breck’s Excelsior. Brk. For similar names see Nott’s Excelsior.


Bridgeman’s Extra Early. Entered as Extra Early.

Briggs’ Extra Early. Entered as Extra Early.

British Queen. All Hme Lar W&D. For similar names see Queen.

British Wonder. Gra Lar. For similar names see English Wonder.

Bruce’s C P R. Brn.

Bunning’s Extra Early. Entered as Extra Early.

Buckbee’s Extra Early Tom Thumb, Buckbee’s Lightning Express, Buckbee’s Mammoth Melting Sugar, Buckbee’s Startler. Entered as Extra Early Tom Thumb, Lightning Express, Mammoth Melting Sugar, and Startler.

Buist’s Morning Star. Entered as Morning Star.

Burpee’s Best. McM. For similar names see McMillan’s Best.

Burpee’s Extra Early, Burpee’s Profusion, Burpee’s Quality, Burpee’s Quantity. Entered as Extra Early, Profusion, Quality, and Quantity.

Canadian Beauty. Gra Hme. For similar names see Canadian Field.

Canadian Blue Field. C&B Cnru Ham Hm Lnr Wyg.

Similar names. See Canadian Field.

Canadian Field. Brt Bkt Bgg Bgs Bng Bui Bar Brr Brw C&J CE CF Del DD Drw Dun Ebe Ebr Elt Fnr Fqr Est Ger Gry G&T Grw Ham Hrn Hrs H&C Hlm Hse
Canadian Green Field. Btl Brk Col Fmr GH Ham Hbt Lur Neb Old Sox Web Wer Wyg.

Similar names. See Canadian Field.


Similar names. See Canadian Field.

Canadian Yellow Field. Hbt. For similar names see Canadian Field.

Canner's Favorite. All.

Similar names. Gardener's Favorite, Grant's Favorite, Market Gardener's Favorite, Nebraska Seed Co.'s Favorite, Favorite.

Caractacus. Cle Sqr.


Charmer. Vkg.

Similar names. Vick's Charmer.

Chelsea. Elt Fle Gru Hen Lan Mnd Mas Rog Sqr Tem Thr Wea W&D.

Childs' Morning Star, Childs' Universal. Entered as Morning Star and Universal.

Clauft. Brk Ggy Sqr Yk Wd WS.

Clay-Colored. MWJ.

Cleveland Market. Til.

Cleveland's Advance, Cleveland's Alaska, Cleveland's Early Alaska, Cleveland's Eclipse, Cleveland's First and Best, Cleveland's French Canner, Cleveland's Improved Tom Thumb, Cleveland's Rural New Yorker, Cleveland's Stratagem, Cleveland's Sugar Marrow. Entered as Advance, Alaska, Early Alaska, Eclipse, First and Best, French Canner, Tom Thumb, Rural New Yorker, Stratagem, and Sugar Marrow.

Clipper. Brk Raw S&F.

Similar names. Rawson's Clipper.

Seedsmen's synonyms. Earliest of All, S&F.
AMERICAN VARIETIES OF VEGETABLES.

Conqueror.  Hme.
  Similar names.  Bruce's Early Conqueror, Early Conqueror.

Cooper's Goliath.  Entered as Goliath.

Cox's Earliest of All.  Entered as Earliest of All.

Crooked.  SB.

Crosman's First and Best.  Entered as First and Best.


Culverwell's Telegraph.  Entered as Telegraph.


  Seedsmen's synonyms.  Dwarf Telephone, C&J J&S Man Ptt Ree Wdr, etc.

Dandy.  GH Neb Pri Sqr.
  Similar names.  Price & Reed's Dandy, Squire's Dandy, Michell's Dandy Extra Early, Dandy Extra Early.

Dandy Extra Early.  Bui Mhl.  For similar names see Dandy.

  Similar names.  Improved Daniel O'Rourke, Improved Early Daniel O'Rourke, Extra Early Daniel O'Rourke, Early Daniel O'Rourke.
  Seedsmen's synonyms.  Hancock, J&S.  Philadelphia Extra Early, J&S.

Darch & Hunter's Little Giant.  Entered as Little Giant.

Day's Early Sunrise.  Entered as Early Sunrise.

Dexter.  G&T TG May.
  Similar names.  Early Dexter, Improved Early Dexter.

Dickmann's Extra Early, Dickmann's Prize Taker.  Entered as Extra Early and Prize Taker.

Doctor McLean.  All D&H XI Ren.  For similar names see McLean's Advance.

Don.  W&D.


Duchess.  Bgy Hme.

Duchess of York.  Grn.  For similar names see Duke of York.

  Seedsmen's synonyms.  American Champion, Bkt Brk Fqr Hrs Ree Thr, etc.

Duke of York.  All Bkg Brk Bdg CF Drr Fgr Gry Grn Hr Hme Lan Lnr M&K Raw Ree Rog S&F S&W Thr Tal Wdn Wd.
  Similar names.  Duchess of York.

Durban's Market Garden.  Alx.  For similar names see Horsford's Market Garden.

Dwarf Blue Imperial.  Alx All Bui Bv Brv Est Hm Mau JCM Pir Shm Stk Trm Yng.
  Similar names.  See Blue Imperial.

Dwarf Champion.  Blg Brk Brv CE C&B Crs Dun Eas Emr Fld GH Gry Hrm Hwr Indo Lvn Lnt Msc Myn Mzy Pn Prn Raw Ree Rs S&O Tal Y&H.
  Seedsmen's synonyms.  Yorkshire Hero, Mzy Pn Ptt Rs.  McLean's Adventurer, Vk Tem.
Dwarf Champion of England.  Hop W&D.


Dwarf Debarbieux.  Rog.

Dwarf French Sugar.  Pfr.  For similar names see French Sugar.

Dwarf Gem Improved.  Entered as Dwarf Gem.

Dwarf Gem.  Sqr.

Dwarf Giant-Podded Prolific Green Marrowfat.  Blg Mns.

Similar names.  See Marrowfat.


Similar names.  See Gray Sugar.

Seedsmen's synonymy.  Dwarf Sugar, Wyg.

Dwarf Green Wrinkled Marrowfat.  G&T.  For similar names see Marrowfat.

Dwarf Marrowfat.  RHJ Mgd.  For similar names see Marrowfat.

Dwarf Professor.  Sal.  For similar names see Professor.


Seedsmen's synonymy.  Dwarf Sugar, Wyg.


Similar names.  See Telephone.


Dwarf Tom Thumb.  Ber Hnt Liv.  For similar names see Tom Thumb.

Dwarf White Blossom.  Hmn.

Dwarf White Marrowfat.  All Brd Brk Dnm Ebe Elt Frd GH Grm Gry Hde Hrs Hme Iow PM Mck HIP JMP Raw RP Sqr SB Van Wea.

Similar names.  See White Marrowfat.

Dwarf White Missouri Marrowfat.  Ken S&F.

Similar names.  See White Marrowfat.

Dwarf White Sugar.  Cle Drr Nef.  For similar names see Dwarf Sugar.

Dwarf White Sugar Marrowfat.  Bui.  For similar names see White Marrowfat.

Dwarf Wrinkled Sugar.  Elt MV Rog Sqr W&D Wdr.

Similar names.  See Dwarf Sugar.

Earliest and Best.  Ham.  For similar names see First and Best.

Earliest Dwarf.  K&F Ptt.  For similar names see Earliest of All.

Seedsmen's synonymy.  Tom Thumb, Ptt K&F.

Earliest Dwarf Jumbo.  Sal.

Similar names.  Salzer's Earliest Dwarf Jumbo.

Earliest Market.  Elt Kg.

Similar names.  King's Earliest Market.

Earliest of All.  All Bow Buc Bur Brr C&Co Cox Ebe Fgr Fxr Fx Fmr Fle Gdy Hm Hmn Iml Koe Lam LB LL Loh Mau May Pg Pot Pri Qkr Raw Rcc Rcg RP S&F Sie Tat Vud.

Similar names.  Cox's Earliest of All, Laxton's Earliest of All, Maule's Earliest of All, Hampden's Earliest, Plant's Earliest Dwarf, First of All, Hunt-
Earliest Perfection. Shm. For similar names see Perfection.
Earliest Alabama. A 'Lc Lns Hdl EB Lbn Stk. For similar names see Alabama.

Early Black-Eyed Marrowfat. Sie. For similar names see Black-Eyed Marrowfat.
Early Bountiful. Rue.
Early Conqueror. Bro. For similar names see Conqueror.
Early Daniel O'Rourke. Bue Bui Brr Crg Fax Fer LB JMM Shm.

Early Dexter. All Brt CF Elt Fqr Ptt S&F Trm. For similar names see Dexter.
Early Dwarf. RIIJ.
Early Dwarf Sugar. C&B. For similar names see Dwarf Sugar.
Early Dwarf Wrinkled Sugar. Brk. For similar names see Dwarf Sugar.

Early Eclipse. Nol.

Early Frame. Bui Crg Lan SC.

Early French. S&W W&D. For similar names see French Sugar.

Early Gradus. Buc D&H GN Roc. For similar names see Gradus.

Early Hancock. Cle. For similar names see Hancock.

Early June. Crs Whl M&S.

Early Kent. Bnn Buc CE Crg Crs Ewg Gdn GH Hnt Jns Lca JCM Min Rec Roc.

Early Morning Star. Cle GH Hly Jac. For similar names see Morning Star.

Early Norther. GN.

Early Philadelphia. Brn. For similar names see Extra Early Philadelphia.

Early Prize. Ggy Mau.

Early Record. Mic.

Early Sugar Marrowfat. M&S.

Early Washington. Bui Crg Lan SC.

Early Washington. Bui Crg Lan SC.

Early Wrinkle. Sqr.

Edible Pod Sugar. Rel Fid Grw NK. For similar names see Melting Sugar.
Edible Pod White Sugar.  MWJ.  For similar names see Melting Sugar.

Egyptian Mummy.  SB.

Eichling's First and Best.  Entered as First and Best.

Electric Extra Early.  Drr.

Similar names.  Drer's Electric Extra Early.

Electric Light.  D&H.

Elephant.  Bgs.

Similar names.  Carter's Elephant.

Emerald Gem.  M&S.  For similar names see Little Gem.

Emerson's Dwarf Champion.  Entered as Dwarf Champion.

Empire State.  Evr Ggy S&H.

Encore.  7th.

English Beauty.  Sqr.

Similar names.  Mills' Mammoth Beauty, Blue Beauty, Mammoth Beauty.

English Dwarf Black-Eyed Marrowfat.  M&S.

Similar names.  See Black-Eyed Marrowfat.

English Dwarf White Marrowfat.  M&S.  For similar names see White Marrowfat.

English Wonder.  All Gra Lorr Sqr Vk.

Similar names.  British Wonder, Matchless Wonder, Bliss' Wonder, Wisbech Wonder.

Enormous.  Mls.

Similar names.  Mills' Enormous.

Eugenie.  Bui Gln Hnm Hue Jnc Lan Stk.

Seedsmen's synonyms.  Alhance, Bui Gln.

Eureka Extra Early.  Bui Drr Mhl.

Similar names.  Drer's Eureka Extra Early.

Evans' Extra Early.  Entered as Extra Early.

Everbearing.  All Amb Ar Bai Bak Bel Btl Brt Brl Ber Blg Bn Bos Bow Bgg Brk Bldg Bgs Brn Buc Bui Brb Bur Brr C&J Cam CE Chl Cle C&B Col CF Cok Crs Cur Chm Del DD Drr Dnm Dun Eas Elie Ebr Elt Emr Evr Ewg Fmr Fqr Fax Fst Fer Fld Frl Ger Gls GH Gra GN Ggy Gm Gry G&T Gwr Tt Hms Hmp Hse Hsn Hnt H&P Hnd low MtM Jiji J&K J&J Jas Kel K&W Kg Lam Lan Lnr LB Liv JL Mnd Mhd Ms May Mm JMM MlC Mhl MLS MV M&S Mzy Nbl Xi NK OV Pae Pj HP JMP Pir Prn Put Ptt Por Pot Pug Qkr Raw Ren Rec Rim Roc Rgz Rs RP S&S SC SF Sw W&D S&O Shn Sic Sim Sgr Sw Sw S&H S&W Tm Tex Thm Thr Thh Tll Thk Trm T&B VI Van Vl Wd Web W&D WI Wd Ws Wyg Yng Y&H.

Similar names.  Bliss' Everbearing.

Everitt's Extra Early Reliance.  Entered as Extra Early Reliance.


Similar names.  Laxton's Evolution.

Excelsior.  Ggy Mud Ptr.  For similar names see Noll's Excelsior.

Exhibition Marrowfat.  Hme.  For similar names see Marrowfat.

Exonian.  Bui Fqr Hm Hme Lan Res S&W Thr W&D.

Express.  WS.  For similar names see Lighting.

Extra Early.  Ar Bak Bel Bldg Bgs Brl Brn Bug Bui Bur Cam CE Crg Cms CA Chim Dlw DD Dnm Eas Ebr Eie RE Fst Fer Fld Ghl Hmr Hop Hnt H&P MWJ J&S Jns Kel K&F Kg Koe Lan Loh Mdl Mau MeM Mic Mhl Min Ncl Pg Pks HP Prn Puc Ptt Pri Pet Prin Rec Rim Rpr Se Spf Stk SB Stw TB Tll 17 Vl Vd.

Similar names.  Improved Extra Early, Bell's Extra Early, Bridgeman's Extra Early, Briggs' Extra Early, Bruning's Extra Early, Burpee's Extra Early, Dickmann's Extra Early, Faust's Extra Early, Haraden's Extra Early, Johnson & Stokes' Extra Early, Jones' Extra Early, Landreth's Extra Early, Maule's Improved Extra Early, Mingle's Extra Early, Noll's Extra Early,
AMERICAN VARIETIES OF VEGETABLES.


**Seedsman's synonyms.** *First and Best, CA Stk Sie.*

**Extra Early Alaska.** Big Brn Can CE Col Crg Hst JL Mos Mbl HP Shw.

**Similar names.** See Alaska.

**Extra Early Bergen Fleetwing.** Grn. For similar names see Bergen Fleetwing.

**Extra Early Challenge.** Cur.

**Similar names.** Currie's Extra Early Challenge.

**Extra Early Daniel O'Rourke.** Buc Ggy Roe Tpk.

**Similar names.** See Daniel O'Rourke.

**Extra Early Deposit.** Tat.

**Extra Early Dwarf Brittany.** SB.

**Extra Early Eclipse.** Pat Tat.

**Extra Early Gradus.** Bui Yng. For similar names see Gradus.

**Seedsman's synonyms.** Prosperity, Bui.

**Extra Early Headlight.** Crg.

**Extra Early Kent.** Anb Bgs Buc LB Mag RP Shm.

**Similar names.** See Kentish Invicta.

**Extra Early Manifold.** Mr K.

**Extra Early Market.** Cle C&B Dw Ebr Kos McK Thr Thb.

**Similar names.** Koss' Extra Early Market, Thorburn's Extra Early Market, Market Gardener's Extra Early, Holmes' Market Gardener's Extra Early.

**Extra Early Maud S.** Brr Hde Pat Shw Wlt. For similar names see Maud S.

**Extra Early Morning Star.** Blg. For similar names see Morning Star.

**Extra Early Nonpareil.** Brg Tat. For similar names see Nonpareil.

**Extra Early Philadelphia.** Anb Edg Bgs Bui Buc Bur CE Cle C&B Cox Crg Csr Del DD Ece Fst Gdn GH Ggy Gyr Tg Hde Hrn Hrn Hr Hst Hlm J&S K&W Lan LB Ltr Mag JCM JMM McK Nek Pne Pri Ren Rce Roe Rs RP SC Shn Smf Tat Tex TB Tpk Trtn T&B Wat W&D Wlt WD Ws Wng Y&H.

**Similar names.** Shumway's Extra Early Philadelphia, Early Philadelphia, Philadelphia.

**Seedsman's synonyms.** Daniel O'Rourke, J&S. *First and Best, Wlt. Hancock, J&S.*

**Extra Early Pioneer.** Drr.

**Similar names.** Dreer's Extra Early Pioneer.


**Similar names.** See Little Gem.

**Extra Early Reliance.** Evr.

**Similar names.** Everitt's Extra Early Reliance.

**Extra Early Rural New Yorker.** Shm.

**Similar names.** See Rural New Yorker.

**Extra Early Star.** Ewrg. For similar names see Morning Star.

**Extra Early Summit.** CE NK.

**Similar names.** Northrup, King & Co.'s Summit Extra Early.

**Extra Early Surprise.** Shw.

**Extra Early Telephone.** Bkt. For similar names see Telephone.

**Extra Early Tom Thumb.** Brn Buc Fer LB MV Pks Roe Shw Shm S&F S&W.

**Similar names.** See Tom Thumb.

**Seedsman's synonyms.** Strawberry, Buc Roe.
First and Best. All Alr Anb Ar Bai Bak Brd Bri Brt Ber Bdg Bon Bow Bgg Bgs Bri Brn Buc Bui Brr Cam CE Cle CF Crg Crs CA Chm D&H DD Ebr Eic Evr Ewg Fmr Frq Frq Frd Gie Gdn GH GY Gyn Gry GIG G&T Gw TG Hm Ham Hde Hm Hrs H&C Hly Uhm Hse Hnt Hwq Jae MJJ J&S Jns Kel Ken Kg Kra Lam Lan Lea LCJL Loh Lm Mgd Mnl Man PM Mns May MJC Mid MV Myz Neb Nef XI OY Pks JMP Pnt Ptt For Pot Pri Fng Rec Roe Roe Rs RP Sal S&R S&O Sml Sic Sox Spf Stk SwS&H Tat TB THM Tfl Tpl Trml V1 Van Wtn W&D Wtr Wf Wd WS Wyg Yng YH.

First and Best Extra Early. Almeer’s First and Best, Cleveland’s First and Best, Crosman’s First and Best, Eichling’s First and Best, Ferry’s First and Best, Hammond’s Earliest and Best, Henderson’s First of All, Johnson’s First and Best, Leonard’s First and Best of All, Nebraska Seed Co.’s First and Best, Philipps’ First and Best, Trucker’s First and Best, and Best of All, Wernich’s First and Best.


First and Best Extra Early. Hme Shw Tex.

First and Best of All. Lnr. For similar names see First and Best.

First Crop. Anb Bdg Brn Buc CE Cle Ebe RE Ewg Hrm Kei K&W LR JMP Rec Roe Sal Shm.

First in the Market. Bdg Drrn JL.

First of All. Bui CE C&B Del Hrs Hst Hen H&P Hm Ken Kos Nol Pd Pne Poo Rec SC S&W Tat Tem Thr AGT VI Wl WY H.

Fleetwing. Mgd Shw. For similar names see Bergen Fleetwing.

Fortyfold. All Bgs Bui Cle Crs D&H Fle GH G&T Hme Lan Lnr Min Spr.

Fortyfold Champion. Rog. For similar names see Champion of England.

Forty-Two Day. Ebe.

French Canner. All Bdg Bui CE Cur Drr G&T Hme J&S Lan Lnr Ms Spr Qkr Raw Rec Rog Spr Tat Wer Wyg.

French Sugar. RHJ.

Extra Early Vermont. Haw.

Extra Early Wrinkled. Kg.

Extra Large Black Eye. Hst.

Family Garden. Man. For similar names see Horsford’s Market Garden.

Faust’s Extra Early. Entered as Extra Early.

Favorite. Neb. For similar names see Gamee’s Favorite.

Ferry’s Extra Early Tom Thumb, Ferry’s First and Best. Entered as Extra Early Tom Thumb and First and Best.

Fillbasket. All Bdg Bdg Bui Cle Drr Fqr Gty Gra Hn Hme J&S May Mhd M&S Pri Rec Rog Shw Spr Trem Thr Wtn W&D.

First and Best. All Alr Anb Ar Bai Bak Brd Bri Brt Ber Bdg Bon Bow Bgg Bgs Bri Brn Buc Bui Brr Cam CE Cle CF Crg Crs CA Chm D&H DD Ebr Eic Evr Ewg Fmr Frq Frq Frd Gie Gdn GH GY Gyn Gry GIG G&T Gw TG Hm Ham Hde Hm Hrs H&C Hly Uhm Hse Hnt Hwq Jae MJJ J&S Jns Kel Ken Kg Kra Lam Lan Lea LCJL Loh Lm Mgd Mnl Man PM Mns May MJC Mid MV Myz Neb Nef XI OY Pks JMP Pnt Ptt For Pot Pri Fng Rec Roe Roe Rs RP Sal S&R S&O Sml Sic Sox Spf Stk SwS&H Tat TB THM Tfl Tpl Trml V1 Van Wtn W&D Wtr Wf Wd WS Wyg Yng YH.

First and Best Extra Early. Almeer’s First and Best, Cleveland’s First and Best, Crosman’s First and Best, Eichling’s First and Best, Ferry’s First and Best, Hammond’s Earliest and Best, Henderson’s First of All, Johnson’s First and Best, Leonard’s First and Best of All, Nebraska Seed Co.’s First and Best, Philipps’ First and Best, Trucker’s First and Best, and Best of All, Wernich’s First and Best.


First and Best Extra Early. Hme Shw Tex.

First and Best of All. Lnr. For similar names see First and Best.

First Crop. Anb Bdg Brn Buc CE Cle Ebe RE Ewg Hrm Kei K&W LR JMP Rec Roe Sal Shm.

Similar names. Carter’s First Crop.

Seedsmen’s synonyms. First and Best, Bdg. Sutton’s Ringleader, Bdg.

First in the Market. Bdg Drrn JL.

Livingston’s First in Market, King’s Earliest Market, Keith’s First in Market.

First of All. Bui CE C&B Del Hrs Hst Hen H&P Hm Ken Kos Nol Pd Pne Poo Rec SC S&W Tat Tem Thr AGT VI Wl WY H.

Similar names. See Earliest of All.

Fleetwing. Mgd Shw. For similar names see Bergen Fleetwing.

Fortyfold. All Bgs Bui Cle Crs D&H Fle GH G&T Hme Lan Lnr Min Spr.

Similar names. Improved Fortyfold.

Fortyfold Champion. Rog. For similar names see Champion of England.

Forty-Two Day. Ebe.

Similar names. Perry’s Forty-Two Day.

French Canner. All Bdg Bui CE Cur Drr G&T Hme J&S Lan Lnr Ms Spr Qkr Raw Rec Rog Spr Tat Wer Wyg.

Similar names. Landreth’s French Canner, Small Early French.


French Sugar. RHJ.

Similar names. Dwarf French Sugar, Early French.
Gardener's Favorite. Big G&T. For similar names see Canner's Favorite.

Giant-Podded Marrowfat. Bkt Big Grn Hlm J&S M&S.

Similar names. See Marrowfat.

Seedsman's synonyms. Long Island Mammoth, Hlm.

Giant Sugar. Big Bow Cur Der McK Ren Rog Tat Thr.

Similar names. See Mammoth Sugar.

Glory. All Bai Hme.

Similar names. Harrison's Glory.

Golden Vine. Bt GI Gra Ham Lnr SB.

Goliath. All Lnr.

Similar names. Cooper's Goliath.


Grant's Favorite. Buc GN Roc. For similar names see Canner's Favorite.

Gray Sugar. Ebe Tat.

Similar names. Dwarf Gray Sugar, Mammoth Gray Sugar, Tall Gray Sugar.

Green Marrowfat. M&S. For similar names see Marrowfat.

Green Prussian. Pug Vin. For similar names see Blue Prussian.

Gregory's Surprise. Gregory's Early Surprise. Entered as Surprise and Early Surprise.

Grenell's Extra Early Bergen Fleetwing. Entered as Extra Early Bergen Fleetwing.

Grey's Perfection. Gry. For similar names see Perfection.

Griffith's Canning. G&T.

Hammond's Earliest and Best, Hammond's Improved Stratagem, Hammond's Improved Telephone, Hammond's Morning Star. Entered as Earliest and Best, Stratagem, Telephone, and Morning Star.

Hampden's Earliest. Bgg. For similar names see Earliest of All.

Hancock. Ggy J&S Pnc Tat.

Similar names. Tall's Hancock, Early Hancock.

Seedsman's synonyms. Daniel O'Rourke, J&S. Philadelphia Extra Early, J&S.

Harnden's Extra Early. Entered as Extra Early.

Harrison's Glory. Entered as Glory.

Hartford Extra Early. C&J.

Similar names. Hawley's Improved Hartford Extra Early.


Hawkins' Market Garden. Haw.

Similar names. See Horsford's Market Garden.

Hawley's Improved Hartford Extra Early. Entered as Hartford Extra Early.

Hearst's Reliance. Entered as Reliance.

Henderson's First of All, Henderson's Heroine. Entered as First of All and Heroine.

Hero. Big Lnr.

Heroine. All Air Brd Bkt Big Bow Bgg Brk Bdg Bri Brn Brp Bar Brw C&J CE Cle C&K Col CF Crs Cur DD Drw Dun Eas Ebr Elt Emr RE Evr Ewg Fqr Fle Frd Ger Gdn GH Gra Gng GN Ggy Grn Gry G&T TG
Hus Ham Hrm Hrs Hen H&C Hlm Hme Jac Jer MWJ J&S K&W Ken Lan Lar Liv Jfr Mnld Mgd PM Mas Man May JMM McK Mic Mhl MV M&S Nei Nob Nov OV Old Pg Pks HP Prn Ptt Poo Pot Pri Raw Ren Rec Rce Rct Rog Rs Sal SC S&F Shm Siu Sia Sis Spd Sqr SR S&H S&W Tat Tem Thr Thb AGT Til Tpk VI Van Vg Wat Wg W&D Wer WS Y&II.

Similar names: Henderson’s Heroine, Medium Early Heroine.

Holmes’ Extra Early. *Hlm.*

Holmes’ Market Gardener’s Extra Early. Entered as Market Gardener’s Extra Early.


Similar names: Hastings’ Home Delight.

Horsford’s Early Market Garden. *McK.*

Similar names: See Horsford’s Market Garden.


Hundredfold. *Mnl.*

Similar names: Munn’s Hundredfold.

Huntington & Page’s First of All. Entered as *First of All.*

Imperial Dwarf. *Ggg.*

Similar names: Large Blue Imperial.


Inexhaustible. *Thb.*

Iowa Challenge. *Ber Iow Rtk.*

Similar names: Currie’s Extra Early Challenge.

Irish Dwarf White Marrowfat. For similar names see White Marrowfat.

Irish Large White Marrowfat. *Dlw Koe Lan Stw.* For similar names see White Marrowfat.

Island Prolific. *TB.* For similar names see McLean’s Prolific.

John Bull. *Ebr Lan.*

Johnson and Stokes’ Extra Early. Entered as *Extra Early.*

Johnson’s First and Best. Entered as *First and Best.*

Jones’ Extra Early. Entered as *Extra Early.*

Juno. All Bt Bt Bt Brk Bdg Buc Brr Col CF Cur Drr Elt Fqr Frd Ggy Grn Ham Hrm Hrs Hen H&C Hlm Iow J&S Krs Lan Lor Liv Mnd Man Mhl Ms Nob Nov Raw Rce Rce Rog S&F Shw Sf S&H S&W Tem Thr Tpk Vg Wg W&D Wdr.

Keith’s First on Market. *Kei.* For similar names see *First in Market.*

Kendel’s First of All. Entered as *First of All.*
AMERICAN VARIETIES OF VEGETABLES.

Kentish Invicta. Blg Bdg Bgs CE Cle Crs Drm Fqr Gry Hme Hnt Lan May Pri Reck Rog.

Similar names: Early Kent, Extra Early Kent.

King of the Dwarfs. Hme Vk.

Similar names: Vick’s King of the Dwarfs.

King’s Earliest Market. Entered as Earliest Market.


Lady. MWJ.

Landreth’s Extra Early, Landreth’s French Canner, Landreth’s Phonograph.

Entered as Extra Early, French Canner, and Phonograph.

Large Black-Eyed Marrowfat. Brd Bgs Bac Cam CF DD Drn Fqr H&P Iml Loh Mic Neb Pg Pks Rce Rs Shw Til Tpk 17 Vk Wyg.

Similar names: See Black-Eyed Marrowfat.

Large Blue Imperial. Min. For similar names see Imperial Dwarf.

Large Dwarf White Marrowfat. Crs. For similar names see White Marrowfat.

Large Melting Sugar. Thr.

Large White Black-Eyed Marrowfat. MWJ.

Similar names: See Black-Eyed Marrowfat.

Large White Marrowfat. Ar Ber Bow Bgs Brn Bru Buc Bui Brr Cam CE C&B Col Cox Crg CA Chm Dw DD Drr Eic Eyr Fqr GH Ggy Grn Grw TG Hrs Hst Haw Hen Iml Jns Kln Lmr Lmr JL Loh Mgd JCM JMM McM Min Neb Pg Pks Pnt Pri Qkr Rce Rce Rs RP SC Shw &O Shm Sim Stk Tex Tl Trk Trn Vn Vin Web &D Wer Wlt Wd WS Yng.

Similar names: See White Marrowfat.

Laxton’s Alpha, Laxton’s Earliest of All, Laxton’s Evolution, Laxton’s Extra Early, Laxton’s Fillbasket, Laxton’s Supreme. Entered as Alpha, Earliest of All, Evolution, Extra Early, Fillbasket and Supreme.

Laxton’s Prolific. Ewg Grm. For similar names see McLean’s Prolific.

Laxton’s Prolific Long Pod. Sim Stk W&D.

Similar names: See McLean’s Prolific.

Leonard’s First and Best. Entered as First and Best.

Lightning. CE Drp Py Pri Reck Y&H.

Similar names: Nebraska Lightning, Price & Reed’s Lightning, Carter’s Lightning, Buckbee’s Lightning Express, Lightning Express, Wood, Stubbs & Co.’s Express, Wood’s Lightning Excelsior, Lightning Excelsior, Express.

Lightning Excelsior. Wd. For similar names see Notte’s Excelsior, Lightning.

Lightning Express. Buc Rec. For similar names see Lightning.

Lilly-Bogardus Thoroughbred. LB.


Seedsman’s synonyms. Premium Gem, Ken.
Little Giant. D&H.

Similar names. Pearce's Little Giant, Darch & Hunter's Little Giant.

Livingston's First in Market, Livingston's Prolific Giant Sugar. Entered as First in Market and Prolific Giant Sugar.

Lohrman's Earliest Wrinkled. Loh. For similar names see Early Wrinkled.

Lohrman's Midsummer. Loh.


Long Island Mammoth. All Brd Big Bui Bui Bar CE Cle G&T CF Chr DD Drr Gls GH Gra Hri Hume Iml J&S Ltr Man Man May Mhl Min M&S Nbh OY Ptt Rec Rog Shw Van Y&H.

Seedsmen's synonyms. Telegraph, Big Bui J&S Ltr Nol Thr. Giant-Podded Marrowfat, Him.

Long Island Marrowfat. Cle G&T Koc Lan Vk.

Similar names. See Marrowfat.

Longstretch's First and Best. Entered as First and Best.

Luscious Melting Sugar. G.N.

Luscious Sugar. Kg Rec.


McGullough's Improved Telephone. Entered as Telephone.

McKenzie's Extra Early Manifold. Entered as Extra Early Manifold.

McLean's Advancer, McLean's Blue Peter, McLean's Improved Little Gem, McLean's Little Gem, McLean's Premium Gem. Entered as Advancer, Blue Peter, Little Gem, and Premium Gem.

McLean's Prolific. Ewg Gra Hume.

Similar names. Laxton's Prolific, Laxton's Prolific Long Pod, Island Prolific.

McMillan's Best. McM.

Similar names. Burpee's Best.

McMillan's Satisfaction. McM. For similar names see Sutton's Satisfaction.

McNeal. Gg.

Magnificent. Evr.

Magnum Bonum. Tat.

Main Crop Long Island Marrowfat. Lan Stw.

Similar names. See Marrowfat.

Mammoth Beauty. Mbs. For similar names see English Beauty.

Mammoth Gray Sugar. May Thr.

Similar names. See Gray Sugar, Mammoth Sugar.

Mammoth Luscious Salad. MWJ.

Similar names. See Luscious Sugar, Mammoth Sugar.

Mammoth Luscious Sugar. Iow Man Wd WS.

Similar names. See Luscious Sugar, Mammoth Sugar.

Mammoth Melting Sugar. All Brt Brr Buc Bar CE Col Cok Drr Hrs Haw Him Mos May M&S Ptt Rec Roc S&F Shw Thr Wat.

Similar names. See Melting Sugar, Mammoth Sugar.

Mammoth Perfection. Til. For similar names see Perfection.

Mammoth Prolific Sugar. J&S. For similar names see Mammoth Sugar.

Mammoth Sugar. Bkt Bui Dlw GH MV Sal Sor Wer.


Mann's Hundredfold. Entered as Hundredfold.

Marblehead Early Marrowfat. Ggy. For similar names see Marrowfat.
Market Garden. Del Hut Min M&S.

Similar names. See Horsford’s Market Garden.

Seedsmen’s synonyms. Moore & Simon’s Second Crop, M&S.


Similar names. See Extra Early Market.

Market Gardener’s Favorite. Qkr. For similar names see Canner’s Favorite.

Market Master. J&S.

Marrowfat. Fld Gng Hnt MWJ Mic XI Pot.

Similar names. Sugar Marrows, Exhibition Marrowfat, Long Island Marrowfat, Main Crop Long Island Marrowfat, Marblehead Early Marrowfat, Sander’s Marrowfat, Royal Dwarf Marrowfat, Dwarf Marrowfat, Giant-Podded Marrowfat, Improved Giant-Podded Marrowfat, Improved Sugar Marrowfat, Nutting’s Green Marrowfat, Green Marrowfat, Simon’s Green Marrowfat, Dwarf Giant-Podded Prolific Green Marrowfat, Dwarf Green Wrinkled Marrowfat. See also White Marrowfat and Black-Eyed Marrowfat.

Matchless Wonder. NK S&I. For similar names see English Wonder.

Maud S. All Alr Brt Bgg Brk Bri Buc Brb Brr CE Cie Col CF Crg Drw Dum Emr Fnr For Fax Frf Gls GH Ggy Grw TG Jus Kel Kra Lnr LB Mud May JCM JMM Py Pot Pri Raw Rec Roc Sal S&F Shw S&O Shm Spf Tat Til Van Y&H.

Similar names. Allan’s Maud S., Burrett’s Maud S., Extra Early Maud S., Seedsmen’s synonyms. First and Best, Frd.

Maul’s Earliest of All, Maul’s Family Garden, Maul’s Improved Extra Early. Entered as Earliest of All, Family Garden, and Extra Early.

May. SC Slm. For similar names see Early May.

May’s Midsummer. May. For similar names see Lohman’s Midsummer.

May Queen. Fh Ggy Jus Lnr M&S. For similar names see Queen.

Medium Early Heroine. Mzy. For similar names see Heroine.


Similar names. Tall Melting Sugar, Tall French Melting Sugar, Mammoth Melting Sugar, Buckbee’s Mammoth Melting Sugar, Sugar, Edible Pod Sugar, Edible Pod White Sugar, Wrinkled Sugar.

Michael’s Early Record. Entered as Early Record.

Michell’s Dandy Extra Early, Michell’s Extra Early. Entered as Dandy Extra Early and Extra Early.

Mills’ Enormous, Mills’ Mammoth Beauty. Entered as Enormous and Mammoth Beauty.

Mingle’s Extra Early. Entered as Extra Early.

Moore’s Bountiful, Moore’s Daisy. Entered as Bountiful and Daisy.

Moore & Simon’s Second Crop. Entered as Second Crop.

Morning Star. Cam Chl Gls Ham.


Nebraska Lightning. Neb S&O. For similar names see Lightning.

Nebraska Seed Co.’s First and Best, Nebraska Seed Co.’s Favorite. Entered as First and Best and Favorite.

Negro. MWJ.

Ne Plus Ultra. All Bdg Mzy Rec Sqr.

New Era. MWJ.

New York Market. W&D.

Niles. Pug.

Seedsmen’s synonyms. Small White Field, Pug.
Noll's Extra Early. Entered as Extra Early.
Nonpareil. M&S.
Similar names. Extra Early Nonpareil, Tait's Extra Early Nonpareil.
Northern Leader. Jer.
Northern Queen. McK.
Northrup, King & Co.'s Summit Extra Early. Northrup, King & Co.'s Improved American Wonder. Entered as Extra Early Summit and American Wonder.
Northwest Premier. May McK OV Tpk.
Similar names. See Premier Extra Early.
Nott's Perfection. DBH Frd Ham J&S Man Ptt.
Similar names. See Perfection.
Omega. Hmc RHJ.
Nutting's Green Marrowfat. Lan. For similar names see Marrowfat.
Paragon. Brb Gry Grn Lan Mzy JMP Pot Pri Roe Rog Stk Y&H.
Pearce's Little Giant. Entered as Little Giant.
Peep O'Day. Brk.
Perfect. Bur. For similar names see Perfection.
Perfection. All McK.
Seedsmen's Synonyms. Blue Beauty, All.
Perkins' Extra Early. Entered as Extra Early.
Perpetual. CCo Man.
Similar names. Walker's Perpetual.
Similar names. See Black-Eyed Marrowfat.
Petit Pois. Fgr Hen.
Similar names. See Extra Early Philadelphia.
Philipps' Extra Early, Philipps' First and Best. Entered as Extra Early and First and Best.
Phonograph. Lan.
Pierson's Extra Early. Entered as Extra Early.
Premier Extra Early. Alx Bur Gdn Min Qkr Rog Vk WS.
Similar names. Improved Premier Extra Early, Northwest Premier.
Seedsmen's Synonyms. First and Best, Alx.

Premium Little Gem. Trm. For similar names see Little Gem.

Price & Knickerbocker’s Improved Extra Early. Entered as Extra Early.

Price & Reed’s Dandy, Price & Reed’s Extra Early, Price & Reed’s Lightning. Entered as Dandy, Extra Early, and Lightning.

Pride of Denver. Hns.

Pride of the Garden. Mls. For similar names see Pride of the Market.


Seedsmen’s synonyms. Golden Sugar, Mls.

Prince Albert Field. Rog Sqr. For similar names see White Field.

Prince of Wales. All D&H Ewg Fmr GH Gra Hrm Hme Lan Man May NK OV Rce Rog RP Sal S&O SQR S& Thr Will. Similar names. Prince of Wales Heavy Cropper.

Prince of Wales Heavy Cropper. Fmr Mzy. Similar names. See Prince of Wales.

Princess Royal. Hme.

Prize Taker. DD M&S.

Similar names. Dickman’s Prize Taker.

Prodigious. Mau Thh.


Prolific Giant Sugar. Evr Ggy Liv Ptt. For similar names see Mammoth Sugar.


Quality. Bai Bur. For similar names see Quantity.


Similar names. Improved Queen, Sharpe’s Improved Queen, Sharpe’s Queen, Rennie’s Queen, May Queen, Summer Queen, British Queen, Southern Queen.
Ram's Horn. Sqf.
Rawson's Clipper. Entered as Clipper.
Red Ripper. MWJ.
Rennie's Extra Early. Rennie's Prosperity, Rennie's Queen. Entered as Extra Early, Prosperity, and Queen.
Rough Rider. Sal.
Royal Dwarf White Marrowfat. Ar Brd Brb Bui Bur Eic Fst TG H&C Hlm J&S
Rural New Yorker. All Brd Bd Bdg Bgg Buc Brb CE Cle Crg DD Ebe Ebr Emr RE For GH Grn G&T TG Hlm Hry Hwv K&W Kg Lan Lea LR Man Mus May MV Mzy Pg HP Ptt Rec Roe RP Sal Shw Snx Sqr SB Tat Til VI Wed.
Schisler-Corneli First of All. Entered as First of All.
Scimitar. Eas SB.
Scotch Beauty Field. Ber Iow. For similar names see White Field.
Scotch Blue Field. Frd Rog. For similar names see White Field.
Scotch Seed. Cur GH Kos. For similar names see White Field.
Second Crop. M&S.
Second Early. DD Put.
Second Sensation. Hme.
Sharpe's Improved Queen. Entered as Sharpe's Queen.
Sharpe's Queen. All Brd Brk Bri Brb Brr CE CF For Grn TG Hrm H&C Hme H&P J&S Lmr May Min Neb OV Ree Sqr Til 17.
Sharpe's Triumph. All Hme. For similar names see Triumph.
Shropshire Hero. All Bui Brd Brt Blg Bgg Brk Bdg Bgs Bng Buc Bui Bur Brr CE Cle C&B Col CE Crs Cur Drr Drn Ebr Ett Fqj Fer Frd Grs Gyn GH Ggy Grn G&T TG Hen H&C Hme J&S Ken Lan Lnr Liv Mnd Mgd Mas Man McK Mhl Neb Nol OV Pg Ptt Qkr Raw Ren Ree Roe Rog S&F S&O Shm Spf Sqr SB Thr Tpk Trm Vau Vk WEA W&D.
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Siegel's Extra Early. Entered as Extra Early.

Small Early French. For W&D. For similar names see French Canner.
Seedsmen's synonyms. Petit Pois, Fqr.

Small White Field. For Pug S&R. For similar names see White Field.
Seedsmen's synonyms. Niles, Pug.

Southern Queen. For similar names see Queen.

Springfield Seed Co.'s Extra Early. Entered as Extra Early.

Squier's Dandy. Entered as Dandy.

Startler. Buc Roc.

Similar names. Buckbee's Startler.

Station. Gsy Grn Liv Thr.

Steele-Briggs' Extra Early. Entered as Extra Early.

Stratagem. Aix All Alr Anb Ar Bai Brd Brr Btt Ber Bg Bw Bgg Brg Brk Bgl Bgs Bri Bm Bn Buc Bui Brb Brr Brw C&J Cam CE Cle C&B Col CF Cox Crg Crc Cur Dlw Del DD Drr Drw Drn Dun Eas Ebe Ebr Eig Elm Emr RE Evr Ewg Fnr Fqr Fst Fux Fer Fld Fle Frd Ger Gdn GH Gra Gng GY Ggy Grn Gry G&T Grw Tq Hns Ham Hrn Hrs Hen Hbt H&C Hop Hme H&P Iow Jac M&J JHJ J&M J&S Jns Kei Kel K&W Ken Kg Kes Kra Lam Lan Lea Lnr LB Liv JL Mnd Mgd Man JCM JMM MeK McM Mie Mhl Min MV MS Mzy Neb NK OV Old Pac Pg Pks HP Pir Prn Pnt Ptt Poo Por Pot Pri Pug Raw Ren Ree Roc Rog Rt Rs RP S&R SC SF Shw S&O Shn Sim Sox Spf Sqr Stk S&H Thm Thr AGT Til Tpk Trn T&B T'B Van Vk Vin Wat Wea Web W&D Wer Wd WS Wg Y&H.

Similar names. Improved Stratagem, Carter's Stratagem, Cleveland's Stratagem, Hammond's Improved Stratagem.


Seedsmen's synonyms. Extra Early Tom Thumb, Buc Roc.


Similar names. See Melting Sugar, Tall Sugar.

Sugar Marrowfat. All G&T Haw Hme J&S Lan Mns Pnt Ree.

Similar names. See Marrowfat.

Summer Queen. WS. For similar names see Queen.

Summit. Fld.

Sunol. All Bkt Ggy May Mzy Ptt Trm.

Similar names. Allan's Sunol.

Supreme. Sim.

Similar names. Laxton's Supreme.

Sunrise. H&C Hme.

Similar names. Early Sunrise.


Similar names. Gregory's Surprise, Early Surprise.


Sutton's Excelsior. Fqr.


Similar names. McMillan's Satisfaction.

Sweet Market. Vbl.

Similar names. Vaughan's Sweet Market.

Swiss. Lan Poh S&R.

Tall Erfurt Sugar. Thr. For similar names see Tall Sugar.
Tall French Melting Sugar. Ptt.

Similar names. See Melting Sugar, French Sugar, Tall Sugar.


Similar names. See Gray Sugar, Tall Sugar.

Tall Green-Seedled Sugar. Rog. For similar names see Tall Sugar.

Tall Melting Sugar. Put SC. For similar names see Melting Sugar, Tall Sugar.

Tall Purple Blossom Sugar. Lan. For similar names see Tall Sugar.

Tall Scimitar Sugar. Sim. For similar names see Tall Sugar.

Tall Sugar. Bui Brz Cox Crs DD Eic Ett Enmr RE Fst Grn Hrs Hst Hlm Ken Liv MV Mzy HP Pri Qkr Sal Spl Stk Vin W&D.

Similar names. Tall White Sugar, Tall Green Seeded Sugar, Tall Scimitar Sugar, Tall Erfurt Sugar, Tall Purple Blossom Sugar, Tall Gray Sugar, Tall Melting Sugar, Tall Mammoth Sugar, Tall French Melting Sugar, Sugar.

Tall White Blossom. Hlm.

Tall White Marrowfat. Gdn Juc May. For similar names see White Marrowfat.

Tall White Sugar. Cle Drr Lan Nef Rog. For similar names see Tall Sugar.

Tait’s Early Deposit. Tait’s Extra Early Eclipse. Tait’s Extra Early Nonpareil. Tait’s Hancock. Entered as Extra Early Deposit, Extra Early Eclipse, Extra Early Nonpareil, and Hancock.

Teddy Roosevelt. NK.

Telegraph. All Bvt Bkt Blg Bdg Bgs Buc Bui CE Cle CF Crs Drr Ewg Fer GH Grn G&T TG H&C Hme H&P J&S Lan Lnr LB Mnd JMM MeK Mzy Nol Pg Rr Rec Rn Rog Sqr Thr Vl.

Similar names. Culverwell’s Telegraph.

Seedsmen’s synonyms. Long Island Mammoth, Blg Bui J&S Lnr Nol Thl.


Similar names. Carter’s Telephone, Eibelings’s Telephone, Allan’s Improved Telephone, Hammond’s Improved Telephone, Extra Early Telephone, Dwarf Telephone, Allan’s Dwarf Telephone, Salzer’s Dwarf Telephone.

The Unknown. MWJ.

Thomas Laxton. Brk Brun Cur Der Ger Ggy Hrm Lnr Pnt Thr Vk.

Thompson’s First of All. Entered as First of All.


Tom Thumb. Axl All Br Pr Brk Btl Brk Bdg Bgs Brz Cam CE Cle Crg Crs Dw Dw Di Eic Fnr Fqr Fst Fld Gdn GH Ggy Grn Gry Grw Hns H&C Hlm Jec J&S Jns K&F Kg Kos Lan Lnr JL Man May JCM JMM Mld Min Neb OV Pnc Pnt Qkr Ren Rec Rog RP Sal SC Shw S&O Sox Sqr Sqr Tat TB Tpk Trm Van W&D Wer Wd WS.

Similar names. Tom Thumb Plentiful, Dwarf Tom Thumb, American Tom Thumb, Blue Tom Thumb, Improved Tom Thumb, Cleveland’s Improved Tom Thumb.
American Varieties of Vegetables.

Thumb, Early Tom Thumb, Extra Early Tom Thumb, Buckbee's Extra Early Tom Thumb, Ferry's Extra Early Tom Thumb.

Seedsmen’s Synonyms. Plant's Earliest Dwarf, Put K&F.
Tom Thumb Plentiful. M&S. For similar names see Tom Thumb.
Triumph. G&T Mns Sqr.
Similar names. Sharpe’s Triumph.
Trucker’s First and Best. Hnt. For similar names see First and Best.
Tuxedo. Y&H.
Universal. Chl.
Similar names. Child’s Universal.
Vaughan’s Improved Telephone, Vaughan’s Sweet Market. Entered as Telephone and Sweet Market.
Veitch’s Perfection. Dun Elt Ewg Gra RIJ Por Pug S&R W&D.
Similar names. See Perfection.
Very Dwarf Sugar. Hen S&W. For similar names see Dwarf Sugar.
Vick’s Charmer, Vick’s Daisy, Vick’s Extra Early, Vick’s King of the Dwarfs. Entered as Charmer, Daisy, Extra Early, and King of the Dwarfs.
Victory. Hen M&S.
Vincent’s Advancer. Vin. For similar names see McLean’s Advancer.
Walker’s Perpetual. Hme. For similar names see Perpetual.
Webb’s Senator. Entered as Senator.
Wernich’s First and Best. Entered as First and Best.
White Champion. Tat. For similar names see Champion of England.
White Crowder. MWJ. For similar names see Yellow Crowder.
White-Eyed Marrowfat. Bri Sie VI.
White Field. Bue Hme MWJ Lar Web.
Similar names. Improved Field, Small White Field, Prince Albert Field, Scotch Field, Scotch Blue Field, Scotch Beauty Field.
White Gem. Hme. For similar names see Little Gem.
White Marrowfat. Alx Air Anb Bai Bak Btl Bkt Bdg Bri Bng Brr Cle C&B Cur Del Dun Ebr Emr RE Ewg Fmr Fqr Glr Gra Hrn Hrn Hrs Hrv Hen Hse H&P J&& Ken Kg Lan Liv Mns Man MV Mzy NK HP Pir Pot Ptt Rog S&B Sox Spf S&I TB Thm Thr VI Vau Wll Y&H.
Similar names. Tall White Marrowfat, Large White Marrowfat, Improved White Marrowfat, Improved White Sugar Marrowfat, Irish Large White Marrowfat, Irish Dwarf White Marrowfat, English Dwarf White Marrowfat, Royal Dwarf White Marrowfat, Dwarf White Missouri Marrowfat, Dwarf White Sugar Marrowfat, White Sugar Marrowfat, Large Dwarf White Marrowfat, Dwarf White Marrowfat. See also Marrowfat and Black-Eyed Marrowfat.
White Sugar Marrowfat. Tat. For similar names see White Marrowfat.
William Hurst. All Bai Brg Brk Buc Bur CE Cox D&H Emr Ggy Haw Hme J&S Lar Liv McK Old Ren Rce Roc Sim Sqr Thr.
Similar names. William the First.
William the First. Hme. For similar names see William Hurst.
Will’s First of All. Entered as First of All.
Wisbech Wonder. Hme. For similar names see English Wonder.
Wisconsin Blue. Hme Sqr.
Witham Wonder. Lar.
Wonderful. MWJ Pq.
Similar names. Page’s Wonderful.
Wood, Stubbs & Co.’s Express. Entered as Express.
Wrinkled Sugar. Bdg. For similar names see Melting Sugar.

Yellow Crowder. MWJ.

Similar Names. White Crowder.


Similar names. See Shropshire Hero.

Seedsmen’s synonyms. Alameda Sweet, Cox. Big Gem, NK. Dwarf Champion, Mzy Prn Ptt Rs.

PEANUT.


African Goober. Alx CCo.

Champion. Cok.

Early Sweet. Chl.

Early Virginia. Brd Sal. For similar names see Virginia.

Extra Early Spanish. JL. For similar names see Spanish.

Faust’s Improved. Fst.

Florida. Cam.

Georgia Improved Ground Pea. J&S Shw.

Hammond’s Earliest Mammoth. Ham.

Improved Ground Pea. Man Sim.

Improved Virginia. Liv Tem Tex WS. For similar names see Virginia.

Large White. Hde.

Large White Luxury. MWJ.

Mammoth. Wlt.

Mammoth Virginia. Buc Kra JL Old Roc Van. For similar names see Virginia.

Old Hickory. MWJ.

Red. Del Put.

Red Cross. Iow Kos.

Red Spanish. Ar. For similar names see Spanish.

Red Virginia. Shw. For similar names see Virginia.

Rennie’s Canadian. Ren.

Savatilla. D&H.

Savatilla Spanish. CCo. For similar names see Spanish.

Small Spanish. Hde. For similar names see Spanish.


Similar names. Small Spanish, Red Spanish, Extra Early Spanish, Savatilla Spanish.

Steckler’s White Mammoth. Stk.

Tennessee Red. Ar Eic.

Virginia. Alx Alr CA Gdn GN Wd.

Similar names. White Virginia, Red Virginia, Mammoth Virginia, Early Virginia, Improved Virginia.

White. Del Mls Pnt.

White Virginia. Ar Shw. For similar names see Virginia.
PEPPER.

Bell.  Bak Big Bgg Brb Brl Cle CF Ebe Eie Emr Fqr Gra Gng G&T Grw TG Ham H&C J&S Kg Lnr Mgd Man PM Mns Mls Nl Pae Pg Pnt Ptt Qkr S&F Shw Sim Stk TB Web Wd WS.

SIMILAR NAMES.  Large Bell, Improved Large Bell, Sweet Bell, Large Sweet Bell, Large Red Bell, Mammoth Bell, Golden Bell.

SEEDSMEN'S SYNONYMS.  Bull Nose, Emr Fqr G&T J&S Lnr S&F, etc.  Sweet Mountain, Ptt.  Improved Bull Nose, Sim.  Large Squash, Sim.  Large Bull Nose, CF.


SEEDSMEN'S SYNONYMS.  Creole, Bur Drr J&M S&W Thm Vin, etc.  Small Chili, Ger.

Black Mexican.  Gra.  For similar names see Mexican.

Black Nubian.  Bgs Buc Bur CE Cle Ewg Mls Ren Rce Rce Shm Sim.

Bolgiano's Mammoth Ruby King.  Entered as Mammoth Ruby King.

Bonnet.  Lan.


Boston Squash.  TG.  For similar names see Squash.

SEEDSMEN'S SYNONYMS.  Tomato, TG.

Bull Nose.  Alx Air Bai Bak Brd Brt Bkt Bel Ber Big Bow Bgg Brk Bdg Bgs Bri Brn Brn Bng Buc Bui Brb Bur C&J Cam CE Cle C&B Col Cox Crs Cur CA D&H D&H DD Drr Drm Ebe Ebr Eie Eit Emr RE EVR EVR Fqr Fqr Fst Fst Fer Fle Frd Ger Gls Gdn GH Gra Gng GN Gty G&T Grw TG Ham Hde Hrn Hrn Hrs Hrv Hst Hen Hbt H&C Hlm Hop Hse Hnt H'Rl Hm Pn Hm Pnt Hm Pnt Poo Por Pot Pri Pug Qkr Raw Rce Rce Rr RP S&R SC S&F Shw S&O Shm Sje Sim Sox Spf Stk SB Stw S&W Tat TB Ttb Til Tpk Trm T&B V&A Vn Vk Web Wd W&D Wil Wht Wd WS Wyg Yng Y'H.

SIMILAR NAMES.  Improved Bull Nose, Large Bull Nose, Sweet Bull Nose.

SEEDSMEN'S SYNONYMS.  Bell, Big Emr Fqr G&T J&S Lur, etc.  Large Bell, Bui Bur Drr Fer Hen Iow, etc.  Large Red Bell, SB.  Large Squash, Sim.  Large Sweet Bell, Gls Mhl.  Mammoth Bell, Cam Gdn Jac.  Spanish Monstrous, Wt.  Sweet Mountain, Bru Hrn.

Burpee's Golden King, Burpee's Golden Upright, Burpee's Mikado, Burpee's Ruby King.  Entered as Golden King, Golden Upright, Mikado, and Ruby King.


Cayenne.  Anb Ar Brd Bt Brr Brv Crg Crs CA D&H D&H DD Drr Drm Ebe Ebr Eie Eit Emr RE EVR EVR Fqr Fqr Fst Fst Fer Fle Frd Ger Gls Gdn GH Gra Gng GN Gty G&T Grw TG Ham Hde Hrn Hrn Hrs Hrv Hst Hen Hbt H&C Hlm Hop Hse Hnt H'Rl Hm Pn Hm Pnt Hm Pnt Poo Por Pot Pri Pug Qkr Raw Rce Rce Rr RP S&R SC S&F Shw S&O Shm Sje Sim Sox Spf Stk SB Stw S&W Tat TB Ttb Til Tpk Trm T&B V&A Vn Vk Web Wd W&D Wil Wht Wd WS Wyg Yng Y'H.

SIMILAR NAMES.  Cayenne Pickling, Long Cayenne, Red Cayenne, Long Red Cayenne, Long Yellow Cayenne, Hammond's Long Red Cayenne, Small Cayenne, Small Red Cayenne, Little Red Cayenne, Large Red Cayenne.

SEEDSMEN'S SYNONYMS.  Long Red Cayenne, Bur.  Chili, JL.

Cayenne Pickling.  Vau.  For similar names see Cayenne.

Celestial.  Alx Air Ar Brd Brt Bt Bgg Brk Bdg Bgs Bri Buc Bui Bur CE Chl Cle Crs Crs Cur CA D&H DD Drr Eas Ebe Ebr Eit RE Ewg Fqr Fst Fsr Ger GH Gra Ggy Grw Ham Hrs Hly MWJ J&M J&S Kra Lan Lnr Liv Man May JCM JMM Mcl Mhl Mls My M&S Nf Nol NK Ptt Pot Qkr Ren Rce Rce S&O Shm Sim Snu Spf Stk SB Stw Tem Thr Trm V& Vn Vin W&D.

SIMILAR NAMES.  Childs' Celestial, Improved Celestial, Chinese Celestial.

Cheese.  Min.
**PEPPER.**

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**Similar names.** Yellow Cherry, Red Cherry.

Chilts' Celestial, Chilts' Improved Celestial, Chilts' Kaleidoscope. Entered as Celestial and Kaleidoscope.

Chili. Alx Bow Brn C&J Cam Cle C&B Cox Cry DD Eas Ebe Eic Elt RE Fqr Gdn Ggy Hde Hen Ken Lur Man Mas McM Mzy Neb Pac Pir Put Poo Por Pot S&R SC Sk Sb S&W T&B W&D.

**Similar names.** Small Chili, Red Chili, Small Red Chili, Yellow Chili, Mammoth Chili, Large Mexican Chili, Mexican Chili.

**Seedsmen's synonyms.** Cajun, JL Mexican, DD.

Chinese Celestial. Aub Cam Evr Vi. For similar names see Celestial.


**Similar names.** See Procopp's Giant.

Cluster. Pac.

**Similar names.** Japanese Cluster, Red Cluster, Japanese Red Cluster.

Columbus. Eic.

Coral Gem. D&H Drr Ebr RE Mhl Ree Sal S&F.

**Similar names.** Coral Gem Bouquet.


**Similar names.** Coral Gem.

**Seedsmen's synonyms.** Red Cluster, M&S.

County Fair. Hen Liv.

**Similar names.** Henderson's County Fair.

Cranberry. GH Mzy.

**Similar names.** Red Cranberry.


**Seedsmen's synonyms.** Bird's-Eye, Bur Drr M&S Shw Thm Vin.

Dwarf Red Squash. Hlm. For similar names see Squash.


**Similar names.** See Squash.


Flat. Ggy.

**Seedsmen's synonyms.** Squash, Ggy.

French Cayenne. Lan.

Giants Emperor. Ebr Mzy.

**Giants Valencia.** Thr.

**Giants Sweet Spanish.** Kg. For similar names see Sweet Spanish.

**Giants Yellow King Mango.** Liv. For similar names see Golden King.

**Golden Bell.** Bui Hnt Han HP Qkr Stw Wlt. For similar names see Bell.

**Seedsmen's synonyms.** Golden Dawn, Bui HP Qkr Roc Wlt.


**Similar names.** Golden Dawn Mango, Sweet Golden Dawn, Mammoth Golden Dawn.

**Seedsmen's synonyms.** Golden Bell, Bui HP Qkr Wlt. Golden Queen, Buc Roc Vk.

**Golden Dawn Mango.** Entered as Golden Dawn.
Similar names. Burpee's Golden King, Giant Yellow King Mango.

Golden Prize. Hst.
Golden Queen. Brt Bkt Buc Bur CE Cle Del Drm Ebe Fld G&T Ham H&C Hlm Liv Lns Mnl Man May OV Ptt Roc Sox Tpk Tom Vl Vk.
Similar names. Mammoth Golden Queen, Improved Golden Queen.

Guthrey's Giant. SB. For similar names see Procopi's Giant.

Hammond's King of Reds. Hammond's Long Red Cayenne. Entered as King of Reds and Long Red Cayenne.

Henderson's County Fair. Entered as County Fair.

Hot Bull Nose. M&S. For similar names see Bull Nose.

Improved Bull Nose. Improved Celestial, Improved Golden Queen, Improved Large Bell, Improved Long Red, Improved Sweet Mountain, Improved Thick Long Red. Entered as Bull Nose, Celestial, etc.

Italian. Raw.

Japanese Cluster. Ewg Gra W&D. For similar names see Cluster.

Japanese Red Cluster. Drr Frd. For similar names see Cluster.


King of Reds. Ham.


Similar names. See Bell.

Seedsmen's synonyms. Bull Nose, Bui Drr Fer Hen Liv Raw, etc.

Large Bull Nose. Brt CF Drw MWJ. For similar names see Bull Nose.

Seedsmen's synonyms. Bell, CF.

Large Mexican Upright. NK. For similar names see Golden Upright.

Large Red. Ewg Gra Kei. For similar names see Long Red.

Large Red Bell. SB. For similar names see Bell.

Seedsmen's synonyms. Bull Nose, SB.

Large Red Cayenne. Hrm Iml. For similar names see Cayenne.

Large Sweet. Bui G&T. For similar names see Sweet.

Seedsmen's synonyms. Sweet Mountain, Bui.

Large Sweet Bell. Gls Hrv Mhl Min M&S Tex. For similar names see Bell.


Large Sweet Mountain. Alx CF Drm Evr Ger Ggy Hrv Liv JL Old Pac Roc AGT VI.

Similar names. See Sweet Mountain.
LARGE Sweet Spanish. Bak Btl Bon Cam CA Dlw Drr Est Gdn Gig MWJ Lan Mel Mhl Pac Stw TB.

SIMILAR NAMES. See Sweet Spanish.

LARGE Squash. Bow CE CF Crs RE Fer Hrm K&W Luc LB MV NK Por Pri Rec Rs S&K Sim Sow Thr Til Y&H.

SIMILAR NAMES. See Squash.

SEEDSMEN’S SYNOMYMS. Bell, Sim. Bull Nose, Sim. Tomato, Bow Bdg CF Crs Rec.

LARGE Yellow. Kei. For similar names see Long Yellow.

LITTLE Red Cayenne. Wd. For similar names see Cayenne.

LONG Cayenne. Cox RE Gig Hst RHJ Kos Lan Luc Sim Vin Web Wyg Y&H.

SIMILAR NAMES. See Cayenne.


SEEDSMEN’S SYNOMYMS. Santa Fe, Ggy.


SIMILAR NAMES. See Cayenne.

SEEDSMEN’S SYNOMYMS. Cayenne, Bur.

LONG Red-Pointed. Cox. For similar names see Long Red.

LONG Yellow. Bgs Brn CE RE Gra H&P Iml Rec Sal S&O.

SIMILAR NAMES. Large Yellow.

LONG Yellow Cayenne. Buc Crs GH Mzy Roc. For similar names see Cayenne.

MAMMOTH. Brk Bgs Brb Bur CE C&B Crs Cur Elt Emr ER Exv Fqr Frd Gls Hen Iow K&W Kra Mzy Nol HP Rec S&O Sox Tem Thb Trm VI Vk W&D Yng Y&H.

SIMILAR NAMES. Monstros, Monstros Mammoth, Sweet Mammoth, Sweet Orange Mammoth, Rose Mammoth.

SEEDSMEN’S SYNOMYMS. Sweet Mountain, Bur Cur Elt Emr Hen Vk, etc. Monstros, Exv VI. Sweet Spanish, Trm.

MAMMOTH Bell. Cam Gdn Jac. For similar names see Bell.

SEEDSMEN’S SYNOMYMS. Bull Nose, Gdn Jac Cam.

MAMMOTH Chili. S&O. For similar names see Chili.

MAMMOTH Golden Dawn. McK Ren. For similar names see Golden Dawn.

MAMMOTH Golden Queen. Air Bel Brn CE Col Frd Hse Iow J&S JL Ms M&SS Pir Rec Sim Sim S&H Thr Wd WS.

SIMILAR NAMES. See Golden Queen.

SEEDSMEN’S SYNOMYMS. Mango, Sim.

MAMMOTH Ruby King. Air Bel Big Cam Drm J&M Liv JL Ms HP S&B Shn Trm.

SIMILAR NAMES. See Ruby King.

MAMMOTH Ruby King Mango. Entered as Mammoth Ruby King.

MAMMOTH Sweet Mountain. Hse. For similar names see Sweet Mountain.

MAMMOTH Sweet Spanish. Wd WS. For similar names see Sweet Spanish.
**AMERICAN VARIETIES OF VEGETABLES.**

**Mango.** Shm Sim.

*Seedsmen's synonyms.* Mammoth Golden Queen, Sim. Sweet Mountain, Shm.

**Martinique.** Eic.

Maule's Ruby King, Maule's Improved Ruby King. Entered as Ruby King.

**Metcalfe's Squash.** Fqr. For similar names see Squash.

**Mexican.** DD Lan.

*Similar names.* Black Mexican, Mexican Chili, Large Mexican Chili.

*Seedsmen's synonyms.* Chili, DD.

**Mexican Chili.** Ger Thm. For similar names see Chili, Mexican.

**Mikado.** Bur.

Monstrous. Bru Crs Evr Hrv NK Put Sim Stk SB Thr Til VI Vk Vin.

*Similar names.* See Mammoth.

*Seedsmen's synonyms.* Grossum, Crs Hrv Vk Vin. Mammoth, Evr Sim VI.

Sweet Spanish, Stk.

**Monstrous Mammoth.** Anb Btl Hns. For similar names see Mammoth.

**Monstrous Sweet Spanish.** Ar CE Eic Ree Sie.

*Similar names.* See Sweet Spanish.

**Moore & Simon's Scarlet Maddalon.** Entered as Scarlet Maddalon.

**Orange Wrinkled.** Bur. For similar names see Wrinkled.

**Oxheart.** Hnt May Mzy NK Thr.

**Pickling.** Fqr S&F.

*Seedsmen's synonyms.* Squash, Fqr S&F.

**Procopp's Giant.** Ar Btl Bel Ber Brk Bri Brug Bui Bur Brr CE Cle D&H Drr Elt RE Evr Ewg Fqr Fst Frl GH Gra Gny Gry Hde Hrs Hst J&M Lnr Liv Mau May McM Mls MV NK Pir Pnt Raw Ten Ree Sal SC S&F Shm Sim Sox Spf SB Thm Thr VI Wer Wd WS.

*Similar names.* Guthrey's Giant, Chinese Giant, Salzer's Giant.

**Rawson's Italian.** Entered as Italian.

**Red Cayenne.** Del Iow Mhl Por S&R Stw S&H Tem AGT Wll.

*Similar names.* See Cayenne.


*Similar names.* See Cherry.

*Seedsmen's synonyms.* Red Cluster, Pac.

**Red Chili.** Bai Brl Btl Bkt Bkg Brk Bdg Bri Brn Bng Buc BUR CE Col Crs Cur D&H Del Eic Emr Fst Fer Fie Ggs GH Gny Gk&T Hns Hrm Hst H&C Hly H&P Iow Jac J&S Lam Lnr LB Liv Loh Mnd JCM M&S NK Put Pri Ree Rs Sal Shw Sie Thr Trm Vin Wer Wyg.

*Similar names.* See Chili.

**Red Cluster.** Bdg Bgs BUR CE Chl Crs Ebe Eic EIE Fst Frl Ger Gls Hde Hst Hen Hbt Hlu Iow Liv Mau May MV M&S NK Pac Pg Ptt Qkr Raw Ree Sal Sox Spf Stk S&W Thr Vau Vk Wll Wd WS Y&H.

*Similar names.* See Cluster.

*Seedsmen's synonyms.* Japan Red Cluster, Frd. Coral Gem Bouquet, M&S.

Red Cherry, Pac.

**Red Cranberry.** Sal. For similar names see Cranberry.

**Red Etna.** Bur CE Iam Mls Ree.

**Red Harold.** Thr.

**Red-Pointed Calabrese.** Thr.

**Rose.** Vau.
Rose Mammoth.  
Ebc.  For similar names see Mammoth.

Ruby King.  
Alx Anb Ar Bai Bak Bred Bt Bdl Bgt Bgd Bri Brn Bru Bng Buc Bai Bur Brr Brw C&J Cam CE Chl Cle C&B Col CF Cok Cox Crg Crs Cur CA Dlw D&H Del DD D&c Drr Drw Eas Ebe Ebr Eic Elt Elt RE Evr Fmr Fqr Fst Fer Flk Frd Ger Gls Ghn GH Gra Gng GN Ggy Gry Gg G&T Grw TG Hns Hm Hde Hrn Hrs Hrv Hst Haw Hen H&C Hly Hlm Hop Hse H&P lmld Tow Jac Jer MJW RHJ J&S Jns Kg Koe Kos Lnm Lan Lea Lnr LB Liv Loh Mnd Mgd Man PM Mas Mau May JCM JMM McM Mel Mic Mhl MLs MV M&S M&y Neb Nol XI NK OV Pac Pg JMP Pir Prm Ptt Poo For Pot Pri Qkr Raw Rec Ren Rec Rn Rs RP Sal S&R SC S&F Shw S&O Sic Sox SPl STr S&B Stw S&H S&W Tat Tem Tex TB Thr Thb Thl Til Tpk Trn T&B VI Vau Vh Vin Wt Wat Wea Web W&D Wer Wll Wd Wdr WS Wyg Yng Y&l.

Similar names.  Burpee's Ruby King, Maule's Ruby King, Maule's Improved Ruby King, Mango, Mammoth Ruby King, Bolgiano's Mammoth Ruby King.

Salzer's Giant.  Sal.
Santa Fé.  Ggy.  

Scarlet Maddalon.  Mc&S.

Scarlet Wrinkled.  Bur.  For similar names see Wrinkled.

Small Cayenne.  Lan HP Spf Stw.  For similar names see Cayenne.

Small Chili.  Drr Ger Grw lmld MWJ Mns May Mhl Ptt Tat Tex VI Wea Wdr.  

Similar names.  See Chili.

Seedsmen's synonyms.  Bird's-Eye, Gey.

Small Red Cayenne.  MWJ.  For similar names see Cayenne.

Small Red Chili.  Bak Bui Cam MJW Lan Roc Shm Sim Stw Til Vk.  

Similar names.  See Chili.

Spanish Mammoth.  Bru Fer Ken Rec.  For similar names see Sweet Spanish.  

Seedsmen's synonyms.  Sweet Mountain, Fer.


Similar names.  See Sweet Spanish.


Similar names.  Large Squash, Boston Squash, Dwarf Red Squash, Early Dwarf Red Squash.


Sweet.  Hly.  

Similar names.  Large Sweet.

Sweet Bell.  Mhl Not.  For similar names see Bell.

Sweet Bull Nose.  Hly.  For similar names see Bull Nose.

Sweet Columbus.  Eic.

Sweet Golden Dawn.  CE MV Ree Sox Tat Thr Wlt.  

Similar names.  See Golden Dawn.

Sweet Mammoth.  Shw.  For similar names see Mammoth.

Sweet Mountain.  Alr Bai Bred Btr Bkt Ber Bgk Bow Bgg Brk Bdg Bgs Bri Brn Bru Bng Buc Bai Brb Bur Brr Brw C&J CE Cle C&B Col Cox Crs Cur D&H Del DD Eas Ebe Ebr Eic EIt Elt Eur Fqr Fer Frd Frs GH Gra Gry Grw TG Hde Hrm Hrn Haw Hen H&C Hly Hlm Hop Hnt H&P lmld Jns K&W Ken Kg Kra Lam Lea Lnr LB Loh Lon Mnd Mgd Mns May JCM JMM Min MV Mzy Neb
AMERICAN VARIETIES OF VEGETABLES.

Nol Nf NK OV Pk HP JMP Pnt Pe Pot Pri Raw Ree Rec Rs Sal SC S&F Shw S&O Shm Sox SB S&W Tem Tex Thm Thr Thb AG T Til Tpk 17 Vank Vm Wea W&D Wdr Wgg Yng YkH.

Similar names. Mammoth Sweet Mountain, Large Sweet Mountain, Improved Sweet Mountain.


Sweet Orange Mammoth. Liv S&B. For similar names see Mammoth, Sweet.


Similar names. Spanish Monstrons, Spanish Mammoth, Large Sweet Spanish, Giant Sweet Spanish, Mammoth Sweet Spanish, Monstrons Sweet Spanish.


Tabasco. Bur Col Drr Eic Jér Lan Man Pnt Sal Shw Stk Thr Wd.

Thick Long Red. Liv. For similar names see Long Red.

Tomato. Bai Bow Bdg Brk Bdg Bui Brb CE Cle CF Cox Crs TG Lan Lnr Liv Mfn Mzy Pac Ptt Qkr Ree Thm T&T Vin.


Tom Thumb. Man.


Similar names. Yellow Wrinkled, Scarlet Wrinkled, Orange Wrinkled.

Yellow Cherry. Crs GH Pnt SC Thr. For similar names see Cherry.

Yellow Chili. Fer Hly Liv NK Pk. For similar names see Chili.

Yellow Wrinkled. Bur. For similar names see Wrinkled.

PIE PLANT. (See RHUBARB.)

PUMPKIN.

Atlas. CE Iow.

Banana. Egg Lnr Sox.


Black Negro. Thr. For similar names see Negro.

Seedsmen's synonyms. New Hampshire, Thr.

Black Sugar. Cle Fmr Liv. For similar names see Sugar.


Bright Red Etampes. Crs R/H J Ken. For similar names see Red Etampes.

Buckbee's King of the Mammoths, Buckbee's Pure Gold Field. Entered as King of the Mammoth and Pure Gold Field.


Similar names. See Large Cheese.
PUMPKIN.

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Citrouille. J&S.

Seedsmen's synonyms. Mammoth Tours, J&S.

Common Field. Bt1 Cor Dlw Gls Hns Hbt Hse H&P Koc Lan Lea Mic Mls Min Ree Swk Ten.

Similar names. See Field.


Common Young Field. D&H J&S. For similar names see Field.


Connecticut Golden Field. Brs. For similar names see Connecticut Field.

Connecticut Large Yellow Field. Gra Ham PM.

Similar names. See Connecticut Field.

Seedsmen's synonyms. Yankee Cow, Hain.

Connecticut Yellow Field. C&J. For similar names see Connecticut Field.

Cornfield. Wd.

Similar names. Large Cornfield.

Seedsmen's synonyms. Connecticut, Wd.

Cream. Alr.

Seedsmen's synonyms. Cushaw, Alr.

Crookneck. At Bll Ber Bly Bow Bri Buc Bur Brr DD Fst G&T TG Hns Hlm Hop J&K J&S Kg Lam Mgd PM Man Pac Ptt Pug Raw Rec Rec RP S&R S&O Sox Thm Vl Wk Wd Wdr WS.


Cucumber Pumpkin. Brb.


Similar names. Improved Cushaw, Green-Striped Cushaw, Striped Cushaw, Mammoth Golden Cushaw, Yellow Cushaw, Improved Yellow Cushaw, White Cushaw, Large White Cushaw.


Dunkard. Bgs Frd Lnr Rec Sox.

Early Sugar. Elt Nef NK Rt Thr. For similar names see Sugar.

Enormous. D&H.

Farmer's Pride. Mls.
Field. Bou Hnt Lan XI Rt.

**Similar Names.** Common Field, Common Yellow Field, Large Common Yellow Field, Large Common Field.

**French Prize.** May. For similar names see Mammoth Prize.

**Georgia Field.** CA.

**Similar Names.** Large Georgia Field.

**Gibson’s Mammoth.** Ggy Rob Shw.

**Globe Mammoth.** D&H. For similar names see Mammoth.

**Golden Marrow.** Bgg Bur Evr Fst Hlm J&S & Man Thr Thk VI.

**Seedsmen’s Synonyms.** Michigan Mammoth, C&J J&S.

**Golden Oblong.** Bkt Bri Bur C&J CE D&H Del D&C Frd GH Hbt Hlm Hop Hse J&S Lar Liv Mau May NK Pav Py Pne Qkr Ren Rec Rob Sal Shm Tem Thr T&B VI Vun Vk Wh Yng.

**Similar Names.** Burpee’s Golden Oblong.

**Golden Sugar.** M&S. For similar names see Sugar.

**Golden Yellow King of Mammoths.** CCo Cur Hse.

**Similar Names.** See King of Mammoths.

**Granite State.** Raw.

**Gray Boulogne.** J&S.

**Green-Striped Cushaw.** Bui Hst J&S Thm. For similar names see Cushaw.

**Seedsmen’s Synonyms.** Improved Cushaw, Hst.

**Hammond’s Hundredweight.** Ham. For similar names see Hundredweight.

**Hammond’s Mammoth.** Ham. For similar names see Mammoth.

**Hastings’ Jumbo.** Entered as Jumbo.

**Hundredweight.** Mau Mls WS.

**Similar Names.** Hammond’s Hundredweight.

**Improved Cushaw.** Improved Mammoth, Improved Yellow Cushaw, Improved Yellow Field. Entered as Cushaw, Mammoth, Yellow Cushaw, and Yellow Field.

**Indiana Field.** VI.

**Seedsmen’s Synonyms.** Kentucky Field, Evr VI.

**Iron Bark.** Ger.


**Jonathan.** Bdg Buc Bui Brr Cam CE Cle Cur RE Frd Gdn GH Hen Iow J&S Kos Lur Neb Pcc Pri Raw Rec Rob Roc Shw Shm Se Sim Spf Tem Thr Y&H.

**Seedsmen’s Synonyms.** Crookneck, Brr. Large White Cushaw, J&S Tem. White Cushaw, Iow.

**Jumbo.** Anb Bgs Bru Bng Buc C&B Cur CA Ger GH Hst Hen Hlm McR Nef Nol Pks Prn Ptt Roc Sim SB S&W W&D.

**Similar Names.** Mammoth Jumbo.

**Seedsmen’s Synonyms.** Big Show, Frd. Fifty Dollar Prize, Frd Iml. King of Mammoths, Brn Bur Cur Frd Hrs Iml, etc. Large Mammoth, Pg. Large Yellow Mammoth, Ham Liv. Large Yellow Mammoth Potiron, Drr. Mammoth, Frd Iml McR Ren Pg Liv, etc. Mammoth Fifty Dollars, Ham Liv. Mammoth Potiron, Buc Hlm Hrs Tex. Mammoth Tours, Anb Ger Nef. Potiron, Bur Liv Ham Ptt Ren Vk, etc. Tours, Ren.

**Kentucky Field.** Anb Ar Bak Bll Brk Brh C&J CE DD Ebr Eic Frd GH Hns Hrn H&C Hly Iml J&S K&F Koe Kra Lam May JCM JMM Pks Put Ree Rs RP SC Sox Stk SB Thu Tpr Trm VI Web WS.

**Similar Names.** Large Yellow Kentucky Field, Mammoth Kentucky Field.

**Seedsmen’s Synonyms.** California Field, Thm. Connecticut Field, Thm. Large
King of the Field. May. For similar names see King of Mammoths.

King of Mammoths. Alx Brl Bel Egg Bgs Brn Buc C&J Cam CE Cle Col CF Cok Crs CA D&H Del Eie RE GDn GH Gra GN TG Hns Hdr Hrn Hse H&P Iow J&S Kei Kg Koe Lea Lon LB Mgd Mns McM Mls M&S Xol Pitt Pri Rtk Raw Rec Rec Rob Roc Shw S&O Spf S&H Tat Trm Til Trn Vkg Win Wtl Wd Wdr WS.

Similar names. Bucklee's King of Mammoths, Golden Yellow King of Mammoths, May's King of the Field, Mammoth King, Mammoth Yellow King, King of the Field.


Large Cheese. Alx Alr Ar Bai Bak Brd Brt Btl Bkt Bel Bel Bri Brn Bug Buc Bui Brb Brw Brr C&J Cam CE Chl C&B Col CF Crs Cur Del DD Drr Ebr Eie Ett Exv Fest Fld Fld Gdn GH Gra Gry G&T TG Hde Hrm Hrn Hrs Hst Htr Hlm H&P Iml Low Joc MJW RIJ J&M Jns K&W Kg Kos Kra Lea Lnr Mnd Mgl Man Mos Man May JCM JMM M-K Me M Mhh MV Ms Myz Neb Nol Noy Pac JMP Pir Pne Putt Ptt Por Pot Pri Rtk Ren Rec Rob Roe Rs RP S&L S&R SC S&O Sic Sox Stk SB S&W Tat Tex Thm Thr Til Tjk Trn Vkg Win W&O Wer Wd Wdr WS Wfg Yng Y&H.

Similar names. Mammoth Cheese, Large Mammoth Yellow Cheese, Large Sweet Cheese, Sweet Cheese, Cheese.

Seedsmen's synonyms. Kentucky Field, Bur Brk Brb C&J Rec Sox, etc. sweet, Col.

Large Common Field. Bur Col. For similar names see Field.

Seedsmen's synonyms. Big Tom, Bur.


Similar names. See Field.


Large Cornfield. MWJ. For similar names see Cornfield.

Large Field. Bur Drw Frd Ggy Iml Jer RIJ Kra Mck Pne Ren S&O Sim TB Van Y&H.

Seedsmen's synonyms. Yankee Cow, Frd.

Large Georgia Field. Alx. For similar names see Georgia Field.

Large Mammoth. Hly. For similar names see Mammoth.

Seedsmen's synonyms. Jamb, Pg. King of Mammoths, Pg. Mammoth, Pg.

Large Mammoth Tours. Gls. For similar names see Mammoth Tours.

Large Mammoth Yellow Cheese. Sim. For similar names see Large Cheese.

Large Pie. Liv.

Large Red Etampes. RIJ. For similar names see Red Etampes.

Large Sweet. Liv. For similar names see Sweet.

Seedsmen's synonyms. Pic, Liv.


Similar names. See Large Cheese.

Seedsmen's synonyms. Kentucky Field, J&S Vkg.

Large Tours. Alr Bel Bdg Brn CE C&B Drr RE Hen RIJ Kg Lnr Mas Man JCM Mhl Xol Pac HP Prc Re Cell RP S&O Sox S&W Van Vkg W&D Yng.

Similar names. See Mammoth Tours.

Seedsmen's synonyms. Mammoth, Gls Mas Mhl Ptt Sox S&W, etc. Mammoth French, Vav. Mammoth Tours, Hen Man HP RP.
Large White Cushaw. J&S Tem. For similar names see Cushaw.

Large Yellow. Bai Bow Brn Dun Ebr RE Fer Lam LB Loh NL Old Pg Pks Por Pug S&R Syp Tpk Vin.

Large Yellow Field. Bgs Drr Hde Hlm Pot S&H.

Large Yellow Kentucky Field. Shw. For similar names see Kentucky Field.


Large Yellow Tours. MWJ. For similar names see Mammoth Tours.

Leaving’s World Beater. Enter as World Beater.

Livingston. Frd.


Mammoth Cheese. Kei. For similar names see Large Cheese.

Mammoth Chili. DD.

Mammoth Etampes. Brn Drn Evr TG Iow Man Vl.

Mammoth Field. Bui Thb.

Mammoth French. Vau.

Mammoth Gigant. Wer. For similar names see Mammoth.


Mammoth Gray. SB.

Mammoth Jumbo. Shun. For similar names see Jumbo.

Mammoth Kentucky Field. WS. For similar names see Kentucky Field.

Mammoth King. Brk Bri Bui Hrv Mzy Neb SB Thr Thb Vl.


Mammoth Yellow. J&S Tem. For similar names see Cushaw.


Mammoth’s Improved, Livingston’s Cushaw. Entered as Livingston and Cushaw.

Mammoth’s Improved, Livingston’s Cushaw. Entered as Livingston and Cushaw.


Mammoth. Improved, Large Mammoth, Hammond’s Mammoth, Michigan Mammoth, West India Mammoth, Globe Mammoth, Wernich’s Mammoth Giant, Mammoth Giant.

Mammoth’s synonyms. Jumbo, Bur Ham Liv Pg Frd Iml, etc. King of the Mammoths, Bur Ham Liv Pd Wdr Frd Iml, etc. Large Mammoth, PG. Large Yellow Mammoth, Ham Liv. Mammoth Fifty Dollars, Liv Ham. Potiron, Bur Chl Dlw Fst Ham JL, etc. Big Show, Frd. Fifty Dollar Prize, Frd Iml. Large Tours, Gls Mhl Mas Ptt Rec S&O, etc. Tours, Kei Ren.

Mammoth’s synonyms. Jumbo, Bur Ham Liv Pg Frd Iml, etc. King of the Mammoths, Bur Ham Liv Pd Wdr Frd Iml, etc. Large Mammoth, PG. Large Yellow Mammoth, Ham Liv. Mammoth Fifty Dollars, Liv Ham. Potiron, Bur Chl Dlw Fst Ham JL, etc. Big Show, Frd. Fifty Dollar Prize, Frd Iml. Large Tours, Gls Mhl Mas Ptt Rec S&O, etc. Tours, Kei Ren.

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Mammoth Prize. Btr Drw Ebe Kg Lam Lur NK Old Van.

**Similar Names:** Northrup, King & Co.'s Mammoth Prize, Simmers' Mammoth Prize, French Prize.

**Mammoth Red Etampes.** Bkt Brk Bui CE CF DD Fst GH Gra Ggy Liv May OV Rec Rob Tpk Vk.

**Similar Names:** See Red Etampes.

**Mammoth Sugar.** TB. For similar names see Sugar.

**Mammoth Summit.** Hop.

**Seedsmen's Synonyms:** King of the Mammoths, Hop.

**Mammoth Tours.** Anh Ar Brd Cam Cle Cox Crs Cur DD Drtn Ebr Elt Evr Frd Ger GH Ging TG Hus low J&S Kos Lam Lur Liv Mnd Man May JMM MV Mzy Nef OV For Rec Rs RP S&R SC Shm Sis Spy Thr Tpk T&B Vl Vin Web Y&H.

**Similar Names:** Large Tours, Large Mammoth Tours, Large Yellow Tours, Mammoth Yellow Tours, Tours.

**Seedsmen's Synonyms:** Citrouille, J&S. Etampes, VI. Jumbo, Anh Ger Nef. Large Tours, Hen Man RP. Mammoth Whale, Iow.

**Mammoth Yellow.** Brn. For similar names see Large Yellow.

**Seedsmen's Synonyms:** Jumbo of California, Ms. King of the Mammoths, Ms. Potiron, Ms.

**Mammoth Yellow King.** MWJ. For similar names see King of Mammoths.

**Mammoth Yellow Tours.** MWJ. For similar names see Mammoth Tours.

**Maryland Sweet Potato.** G&T. For similar names see Sweet Potato.

**Maule's Prize Potiron.** Entered as Prize Potiron.

**May's King of the Field.** Entered as King of the Field.

**Michigan Mammoth.** Ggy Rob. For similar names see Mammoth.

**Seedsmen's Synonyms:** Golden Marrow, C&J J&S.


**Similar Names:** Small Nantucket, Nantucket Negro.

**Seedsmen's Synonyms:** Negro, Brk Cur Fqr Gry Rec Rob, etc. St. George, Frd JCM. Sugar, Bui.

**Nantucket Negro.** May. For similar names see Nantucket, Negro.

**Negro.** Brk Brn C&J CE Cur D&H Del Env Fmr Fqr Ggy Gry Hse J&S Raw Rec Rob S&F SB Wer Wyg.

**Similar Names:** Black Negro, Nantucket Negro, Small Negro.


**New Jersey Sweet Potato.** M&S Nol. For similar names see Sweet Potato.

**Northrup, King & Co.'s Mammoth Prize.** NK.

**Similar Names:** See Mammoth Prize.

**Ohio Pie.** Anb.

**Old Tom.** Bgg.

**Pie.** Bt Bw Bd Bld Fer Fle Gls GN Haw Lam LB Liv Loh Mba Pne RP Vk.

**Seedsmen's Synonyms:** Japanese Crookneck, Vin. Large Sweet, Liv. Pie Squash, Gls. Sugar, Haw Vk. Sweet, RP.

**Potato.** Big Shw. For similar names see Sweet Potato.

**Seedsmen's Synonyms:** Cushaw, Shw.

**Potiron.** Chl Dlw Fst Ham Hbt Liv JL Mau M&S Ptt Rob Shm Wd WS.

**Similar Names:** Mammoth Potiron, Yellow Mammoth Potiron, Maule's Prize Potiron.

**Seedsmen's Synonyms:** Jumbo, Ptt Ren Vk Bur Liv Frd, etc. King of the Mammoths, Ms Rob Ptt Vk WS Wd, etc. Mammoth, Ren. Tours, Ren. Big.

1329—No. 21—02—20
AMERICAN VARIETIES OF VEGETABLES.


Prize Potion. Man.

Prolific Field. Thm.

Pure Gold Field. Buc Roc.

Similar names. Buckbee's Pure Gold Field.


Similar names. Burpee's Quaker Pie.

Queen Luxury. Shm. For similar names see Winter Luxury.

Red Etampes. Brn Mnd MV Sox Thr.

Similar names. Large Red Etampes, Mammoth Red Etampes, Bright Red Etampes, Mammoth Bright Red Etampes, Mammoth Etampes.

St. George. Frd Lmr JCM.

Seedsmen's synonyms. Nantucket, Frd JCM.

Sandwich Island. D&H Roc.

Simms' Mammoth Prize. Sim. For similar names see Mammoth Prize.

Small Early Sugar. J&S. For similar names see Sugar.

Small Golden Sugar. Br. For similar names see Sugar.

Small Nantucket. Lmr. For similar names see Nantucket.

Small Negro. Cle. For similar names see Negro.

Seedsmen's synonyms. Black Sugar, Cle.


Similar names. See Sugar.


Small Sweet. Crs Del. For similar names see Sweet.

Seedsmen's synonyms. Sugar, Crs.

Small Sweet Sugar. Cam Evr YH. For similar names see Sugar.

Small Yellow. Mck. For similar names see Large Yellow.

Small Yellow Sugar. Cle TG Hns. For similar names see Sugar.

Southern Field. Hst.

Striped Cushaw. Gdb MV Pnt Sox Spf Thr. For similar names see Cushaw.

Seedsmen's synonyms. Cushaw, Pnt.


Similar names. Early Sugar, Small Early Sugar, Golden Sugar, Small Golden Sugar, Small Sugar, Small Sweet Sugar, Yellow Sugar, Small Yellow Sugar, Black Sugar, Mammoth Sugar, Sweet Sugar, Vaughan's Sugar.


Similar names. Large Sweet, Small Sweet, Yellow Sweet.

Seedsmen's synonyms. Large Cheese, Col. Pie, RP. Small Sugar, Sox. Sugar, C&J Fqr Ken Por Rce S&O, etc.
Sweet Cheese.  Fer H&C Lam LB Pks.  For similar names see Large Cheese.

Seedsman's synonyms.  Kentucky Field, Fer Lam H&C LB Pks.

Sweet Field.  J&M.


Similar names.  Maryland Sweet Potato, New Jersey Sweet Potato, Tennessee Sweet Potato, Yellow Sweet Potato, Potato.

Sweet Sugar.  Brk Mic Rs Wll.  For similar names see Sugar.

Tennessee.  Cle Tat.

Tennessee Sweet Potato.  Alx Air Anb Ar Bak Brd Btl Bgs Bri Buc Bui Bur Cam CE Col Cok CA Del DD Drr Drrn Fmr Est Frd G&T TG Hst Hly Hlm Hop H&P

Jan JK J&S Kg Lcr Liv Mgd Man May JCM JMM Mhl Ms M M&S Xeb Xol

NX Pac JMP Pnt Por Pri Qkr Rece Rec Rob RP S&R Shw S&O Shp Spf S&H

Tem Thm Thr Trm VI Vl Wd Wdr WS Wyg.

Similar names.  See Sweet Potato.

Thanksgiving.  Brd Col Fnr JL M&S S&H.

Tours.  Kt Ren.  For similar names see Mammoth Tours.


Vaughan's Sugar.  Vau.  For similar names see Sugar.

Virginia Mammoth.  Wd.

Wernich's Mammoth Giant.  Entered as Mammoth Giant.

Western Field.  Buc J&S Roc.

West India Mammoth.  Bdg.  For similar names see Mammoth.

White Cushaw.  Brk TG low Rece S&O Spf Thr.  For similar names see Cushaw.

Seedsman's synonyms.  Jonathan, Iow.

Winter Luxury.  Brd Bkt Brk Buc Bur Brv C&J Col D&H Drr Drrn Efl Evr For

Fle GH Ham Hr Hcn Hlm Hop J&S Mgd Ms M&S Xol Poo Por Rece Rob Roc

Sal S&R Shw Shm Sic Sim Thr Tlh Vl Vau Vk.

Similar names.  Queen Luxury.

Seedsman's synonyms.  Sugar, Hrs.  Winter Queen, Frd Vau.

Winter Queen.  Kg Lnr Vau.

Seedsman's synonyms.  Winter Luxury, Frd Vau.

World Beater Pie.  Lea.

Similar names.  Leavings' World Beater Pie.

Yankee Field.  Fld M&S.

Yankee Pie.  low Ms Rtk Tem.


Similar names.  See Cushaw.

Seedsman's synonyms.  Crookneck, Pac.  Large Yellow Crookneck, Lan.

Yellow Field.  Ewg Ham Hop.

Similar names.  Improved Yellow Field, Large Yellow Field.


Yellow Mammoth Potiron.  CE Rec Sox.  For similar names see Potiron.

Yellow Monster.  Lan Stw.

Yellow Sugar.  Pot.  For similar names see Sugar.

Yellow Sweet.  Bgs.  For similar names see Sweet.

Seedsman's synonyms.  Sugar, Bgs.

Yellow Sweet Potato.  Man.  For similar names see Sweet Potato.

Yum Yum Pie.  Ber.

RADISH.

Alaska.  Sal.

Alexander's All Seasons.  Entered as All Seasons.

All Seasons.  Alx Gif low Lan Msu Spf Vl.

Similar names.  Alexander's All Seasons, Vick's All Seasons, All Year Round.

Seedsman's synonyms.  Celestial, Iow.
All Solid. Cur.
All Year Round. Sal. For similar names see All Seasons.
Arlington First Early. Lam.
   Similar names. See Long Scarlet.
Arrington’s First and Best. Entered as First and Best.
Barteldes’ Glass. Entered as Glass.
Beckert’s Chartier, Beckert’s Improved Chartier, Beckert’s Nonpareil. Entered as Chartier and Nonpareil.
Bertram Forcing. Vau.
   Similar names. See Long Black Spanish.
Black Spanish Oblong-Shaped. Brw. For similar names see Long Black Spanish.
Black Spanish Oval-Shaped. JMM. For similar names see Long Black Spanish.
Black Summer Turnip. Vau.
Bolgiano’s Early Long Scarlet, Bolgiano’s Large White, Bolgiano’s Snow White Turnip. Entered as Early Long Scarlet, Large White, and Snow White Turnip.
Bolgiano’s No. 1 Scarlet Globe. Blg. For similar names see Early Scarlet Globe.
Bolgiano’s No. 2 Scarlet Globe. Blg. For similar names see Early Scarlet Globe.
Boston Long Scarlet. Ggy. For similar names see Long Scarlet.
Breakfast. GN Vau. For similar names see French Breakfast.
Bright Breakfast. Bar Ham Jer Mgd McM.
   Similar names. See French Breakfast.
Seedsmen’s synonyms. French Breakfast, Ham.
Bright Red Turnip Forcing. M&S. For similar names see Red Turnip.
Bruce’s In and Out, Bruce’s Non Plus Ultra. Entered as In and Out and Non Plus Ultra.
Buckbee’s Crystal Forcing, Buckbee’s Improved Chartier, Buckbee’s Rapid Forcing, Buckbee’s Rockford Market. Entered as Crystal Forcing, Chartier, Rapid Forcing, and Rockford Market.
Buckskin Yellow Gray. Bgs.
Buist’s Early Long Scarlet, Buist’s Early Long White, Buist’s Earliest Scarlet Turnip, Buist’s Early Short White Forcing, Buist’s Yellow Summer Turnip. Entered as Early Long Scarlet, Early Long White, Early Scarlet Turnip, Early Short White Forcing, and Yellow Summer Turnip.
Burlington Early White Forcing. Lam. For similar names see Earliest White.
Burpee’s Earliest. Bur Pg. For similar names see Earliest Forcing.
Burpee’s Earliest Scarlet Button, Burpee’s Osaka, Burpee’s Ruby Pearl, Burpee’s Golden Dresden, Burpee’s Surprise. Entered as Early Scarlet Button, Osaka, Ruby Pearl, Golden Dresden, and Surprise.
California Cherry. M&S.
   Similar names. Moore & Simon’s California Cherry.
California Long White Spanish. Sim.
California Mammoth Long Black Spanish. Sim.
   Similar names. See Long Black Spanish.
California Mammoth White China. Ebe Emr Fer Lam Lun LB Loh Pks Tpk.

Similar names. See California Mammoth White Winter, Chinese Rose Winter.

California Mammoth White Winter. All Anb Ar Btl Btl Bel Big Bow Bgs Bgr
Bn Bru Buc Buc CE C&B Col Cus Cur Del DD Ebr Elt RE Eve Emr Fst Frl Ger
Gls Gdn GHI Gra Grw TG Hns Hrs Hrv Hst Hen Hbt H&C Hln H&P
NK Pac Pm Put Ptt Por Pug Qkr Raw Rec Rec Roc RP Sal S& R SC Shw
S&O Scr Sst SB S&H Tat Tem Tfl Thm Thr Til Trm T&B Vl Van Vlk Vw W&B Wtr.

Similar names. Mammoth White Winter, California Mammoth White China, California Winter, California Long White Spanish, Moore & Simon's California Cherry.

Seedsmen's synonyms. Russian Mammoth White, HP.

California White Winter. Cle Drr Ggy Hop Lam Man Mhl Nol.

Similar names. See California Mammoth White Winter.

Seedsmen's synonyms. Large White Russian, Ggy.


Similar names. Cardinal.


Similar names. See Long Cardinal.


Carmine Forcing. H&C M&S. For similar names see Earliest Carmine.

Carmine Olive-Shaped. Tg Hrn. For similar names see Scarlet Olive-Shaped.


Scarlet Olive, Ham. Short Leaf, Ham. Starlite, Ham.

Carter's Long Scarlet. Entered as Long Scarlet.

Celestial. Bkt Blg Bgs Bm Buc Bui Buc CE Cle Car D&H DD RE Frd Frd Gdn
Hcn Hrn low J&S Lam Lun Mgl Mns Mrs Pae HP Rec Rim Svc Stw Thm Van
Wt Wd Wd W&D.

Similar names. Chinese Celestial.

Seedsmen's synonyms. All Seasons, low. Chinese, Mgd. Chinese Half Long
White Chinese, Al. White Chinese, Bg Bui Bur Hen Liv Mns, etc.

Champion. Fst Hrn Pri.

Similar names. Faust's Champion.

Chartier. Agr Alx Anb Ar Bui Bak Brd Brt Btl Bkt Bst Bng Bg
Bgs Bm Bui Bui Bui Bur Brr C&J Cam CE Chl Ck C&B Cl CF Col Cox
Cyg Cus Cur CA Dlw Del D&D D&C Ddr Dwr Dwn Eas Ebr Eic Elt RE Ewg Fsr
Fsr Fst Fer Fld Efl Fld Ger Gls Gdn GHI Gra Gng GN Ggy Gry G&T HG Hns
Ham Hde Hrn Hrs Hrv Hst Hen Hbt H&C Hly Hln Hmp Hsp Hst H&P Imf low
Jae Joer MWJ J&M J&S Jns Kei Ken Kg Koe Kos Lam Lea Lun LB Liv Loh
Lon Mgl Man PM Mns Man May JCM JMM McK Mc-M Mc-M Mc-M Mc-M Mcs Msh
Mzy Neb Nol Nl Nk NV OW Old Pac Pks HP JMP Pbr Pm Ptt Ptt Poo Ppr
Pot Pri Pug Qkr Rrk Raw Rec Rec Roc Rt Rs RP Sal S& SC S&F Shw S&O Shm
Sic Sim Sox Spf SB Stw S&H Tem Tex Thm AGT Tfl Thm Thm T&B Vl Van
Vlc Vm Wt Web W&D Wll Wyg Yng Y&H.

Similar names. Beckert's Chartier, Beckert's Improved Chartier, Improved
Chartier, Aheer's Improved Chartier, Buckbee's Improved Chartier, Cox's
Improved Chartier, Long Chartier, Long Scarlet Chartier, Long Scarlet
Chartier White-Tipped, White-Tipped Chartier, White-Tipped Scarlet Chartier, White
Chartier, Long White Chartier.

Seedsmen's synonyms. Shepherd, Bgs Hen Vl Bur JL Bwc, etc. Early Mam-
momoth, Chl. Long Rose, Cam Bak. Long Rose White-Tipped, Hde Neb Put SC.
Chinese Celestial.  Tem Wat.

Similar names.  See Celestial, Chinese Rose Winter.

Seedsmen's synonyms.  Round Scarlet Chinese, Low Tex.

Chinese Globe Winter.  Low Tex.  For similar names see Chinese Rose Winter.


Similar names.  See Chinese Rose Winter.

Seedsmen's synonyms.  Celestial, Lan Stw.

Chinese Mammoth White.  Alr Blt Cox Frd GH Lnr Sm Shw Vau Vln.

Similar names.  See Chinese Rose Winter.

Seedsmen's synonyms.  Celestial, Alr Frd Lnr Vau.

Chinese Rose Summer.  Blg.  For similar names see Chinese Rose Winter.

Chinese Rose Winter.  Axl Alr Anb Ar Brl Brl Bkt Bel Ber Brg Bos Brk
Bgs Bri Brn Buc Bui Bur Brr Cam CE Chl Cle C&B Col CF Cox Crg Cts
Cur CA D&H DD Drw Drm Eus Ebr Eic Elt RE Evr Ewg Fmr Fqr Fst Frd Ger
Gls Gdn GH Gra Gng Gry Gry G&T Grw TG Hns Ham Hde Hrm Hrs Hrv Hst
Hen H&C Hly Hm Hop Hnt H&P Iow Jnc MWJ RHJ J&S Jus Kei K&F Kg
Kos Lam Lan Lea Lnr LB Liv Man PM Mus Mau May JCM McM Mic Ms Mv
M& Mrs Mzy Nef Nol NK OV Old Pac JMP Pir Pnr Pnt Ptt Poo Por Pri
Pug Qkr Raw Re Ec Rnc Rcc Rct Rs RP Sal S&R SC S&F Shw Shm Sic Sox
Stk S&H S&W Tat Tem TB Thm AGT Tlh Tpk Trm Vl Vau Vn Vn Vin Wat Web
W&D Wll Wli Wld Wdr WS Wgy Y&H.

Similar names.  Chinese Rose Summer, Perfection Chinese Rose Winter, Chinese
Globe Winter, Round Chinese Rose Winter, Long Chinese Rose Winter,
Chinese Scarlet Winter, Round Chinese Scarlet Winter, White Chinese,
Chinese Mammoth White, California Mammoth White Chinese, Chinese Celestial,

Seedsmen's synonyms.  Scarlet China, Bui Brn Liv Frd Fmr Vau, etc.  Scarlet
Winter, Bur.

Chinese Scarlet Winter.  Bow Bdg Brn Bui C&J Drv Elt Emr Fmr Frd Frd Iml
MWJ Ken Lan Lnr LB Liv Loh JMM McK Mhl Min Pg HP Rim Stw Tex Thr
Tlh Tpk Vau Wat Wav.

Similar names.  See Chinese Rose Winter.

Seedsmen's synonyms.  Chinese Rose Winter, Bui Liv Elt JL Ren Vau, etc.

Chinese Stump-Rooted.  Cle GH.  For similar names see Chinese Rose Winter.

Seedsmen's synonyms.  Celestial, Cle.

Cincinnati Long Scarlet.  Mhl.  For similar names see Long Scarlet.

Cincinnati Market.  Alr Blt Bkt Blg Bri Brn Bur Brr CE Col CA Drt Evr
Fnr Frd G&T Ham H&C Hm H&P Iml Iow J&S Jns Lan Lnr Liv Lon Mus
Mau May JCM JMM Mrs NK Old HP Rec Ree Shw Sic S&H Tex Tlh Til Vl
Vau Wll.

Similar names.  McCullough's Cincinnati Market, Cincinnati Long Scarlet.

Seedsmen's synonyms.  Glass, Bur NK Wll.

Clipper.  D&H.

Colorado Glass.  Vau.  For similar names see Glass.

Comet.  J&S.

Covent Garden.  Ggy.

Similar names.  Covent Garden Long Scarlet.

Seedsmen's synonyms.  Long Scarlet Short Top, Ggy.

Covent Garden Long Scarlet.  Kei.

Similar names.  See Covent Garden, Long Scarlet.

Cox's Improved Chartier, Cox's Rose Queen, Cox's Triumph.  Entered as Chartier,
Rose Queen, and Triumph.

Crimson Ball.  Drr.
RADISH.

Crimson Bunch. Ren.

Seedsmen’s synonyms. No Plus Ultra, Ren.

Crimson Red. Shn.

Crimson Red. Shn.

Crimson Red. Shn.

Crimson Red. Shn.

Crimson Red. Shn.

Crystal Forcing. Buc Drt Roc.

Similar names. Dreer’s Crystal Forcing, Buckbee’s Crystal Forcing.

Seedsmen’s synonyms. Model White Box, Alr.


Dainty Forcing. Hlm Vl.

Similar names. Holmes’ Dainty Forcing.

Dallwig’s Earliest Forcing. Dlw. For similar names see Earliest Forcing.

Dallwig’s Golden Yellow Oval-Shaped, Dallwig’s Twenty Day. Entered as Golden Yellow Oval-Shaped and Twenty Day.

Danish Attraction. Ren.

Dark Red Ball. Bur Hrs. For similar names see Fire Ball.


Deep Blood Red Turnip. Brk DD Ggy. For similar names see Red Turnip.


Similar names. See Scarlet Olive-Shaped.


Similar names. See Scarlet Turnip.


Deep Scarlet Turnip Forcing. Tat. For similar names see Scarlet Turnip.

Seedsmen’s synonyms. No Plus Ultra, Drn Liv.


Similar names. See Scarlet Turnip White-Tipped.


Similar names. See Scarlet Turnip White-Tipped.

Seedsmen’s synonyms. Rose Gem, Mzd.

Delicacy. Bgs Ebr LB May SC Thd.

Similar names. Early White Delicacy, Moore & Simon’s Early White Delicacy, White Delicacy.

Seedsmen’s synonyms. Half Long White Summer, SC.

Denver Glass. Hrs. For similar names see Glass.

Dickmann’s Model White Box. Entered as Model White Box.

Dom Pedro. JMP.

Similar names. Phillips’ Dom Pedro.

Double Quick White Forcing. J&S. For similar names see Earliest White.

Dreer’s Crystal Forcing, Dreer’s Crimson Ball, Dreer’s Earliest White Globe Forcing. Entered as Crystal Forcing, Crimson Ball, and Earliest White Globe Forcing.


Earliest Carmine Erfurt. Alr GH Vau. For similar names see Earliest Erfurt.

Seedsmen’s synonyms. Fireball, Alr. Rapid Forcing, Alr.

Earliest Carmine Forcing. Cur Nol W&D. For similar names see Earliest Carmine.


Seedsmen’s synonyms. Red Rocket, Blu.

Earliest Carmine Turnip. Dlw Ebr GH Hrn Spf Vau.

Similar names. See Earliest Carmine.
Earliest Erfurt. Fnr Hde K&F Wer.


Earliest Erfurt Blood Red. Bai Put. For similar names see Earliest Erfurt.


Similar names. See Earliest Erfurt.

Earliest Erfurt Scarlet Turnip White-Tipped. Gig.

Earliest Forcing. Chl.


Earliest of All Scarlet. Mhl.

Similar names. Sutton's Earliest of All Scarlet.

Earliest Scarlet. Man. For similar names see Earliest Forcing.


Earliest White Forcing. Ren. For similar names see Earliest White.


Earliest White Olive. Mgd. For similar names see Earliest White.

Seedsmen's synonyms. White Rocket, Mgd.

Early Bird. GN. Lon Sal.

Similar names. Salzer's Early Bird.


Early Bright Scarlet Olive-Shaped. Dw.

Similar names. See Scarlet Olive-Shaped.


Similar names. See Scarlet Olive-Shaped.

Early Carmine Olive-Shaped Forcing. Y&H.

Similar names. See Scarlet Olive-Shaped.

Early Deep Blood Red Turnip. MV Sor Thr. For similar names see Red Turnip.

Early Deep Red Turnip. Bri TB. For similar names see Red Turnip.

Early Deep Red Turnip Forcing. TB. For similar names see Red Turnip.

Early Deep Scarlet Olive-Shaped. Buc Bui Ebe Fqr Gh Hde Lam Man Pac Ree RP Y&H.

Similar names. See Scarlet Olive-Shaped.


Similar names. See Scarlet Olive-Shaped.

Early Deep Scarlet Olive-Shaped White-Tipped. RE SB.

Similar names. See Scarlet Olive-Shaped.

Early Deep Scarlet Tennis Ball. Lon.

Early Deep Scarlet Turnip. Bak Brt Brk C&J Col D&H Ebe Elt Gdn GH TG Hrn Jac Lam Min MV Neb NK Pac Pg Pri Reo Roe S&O Sie Thr Vau Web Wdr Y&H.

Similar names. See Scarlet Turnip.

Seedsmen's synonyms. Early Round Dark Red Erfurt, Btl. Non Plus Ultra,

Cur Fer Lam Pg. Round Dark Red, Col.
Early Deep Scarlet Turnip Forcing. Brw CF Cur Fqr Fer Fle Gry Haw Jns Mel Rim Thr Wer.

Similar names. See Scarlet Turnip.

Seedsmen's synonyms. Dark Red, Col DD Fle Jns Loh. Dark Red Ball, Col.

Early Deep Scarlet Turnip White-Tipped. SB.

Similar names. See Scarlet Turnip White-Tipped.

Early Fire Ball. Liv Wat. For similar names see Fire Ball.

Early Frame. Ewg Mhl Tat. For similar names see Wood's Early Frame.

Early Frame Forcing. Shm. For similar names see Wood's Early Frame.


Similar names. See French Breakfast.

Seedsmen's synonyms. Early White-Tipped Scarlet Olive-Shaped, SC.

Early French Deep Scarlet Turnip. Thr. For similar names see Scarlet Turnip.

Early French Scarlet Forcing Turnip. Brk Fqr Thr.


Similar names. See Scarlet Turnip.

Early French Scarlet Turnip. Thr. For similar names see Scarlet Turnip.

Early French Scarlet White-Tipped Forcing Turnip. Mud Thr.

Similar names. See Scarlet Turnip White-Tipped.

Early French Scarlet White-Tipped Turnip. Thr.

Similar names. See Scarlet Turnip White-Tipped.

Early Garnet. MWJ Ken Lan.

Early Giant White Stuttgart. C&J Fer Lam LB HP WS.

Similar names. See White Stuttgart.

Early Golden Dresden. Lan. For similar names see Golden Dresden.

Early Golden Yellow Oval-Shaped. Fer Gil Mgd HP Shw.

Similar names. See Golden Olive-Shaped.


Similar names. See Half Long Scarlet.

Early Half Long Scarlet. Bui Lea. For similar names see Half Long Scarlet.

Early Island Bright Scarlet. TB.

Early Long Brightest Scarlet. Buc Por Roe S&R.

Similar names. See Long Scarlet.


Similar names. See Long Scarlet.


Similar names. See Long Scarlet.


Early Nine-Pin Shape. Sim.

Early Non Plus Ultra. MV Sim Thr. For similar names see Non Plus Ultra.

Early Olive-Shaped. Bow Bur Fqr Hns.


Seedsman’s synonyms. Half Long Scarlet, Bow.

Early Oval Dark Red. Bur. For similar names see Round Dark Red. &


Similar names. See Early Purple Turnip.

Early Purple Turnip. Dlw Raw.

Similar names. Purple Summer Turnip, Early Purple Olive-Shaped White-Tipped.

Early Red Turnip. Bou Crg MWJ Mns Min Wd WS.

Similar names. See Red Turnip.

Seedsman’s synonyms. Early Scarlet Turnip, Wd WS.

Early Rose Gem. Mls Sox. For similar names see Rosy Gem.

Early Rose Turnip. Col. For similar names see Rose Turnip.

Early Round Bright Red. Brw. For similar names see Round Dark Red.

Early Round Dark Red. Brd Bld Bnr Bur CE C&B Cur D&C Dnm Fst GH Ham Hen Hlm J& Kes Mns Man Mls Mrs Pir Prn Poo Rec Rec Rec Tm Vd W&D.

Similar names. See Round Dark Red.


Early Round Dark Red Erfurt. Bld Hns SC.

Similar names. See Earliest Erfurt.

Seedsman’s synonyms. Early Deep Scarlet Turnip, Bld.

Early Round Deep Scarlet. Bow Cox Crs Fer Gls Loh Til Tpk.

Similar names. See Scarlet Turnip.


Similar names. See Scarlet Turnip.


Early Round White-Tipped. Til. For similar names see White-Tipped.

Early Scarlet Ball. Brr M&K. For similar names see Fire Ball.

Early Scarlet Button. Bur Hlm Rec Tm Vl. For similar names see Scarlet Button.

Early Scarlet Gem White-Tipped Forcing. THR.


Seedsman’s synonyms. Prussian Globe, G&J Lbr.

Early Scarlet Globe Short Top. Hrs. For similar names see Early Scarlet Globe.


Similar names. See Early Scarlet Globe.

Early Scarlet Olive-Shaped. Anb Bt Btl Bdg Buc C&J CE Cox Dlw DD Elec RE Fer Ggy K’si Lh Mgd PM Mc K Mm Min Nk Pks Pnt Ptt Rec Rec Rec SC S&F Sim Sk S&H Tm Tmn.

Similar names. See Scarlet Olive-Shaped.


Seedsmen’s synonyms. Early French Breakfast, Ken Ptn Sim. Early French Breakfast, SC.

Early Scarlet Prussian Globe. Lan Mnd Thr Til. For similar names see Prussian Globe.

Early Scarlet Short Top. Kei Sie. For similar names see Scarlet Turnip.


Similar names. See Scarlet Turnip.


Early Scarlet Turnip Forcing. Ber Cur DD H&C Mzy Hrs HP Pir Tem Thr.

Similar names. See Scarlet Turnip.

Seedsmen’s synonyms. Dark Red Ball. Hrs.

Early Scarlet Turnip Short Top. H&P. For similar names see Scarlet Turnip.


Similar names. See Scarlet Turnip White-Tipped.


Early Scarlet Turnip White-Tipped Forcing. Bak Fer Hrs Lnr Loh Mzy Nol S&O Til Thr.

Similar names. See Scarlet Turnip White-Tipped.

Early Short Top. Sim.

Seedsmen’s synonyms. Long Scarlet, Sim.

Early Short White Forcing. Bui. For similar names see Earliest White.

Early Snow White. GN.

Similar names. Bolgiano’s Snow White Turnip, Salzer’s Snow White Ice, Snow White Turnip, Snow White Ice.

Early Summer Turnip. Nef.

Seedsmen’s synonyms. Early White Turnip, Nef.

Early Triumph. MWJ Thr W&D. For similar names see Triumph.

Early White Box. Bri Bui Del Ebe NK Sox. For similar names see White Box.

Seedsmen’s synonyms. Early White Turnip, Ebe Ebr Fqr Thr.

Early White Delicacy. M&S. For similar names see Delicacy.

Early White Italian Summer. Bui. For similar names see White Summer.


Similar names. See White Olive-Shaped.


Similar names. See White Olive-Shaped.

Early White Stuttgart. Van. For similar names see White Stuttgart.

Early White Surprise. Shw. For similar names see Surprise.
American Varieties of Vegetables.


Similar names.  See White Turnip.

Seedsmen's synonyms.  Early Summer Turnip, Nef.  Early White Box, Ebe Ebr Fqr Thr.

Early White Turnip Forcing.  Mpd Y&H.  For similar names see White Turnip.

Early White Turnip Short Top.  Bak Lan Van.

Similar names.  See White Turnip.

Seedsmen's synonyms.  Philadelphia White Box, Van.

Early Yellow Ball.  Bur.

Early Yellow Olive-Shaped.  Y&H.

Similar names.  See Golden Olive-Shaped.

Early Yellow Summer Turnip.  CE Evr GH TG Min NK Tem.

Similar names.  See Golden Summer Turnip.

Early Yellow Turnip.  Brd Ctg Fqr Grw Pnt SC.

Similar names.  See Golden Summer Turnip.

Early Yellow Turnip Forcing.  Y&H.

Similar names.  See Golden Summer Turnip.

Eighteen Day Forcing.  Sal.  For similar names see Twenty Day.


Eighteen Hundred and Thirty-Four.  Man.

Erfurt Dark Red.  Pnt Sal.  For similar names see Earliest Erfurt.

Evans' Scarlet Globe Forcing.  Entered as Scarlet Globe Forcing.

Extra Early Carmine Globe.  LB Shm.  For similar names see Earliest Carmine.

Extra Early Carmine Olive-Shaped.  Koe May JCM OV Tpk WS.

Similar names.  See Scarlet Olive-Shaped.

Extra Early Deep Scarlet Turnip.  Bug C&J Gra Ken Pri W&D.

Similar names.  See Scarlet Turnip.


Extra Early Deep Scarlet Turnip White-Tipped Forcing.  Hrm Lan Mel Y&H.

Similar names.  See Scarlet Turnip White-Tipped.

Extra Early Erfurt.  CA TG Yng.  For similar names see Earliest Erfurt.


Extra Early Red Forcing.  Pri.  For similar names see Red Turnip.

Extra Early Rosy Gem.  Gra Wdr.  For similar names see Rosy Gem.

Extra Early Round Red.  Brr.  For similar names see Round Dark Red.

Extra Early Ruby Pearl.  Shw.  For similar names see Pearl.


Similar names.  See Early Scarlet Globe.

Seedsmen's synonyms.  Cardinal Globe, Wd.


Similar names.  See Early Scarlet Globe.

Extra Early Scarlet Olive-Shaped.  Wd.

Similar names.  See Scarlet Olive-Shaped.

Extra Early Scarlet Prussian Globe.  Koe l1P.

Similar names.  See Prussian Globe.

Seedsmen's synonyms.  Vick's Globe, HP.


Similar names.  See Scarlet Turnip.
Extra Early Scarlet Turnip Forcing. CE Gra Hrm Ptt Rec Sie Y&H.

**Similar names.** See Scarlet Turnip.

Extra Early Scarlet Turnip White-Tipped. IIP.

**Similar names.** See Scarlet Turnip White-Tipped.

**Seedsmen's synonyms.** Gem, Put.

Extra Early Scarlet Turnip White-Tipped Forcing. CE Y&H.

**Similar names.** See Scarlet Turnip White-Tipped.


**Similar names.** See White Olive-Shaped.

Extra Early White-Tipped. WS. For similar names see White-Tipped.

Extra Early White Turnip. Ewg Pri.

**Similar names.** See White Turnip.

Faust's Champion. Entered as Champion.

Faust's Favorite. Fst.

**Similar names.** Tait's Favorite Forcing.

Felton's Improved White Box, Felton's Model White Box, Felton's White Box.

Entered as White Box and Model White Box.

Fire Ball. Bri JS& Mhl Tt.

**Similar names.** Early Fire Ball, Early Scarlet Ball, Scarlet Ball White-Tipped, Dark Red Ball, Scarlet Ball.


First and Best. CA.

**Similar names.** Arrington's First and Best.

First Crop. Gry.

First Number. Mhl.

Fourteen Day. Alr. For similar names see Twenty Day.


**Similar names.** Bright Breakfast, Early French Breakfast, Improved French Breakfast, Improved Breakfast, Old's Improved French Breakfast, Breakfast.


French Café. Lan Thm.

French Forcing. Rs.

**Similar names.** French Forcing Deep Scarlet, French Forcing Early Deep Scarlet.

**Seedsmen's synonyms.** Non Plus Ultra, Rs.

French Forcing Deep Scarlet. Ebr. For similar names see French Forcing.

French Forcing Early Deep Scarlet. CF Mnd Thr.

**Similar names.** See French Forcing.

French White Tail. Ebr.
Giant White Strasburg.  Cle.  For similar names see White Strasburg.


Similar names.  See White Stuttgart.

Glass.  Btl Blg Bri CE Frd GH Hst Hse Iml Ken Lnr NK Por Rce S&R Til Trm VI Wl.

Similar names.  Barteldes’ Glass, Colorado Glass, Denver Glass.

Seedsmen’s synonyms.  Cincinnati Market, Bur NK Wl.  Non Plus Ultra, VI.

Golden Ball.  Bri.  For similar names see Golden Globe.


Similar names.  Shumway’s Golden Globe, Yellow Globe, Improved Golden Ball.  See also Golden Summer Turnip, Golden Olive-Shaped.

Seedsmen’s synonyms.  Golden Summer, Bou S&R.  Yellow Summer, Anb SC.

Golden Olive-Shaped.  Bdg Mau S&F.

Similar names.  Golden Yellow Olive-Shaped, Dallwig’s Golden Yellow Oval-Shaped, Early Golden Yellow Oval-Shaped, Yellow Olive-Shaped, Oval-Shaped, Early Yellow Olive-Shaped.  See also Golden Globe, Golden Summer Turnip.

Seedsmen’s synonyms.  Yellow Olive-Shaped, Wdr.


Seedsmen’s synonyms.  Buist’s Yellow Summer Turnip, Bui.

Golden Summer Turnip.  Brk Bri Bac CE C&B Ebr Ewg Gls Gra Ggy RHJ Lnr Mnd Man MV Rce Sox Tal Thr Wer.

Similar names.  Yellow Summer Turnip, Buist’s Yellow Summer Turnip, Large Yellow Summer Turnip, Improved Large Yellow Summer Turnip, Golden Yellow Summer, Early Yellow Turnip, Early Yellow Turnip Forcing, Early Yellow Summer Turnip.  See also Golden Globe, Golden Olive-Shaped.

Golden Yellow Oval-Shaped.  Dlw.  For similar names see Golden Olive-Shaped.

Seedsmen’s synonyms.  Yellow Summer Turnip, C&B Ebr.


Seedsmen’s synonyms.  Surprise, J&S.


Similar names.  See Golden Summer Turnip.

Gray Summer Turnip.  Bkt Bri Bac Cle Cnr Fer GH Hrv Koe Kos Lnr Liv MV Nef HP Ptt Rce Roc S&R Sox S&W Til W&D Wer Yng.

Griffing’s Early Long Scarlet.  Entered as Early Long Scarlet.

Half Long.  Mrs.

Seedsmen’s synonyms.  Olive-Shaped, Mrs.


Half Long Black Autumn.  Bng Nol W&D.

Similar names.  See Long Black Spanish.

Half Long Black Spanish.  Brn C&B Fer Gls Hen Iml J&S MJW Lnr Mns Nol Raw S&W Thr Y&H.

Similar names.  See Long Black Spanish.
Similar names. See Long Black Spanish.

Half Long Brightest Scarlet.  Cle Mhl *Thm*.
Similar names. See Long Scarlet.

Half Long Deep Scarlet.  Bak Bkt Bow Bru Buc Bur Cam *C'F D&H Drs Ebe Eie RE Fer GI* TG IIln RIJ J&S Jus Ken Kg Lan *Lue Lie Mgd Mss HP Put For Ren Ree Sal &R Shw TB Thr TV Vau*.
Similar names. See Half Long Scarlet.


Similar names. See Half Long Scarlet.

Half Long Olive-Shaped.  Pg. For similar names see Half Long.

Half Long Red.  Stw Vin. For similar names see Half Long Scarlet.

Half Long Scarlet.  *Se*.

Seedsman’s synonyms. Early Olive-Shaped, Bow.

Half Long White Strasburg.  *GH*. For similar names see White Strasburg.

Half Long White Summer.  SC.

Seedsman’s synonyms. Delicacy, SC.

Half Long White-Tipped.  Bow. For similar names see Half Long.

Seedsman’s synonyms. French Breakfast, Bow.

Hamburg Forcing.  *Dre*.


Henderson’s Rose Turnip.  Entered as Rose Turnip.

Holmes’ Dainty Forcing, Holmes’ Royal Red Forcing. Entered as Dainty Forcing and Royal Red Forcing.

Hospital.  Col Crs Cur Ebe Hrn Lan RP Stw Vk.

Seedsman’s synonyms. Long White Strasburg, Kra. White Naples, RP. White Strasburg, Col Cur Crs Ebe Lan Stw, etc.

Similar names. White Icicle, Long White Icicle.

Improved Breakfast, Improved Chartier, Improved Early Long Scarlet Short Top, Improved Early Scarlet Globe, Improved Early Scarlet Turnip, Improved French Breakfast, Improved Golden Ball, Improved Golden Dresden, Improved Half Long Black Spanish, Improved Large Yellow Summer Turnip, Improved Long Scarlet Short Top, Improved Scarlet Button, Improved Shepherd, Improved White Strasburg. Entered as Breakfast, Chartier, Early Long Scarlet Short Top, etc.

In and Out.  *Bru*.
Similar names. Bruce’s In and Out.


Similar names. Japanese Scarlet, Japanese Winter. See also Long White.


Jones’ Scarlet Conical.  Entered as Scarlet Conical.

Just So.  Mau.

Krewson’s Oblong Black Spanish.  *Drv Lan*.
Similar names. See Long Black Spanish.
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Seedsmen's synonyms. Early Long White Vienna, Neb. Long White Vienna, Alx Bui Bur Fer Hen Thr, etc. Vianna, Sox. White Vienna, Bgs Ebe RE G&T Lan McK, etc.

Landreth's Earliest.  Lan. For similar names see Earliest Forcing.

Landreth's White Lady Finger.   Entered as White Lady Finger.

Large White.   B1g.

Large White Baltimore.   Rec. For similar names see Long White.

Large White Globe.   Bur CE Cle D&c Evr Fst Hlm VI.

Similar names. See White Globe.

Seedsmen's synonyms. Large White Summer Turnip, J&S.

Large White Russian.   G'g. For similar names see White Russian.

Seedsmen's synonyms. California Winter, G'g.

Large White Spanish.   B1g E1t Fer G&T Inl J&S L1r Mnd Min MV Nol Sox Thr Vk.

Similar names. See White Spanish.

Large White Summer.   Brn CE Drr G&T PM S&W.

Similar names. See White Summer.

Large White Summer Turnip.   Brk Drr E1t Enr Fer GH J&S Ken Lur Liv Mns Mhl Rec Tex Thr Til Y&H.

Similar names. See White Summer.

Seedsmen's synonyms. Large White Globe, J&S.

Large Yellow Summer Turnip.   Drr E1t J&S Lur Mhl.

Similar names. See Large Summer Turnip.

Late Deep Scarlet Turnip.  GH. For similar names see Scarlet Turnip.

Leafless.   Bri Bue Bur Dm RN Ggj Ham Liv JL Mns Mni Mls NK WS.

Similar names. Leafless Forcing, Leafless Scarlet Forcing, Leafless Bright Red Forcing.

Leafless Bright Red Forcing.   Lnr. For similar names see Leafless.

Leafless Forcing.   Vau. For similar names see Leafless.

Leafless Scarlet Forcing.   Bui. For similar names see Leafless.

Leonard's Three Leaf.   Entered as Three Leaf.

Leavings' Improved Shepherd.   Entered as Shepherd.

Lightning Scarlet Turnip Forcing.   Bui.

Similar names. See Scarlet Turnip.

Lily White.   Bru.

Livingston's Pearl, Livingston's Pearl Forcing.   Entered as Pearl and Pearl Forcing.

Long Black Corsican.   Mnd. For similar names see Long Black Spanish.

Long Black Spanish.   Alr Anb Ar Bai Bak Brd Bt Btt Bl Bt Bui Ber Dom Bow Bgg Brk Bdg Bgs Bri Bru Bui Bur Brr Cam Cle Cle Col Cox Crg Crg Crs Cur D&H Df Dun E1t E1t E1t E1t E1t E1t E1t E1t E1t E1t E1t E1t E1t Fst Fst Fst Fst Fst Fst Fst Fst Fst Fst Fst Fst Fst G&T Grw Hns Hde Hrm Hrs Hrv Hst Haw Hen H&C Hly Hlm H&P Hiu Jac MWJ J&S Jns Ken Kg Koe Kos Lan Lan Lnr LB Liv Loh PM Mns May JCM JMM Mhl Min MV Neb Nef Nol NK OV OLd Pac Pk Pks HP Put Pri Raw Ree Roc Rs RP S&R Shw S&O Sie S'n Sox SB S&H S&W Tat Tex TB Thm Thr Til Tpk Vl Vau Vk Vin Wnk Web W&D Wd Wdr WS Y&H.

Similar names. Long Black Corsican, Long Black Summer, Long Black

**Seedsmen’s synonyms.** Long Black Winter, Fqr. Long Black Fall, Anh Ken Ptt SC.

Long Black Summer. For GH Hlm LB Yk.H.  
**Similar names.** See Long Black Spanish.

Long Black Winter. Fqr S&F. For similar names see Long Black Spanish.  
**Seedsmen’s synonyms.** Long Black Spanish, Fqr.

Long Brightest Scarlet. Ar Bak Brd Brt Bil Bkt Brk Bnr Bwr Brw CE C&B Col Crs D&H Eic Frd GH Ggy Gry Gwr Hms Ham Hrn Hen Hlm Hop Hse Ken Kg Lam Lan Lur LB Liv Mgd PM May JCM Mic Mls MV Mrs NJ Pnc Pnt Rec Sal &O Sim Sie Sor AGT Til Trn VI Van Wd WS Wyg Yng.  
**Similar names.** See Long Scarlet.  

**Similar names.** See Long Scarlet.  
**Seedsmen’s synonyms.** Long Scarlet, J&S.

**Similar names.** Cardinal, Cardinal Globe, Shumways’s Cardinal.  

Long Chartier. Brk CE D&H Ebe Hly Ren Stk Tat.  
**Similar names.** See Chartier.

Long Chinese Rose Winter. Sim. For similar names see Chinese Rose Winter.  

Long Gray Laon. Loh. For similar names see Long Gray Winter.

Long Gray Winter. Cnr Ebe Kei.  
**Similar names.** Long Gray Laon.

Long Purple Rose. Mud. For similar names see Long Rose.

Long Red. Brn. For similar names see Half Long Scarlet.

Long Red White Longfellow. Sal.

Long Rose. Lan.  
**Similar names.** Long Rose White-Tipped, Long Purple Rose.  
**Seedsmen’s synonyms.** Chartier, Bak Lan.

Long Rose White-Tipped. Neb SC. For similar names see Long Rose.  
**Seedsmen’s synonyms.** Chartier, Hde Neb Pnt SC.

Long Salmon. Kei Pri. For similar names see Salmon.


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**SEEDSMEN’S SYNONYMS.** Early Short Top, Sim. Monthly, RE.

**Long Scarlet Chartier.** RHJ Wd WS. For similar names see Chartier, Long Scarlet.

**Long Scarlet Chartier White-Tipped.** MV Nol Sor Thr.

**Similar names.** See Chartier, Long Scarlet.

**Long Scarlet Short Top.** Arr Anb Ar Bai Bak Brd Bt Bkt Bel Bon Brk Bdg Bri Brn Bng Brb Cam Cle C&B Crg Crs Cur Dlw Drr Dnm Err RE Frd Gls Gng Ggy Gry Hrs Hrn Hrs Hly Haw Hen Hly Hop H&P Jns K&W Ken Kg Koe Kos Lan Lea JL Mas May JMM McM Mie Mhl Mls Min MV Neb Nol NI NK Ov Prn Put Poo Pot Pri Pug Rce S&O Shm See Sor SB S&W Tat Tex Thr Thb Tlk Tpk Vk W&D Wer Wll Wlt Yng Y&H.

**Similar names.** See Long Scarlet.

**SEEDSMEN’S SYNONYMS.** Coret Garden, Ggy. Salmon, Mhl.

**Long Scarlet White-Tipped.** Fnr RHJ. For similar names see Long Scarlet.

**Long White.** Cam Crg Kéi.


**Long White Chartier.** Lív. For similar names see Chartier.

**SEEDSMEN’S SYNONYMS.** Nauparéil, Lív.

**Long White Lady Finger.** CE Eic Ken Mhl Rce Shw TB.

**Similar names.** See Lady Finger.

**Long White Iceicle.** Bld Gmj WMJ Lan Lar Sim Thr. For similar names see Iceicle.

**Long White Napels.** Bkg Bdg Bks CE Cle Crs DD Fer GH Hrn H&P Lam Lea LB Loh Mnd May JCM Mzy Nef Pri Ren Rce Sal SC S&F Sim Tat Thr Tpk Web Wd WS Y&H.

**Similar names.** See White Naples, Long White.

**Long White Russian.** Cle Koe Lan. For similar names see White Russian.

**Long White Spanish.** Btr Bkt Blg Bgs Brn Bur CE DD Drr Ger GH Hrn H&P MWJ Ken Kg Kos Lan Loh Mns Mzy Neb Nef HP Put Rce SC S&O Sor Til Tpk Van Wd WS Y&H.

**Similar names.** See White Spanish, Long White.

**SEEDSMEN’S SYNONYMS.** Long White Full, Ken SC.

**Long White Strasbourg.** D&H Del Koe Lan RP Shw Shm Van Web.

**Similar names.** See White Strasbourg.

**SEEDSMEN’S SYNONYMS.** Hospital, Kra.

**Long White Summer.** SC. For similar names see Long White.

**Long White Vienna.** Alx Alx Anb Bai Brd Btl Bkt Ber Bow Brk Brn Brui Bur CE C&B Col CF Cox Crs Cur DD Drr Evr Fnr Fst Frd Gls Gdn GH Hns Hrn Hst Hen H&K Hly Him Iml Jac MJW J&M J&S Jns Kos Lnr LB Loh Mfg PM Mns Mic MV Nol NK Pac HP Pir Prn Qkr Rce Rece SC Shw S&O Sim Sor Spl S&W Tat Tex Thr Thb Til Trm T7 Vau Vk Wat W&D Wgg Yng Y&H.

**Similar names.** See White Vienna, Long White.

**SEEDSMEN’S SYNONYMS.** Lady Finger, Bui Bur Fer Hen Thr Vk, etc. White Lady Finger, DD Liv Man SC.
Long White Winter. S&F. For similar names see Long White. 
McMillan's Early Scarlet Turnip, McMillan's Extra Early Scarlet Turnip. Entered as Early Scarlet Turnip and Extra Early Scarlet Turnip.
Mammoth White Russian Winter. C&J HP. 
Similar names. See White Russian. 
Seedsman's synonyms. California Mammoth White, HP. 
Mammoth White Winter. JMM Shm. 
Similar names. See California Mammoth White Winter.
Market. Air.
Seedsman's synonyms. Shepherd, Alr. 
Similar names. See Long Scarlet. 
Market Gardener's Early Long Scarlet Short Top. HP Pnt. 
Similar names. See Long Scarlet. 
Market Gardener's Extra Long Scarlet. Bri. For similar names see Long Scarlet. 
Market Gardener's Ideal Long Scarlet. Evr Rob. 
Similar names. See Long Scarlet. 
Market Gardener's Long Scarlet. Bgs K&F Put Spf VI. 
Similar names. See Long Scarlet. 
Mills' Earliest. Mb. For similar names see Earliest Forcing. 
Model White Box. Air Cur DD Iow J&S Mos Wll. For similar names see White Box. 
Seedsman's synonyms. Crystal Forcing, Alr. 
Monthly. RE. 
Seedsman's synonyms. Long Scarlet, RE. 
Moore's Carmine Forcing, Moore's Quick Selling. Entered as Carmine Forcing and Quick Selling. 
Moore and Simon's California Cherry, Moore & Simon's Early White Delicacy, Moore & Simon's Improved White Lady Finger, Moore & Simon's Pink Lady Finger, Moore & Simon's Red Strawberry. Entered as California Cherry, Early White Delicacy, White Lady Finger, Pink Lady Finger, and Red Strawberry. 
Newcome. Ebe Evr Hst H&P J&S VI. 
Seedsman's synonyms. White Olive-Shaped, Ebe. 
Nonpareil. Bkt Bri.
Seedsman's synonyms. White Chartier, Bkt Bri. Long White Chartier, Liv. 
Non Plus Ultra. Ax Bt Bak Drd Bt Bow Bgs Bri Bui Brv CE Col Crs Dlw DD RE Evr Ewg Fnr Fqr Fer Fle Frd Gls Ggy Grv Hns Hde Hrm Hrv H&P Iow Jns K&W Ko& Lam Lnr LB Liv Lor Mfgl May JCM JMM Mic Pk Ps Pk Pst Pri Raw Rce Roc Rs SC Shm Sie Sox SB S&W Tat Til Vi Van Waa Web Wyg. 
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**Similar names.** See Non Plus Ultra.

Non Plus Ultra Forcing. Not Shw W&D. For similar names see Non Plus Ultra.

Norwood Long White. JMM.

**Similar names.** McCullough’s Norwood Long White.

Olds’ Improved French Breakfast. Entered as French Breakfast.

Olive Gem. McK Ren. For similar names see Rosy Gem.

Olive Rose. JMP. For similar names see Rosy Gem.

Olive-Shaped. Hnt Mrs.

**Similar names.** See Scarlet Olive-Shaped, White Olive-Shaped.

**Seedsman’s synonyms.** Half Long, Mrs.

Osaka. Big Bur D&H J&S.

Paris Beauty. Bgs Bur J&S Mgd Mrs May SB.

**Similar names.** Paris Red Beauty, Scarlet Beauty.


Parisian Black Spanish. M&S. For similar names see Long Black Spanish.

Paris Red Beauty. M&S. For similar names see Paris Beauty.

Pearl. Bri JI.

**Similar names.** Livingston’s Pearl, Livingston’s Pearl Forcing, Pearl Forcing, White Pearl, Ruby Pearl, Extra Early Ruby Pearl.

Pearl Forcing. Bkt Frd Hlm Iml Liv Mns Mzy HP Rec SB.

**Similar names.** See Pearl.

Perfection Chinese Rose Winter. M&S.

**Similar names.** See Chinese Rose Winter.

Perpetual White Summer. Iow. For similar names see White Summer.

Philadelphia Gardener’s Long Scarlet. J&S. For similar names see Long Scarlet.

Philadelphia Gardener’s Long Scarlet Short Top. M&S.

**Similar names.** See Long Scarlet.


**Similar names.** See White Box.

**Seedsman’s synonyms.** Earliest White Turnip Short Top, Vau.

Philippes’ Dom Pedro. Entered as Dom Pedro.

Pink Lady Finger. M&S Not. For similar names see Lady Finger.

Price & Reed’s Forcer. Pri.

Prussian Globe. Bri Hlm MWJ Lnr.

**Similar names.** Early Scarlet Prussian Globe, Extra Early Scarlet Prussian Globe, Prussian Scarlet Globe.

**Seedsman’s synonyms.** Early Scarlet Globe, G&T Lnr.

Prussian Scarlet Globe. Bul G&T.

**Similar names.** See Early Scarlet Globe, Prussian Globe.

Purple Summer Turnip. Bul. For similar names see Early Purple Turnip.

Quaker City Early White Box. Qkr. For similar names see White Box.

Queen of the Market. May.

Quick Selling. M&S.

**Similar names.** Moore’s Quick Selling.

Raphanus Caudatus. Bdg Thr.

**Seedsman’s synonyms.** Edible Pod, Thr. Rat-Tailed, Thr.

Similar names. Buckbee’s Rapid Forcing.


Rawson’s Scarlet Conical. Entered as Scarlet Conical.


Similar names. White Tipped Rocket, White Rocket.


Red Strasburg. Min M&S. For similar names see White Strasburg.

Red Strawberry. M&S.


Seedsmen’s synonyms. Cherry, Bdg. Early Scarlet Turnip, Bdg.

Rennie’s White-Tipped. Ren. For similar names see White-Tipped.

Rettig. J&S.

Seedsmen’s synonyms. Round Black Spanish, J&S.

Rockford Beauty. Buc.


Similar names. Buckbee’s Rockford Market.

Rose Gem Forcing. Evr VI. For similar names see Rosy Gem.

Rose Olive-Shaped. Brd Bkt Bel Bgs Hrs Mls Vin.

Similar names. See Scarlet Olive-Shaped.

Rose Queen. Cox. For similar names see Rosy Gem.

Rose Turnip. CE C&B Hen Rce.

Similar names. Henderson’s Rose Turnip, Early Rose Turnip.

Rosy Gem. Alr Ar Brd Btl Bkt Bel Bgs Bri Buc Bur Brw CE Cle Cok D&H Del Drm Ebe RE Fnr Fle Frd GH Gng GN Grw TG Ham Hrs Hsr Hst Haw Htb Hop Hse Iow J&S Kg Lnr LB Liv Mgd Man JMM McK Mf Mrs Neb NK Pir Pnt Pri Ren Rce Roc Rs RP Shw S&O Shm Sie Sim SB Tem Tex Thb Til Trm T&B Wca Web Y&H.


Rosy Gem White-Tipped. Crs. For similar names see Rosy Gem.

Rosy Queen. May Thb Tpk. For similar names see Rosy Gem.

Round Black Spanish. Alx Alr Bai Brd Btl Bkt Big Bow Egg Brk Bdg Bgs Bri Bru Bng Buc Bur C&J CE Cle C&B Cox Crs Cur DD Drr Elt Emr Evr Fnr Fq
Round Black Winter.  Fqr S&F  For similar names see Long Black Spanish  
Round Chinese Rose Winter.  Bkt Bgg Hde  
Round Chinese Scarlet Winter.  Bgs Col Drr Ebr  
Round Dark Red.  Col Frd  
Round Deep Scarlet.  Cle  For similar names see Scarlet Turnip  
Round Red.  Fld Hrs  For similar names see Round Dark Red  
Round Red Forcing.  Drr Mhl  For similar names see Round Dark Red  
Round Rose.  Thm  For similar names see Rosy Gem  
Round Rose White-Tipped.  Thm  For similar names see Rosy Gem  
Round Scarlet China.  Bur Col Drr Iow Lan  
Round Scarlet Pamir.  HLP  
Round Scarlet White-Tipped.  Pot  
Round White.  Fld  For similar names see White Globe  
Round White Forcing.  Drr Mhl  
Round White Munich.  Mnd Pnt SC  
Round White Spanish.  Bdg Bgs G&T Mns  For similar names see White Spanish  
Round White Stuttgart.  Lan  For similar names see White Stuttgart  
Round White Turnip.  Hrs  For similar names see White Turnip  
Royal Red Forcing.  Hlm VL  
Ruby Pearl.  Bur Ham Mns Man Rec  For similar names see Pearl  
St. Louis White Summer.  CE DD K&F Pnt SC Spi Trm  
Sakurajima Mammoth.  Chl Thr  
Salmon.  J&S Mhl  
Salzer's Every Day. Sal.
Scarlet Ball. J. L.
Scarlet Beauty. D&H. For similar names see Paris Beauty.
Scarlet Button. Bai Bur CE D&H Hst Hbt Hlm Mgld Mhl Ree Sie.
Scarlet Globe White-Tipped. Pne Wd.
Scarlet Turnip. Bai Bel Brn Cam Cur Del Emr RE Fer Ger Gra Hrs Hrv Man Mrs Prn Pot Pug Ren Sal Thm Vin Wer Wl Wd Wdr WS.
AMERICAN VARIETIES OF VEGETABLES.


SEEDSMEN'S SYNONYMS. Round Red, Hrs.

Scarlet Turnip Forcing. Mgd S&W. Tat. For similar names see Scarlet Turnip.


SEEDSMEN'S SYNONYMS. Rosy Gem, Bur Cur Ham Vl. Ruby Pearl, Ham.

White-Tipped Scarlet Ball, Ham.

Scarlet Turnip White-Tipped Forcing. Cox Hlm S&W Vl.

SIMILAR NAMES. See Scarlet Turnip White-Tipped.

Scarlet Twenty Day Forcing. S&F. For similar names see Twenty Day.

Scarlet White-Tipped. GH Gra Gng Hde Shn S&W Thm.

SIMILAR NAMES. See Scarlet Turnip White-Tipped.

Scarlet Winter. Bui J&S.

SEEDSMEN'S SYNONYMS. Chinese Rose Winter, Bur.


SIMILAR NAMES. Improved Shepherd, Leavings' Improved Shepherd, Shepherd's Chartier.


Shepherd's Chartier. Entered as Chartier.


Shumway's Market. Shm. For similar names see Market.

Simon's Solid Ivory Forcing. Entered as Solid Ivory Forcing.

Small White Summer. CE Rec. For similar names see White Summer.

Snowball. Brw Ham Liv.

SIMILAR NAMES. Hammond's Snowball.

Snow White Ice. Sal. For similar names see Early Snow White.

Snow White Turnip. Bdg. For similar names see Early Snow White.

Solid Ivory Forcing. M&S.

SIMILAR NAMES. Simon's Solid Ivory Forcing.

South Jersey. Lm.
Startle. Frd Hrs J&S.


Striped. Ham Shm.

Seedsmen’s synonyms. Triumph, Ham.

Surprise. Bkt Bri Bar Frd Hrs Ken Rec Tll Wll.

Similar names. Burpee’s Surprise, Early White Surprise.

Seedsmen’s synonyms. Golden Yellow Olive-Shaped, J&S.

Sutton’s Earliest of All Scarlet, Sutton’s Rosy Gem. Entered as Earliest of All Scarlet and Rosy Gem.

Tait’s Favorite Forcing. Tat. For similar names see Faust’s Favorite.


Three Leaf. Lnr.

Similar names. Leonard’s Three Leaf.


Similar names. Early Triumph, Cox’s Triumph.

Seedsmen’s synonyms. Striped, Ham.

Twenty Day. Dlw Old Vnl.


Twenty Day Express. Chl. For similar names see Twenty Day.

Twenty Day Forcing. Evr Frd Hrs J&S Lnr Raw Vl.

Similar names. See Twenty Day.


Twenty Day Forcing White-Tipped. Lnr. For similar names see Twenty Day.

Vail’s Dainty Forcing, Vail’s Early Scarlet Button. Entered as Dainty Forcing and Early Scarlet Button.


Vaughan’s Market. Vnl. For similar names see Market.

Vick’s All Seasons, Vick’s Improved Long Scarlet Short Top. Entered as All Seasons and Long Scarlet Short Top.

Vick’s Early Scarlet Globe. Brt Bkt Bel Bri Evr Hrv Hlm Rs Vk.

Similar names. See Early Scarlet Globe.


Similar names. See Early Scarlet Globe.

Seedsmen’s synonyms. Extra Early Scarlet Prussian. HP.

Vick’s Scarlet Globe Forcing. Y&H. For similar names see Early Scarlet Globe.

Wernich’s Erfurt Early. Entered as Erfurt Early.

White Box. Bkt Bel Cle C&H Evr Fqr Frd Gg G&T Grw Hrs Hrv Hlm H&P Ilmr Mnd Man JMM Mhl Mls MV Nol Pri Roe Shm Sox Vl Wat WS Yng.

Similar names. Philadelphia White Box, Quaker City Early White Box,
Early White Box. Felton’s White Box, Felton’s Improved White Box, Felton’s Model White Box, Dickmann’s Model White Box, Model White Box.

**White Button.** Bur.

**White Chartier.** Bkt Bri Brr Drr Hen J&S Mau.

**Similar names.** See Chartier.

**Seedsmen’s synonyms.** Beckert’s Nonpareil, Bkt Bri.

**White Chinese.** Brd Bkt Big Bow Bgs Bng Bui Bur CE Cle Crs D&H RE Evr Fnr Fst G&T Hen Hlm H&P J&S Kei Lur Liv Mgd Mns McK Min Mrs Pac Ren Rec Rim Sal S&O Sim SB Vl Wd.

**Similar names.** See Chinese Rose Winter.


**White Delicacy.** Bkt Bri D&H Drr G&T Mhl Shw.

**Similar names.** See Delicacy.

**White Dresden.** Buc Roc. For similar names see Golden Dresden.

**White English Summer.** M&S. For similar names see White Summer.

**White Giant Spanish.** Ebe. For similar names see White Spanish.

**White Globe.** Fnr S&O Thm.


**White Globe Forcing.** Bkt. For similar names see White Globe.

**White Hot House.** M&S.

**White Icicle.** Ar Bll Brr Bur Col Dlw Ebr JMM M&S Wat WS.

**Similar names.** See Icicle.

**White Italian Gem.** M&S.


**Similar names.** See Lady Finger.

**Seedsmen’s synonyms.** Long White Vienna, DD Liv Mau SC.

**White Naples.** RE McK RP.

**Similar names.** Long White Naples.

**Seedsmen’s synonyms.** Hospital, RP.


**Seedsmen’s synonyms.** Newcome, Ebe. White Rocket, Cur.

**White Pearl.** Ar Brr Dun H&C. For similar names see Pearl.

**White Rocket.** D&H Hen J&S Mgd. For similar names see Red Rocket.


**White Russian.** Bkt Bru Ebe RE HP Kei Lan Tat TB.

**Similar names.** Large White Russian, Mammoth White Russian Winter, Long White Russian, Long White.

**Seedsmen’s synonyms.** California Mammoth, Bkt Bru.

**White Spanish.** Ar Edg Gra Hrv Hst Mau Pri.

**Similar names.** Large White Spanish, Round White Spanish, White Giant Spanish, Long White Spanish.

**White Strasburg.** Alr Anb Ar Bai Bak Brr Btl Bkt Bel Ber Big Bow Bgs Brn Buc Bui Brb Bur Brr CE C&B Col CF Cok Cox Crs Cur DD Drr Ebe Ebr Eic Evr Fnr Fst Fer Fld Frd Ger Gls Gdn Ggy Gry G&T Grv Tg Hns Ham Hrn Hrs Hrv Hst Hen Hbt H&C Hly Hlm H&P Iml Iow Jac J&M J&S Ken Kg Kos
RADISH.

Lam Lan Lnr LB Liv JL Loh Lon Mnd Mgd PM Mns Man May JCM JMM Mic Mhl Ms Min MV M&S Mrs May Neb Xol XI NK OV Old Fwc HP JMP Put Ptt Poo Poo Pot Pri Qkr Rkk Ree Ren Ree Rlm Roe Rs Sal S&R SC S&O Sic Sst Spf Stk SB Stw S&H S&W Tat Tem Tex TB Thr Til Tpk Trm T&B Vl Vv Vin Wat Wer Wll WS Wyg Y&H.


Seedsmen's synonyms. Hospital, Col Cur Crs Ebe Lan Stw, etc. Summer Hospital, Lrt. White Hospital, Vl.

White Stuttgart. CE Cle Crs Ebr Fmr GH Gry Mns MV Poo S&R Socr Thr.


White Summer. Hde HAP Koe Lan Stw.

Similar names. Large White Summer, Small White Summer, Perpetual White Summer, St. Louis White Summer, White English Summer, Early White Italian Summer, White Summer Turnip, Large White Summer Turnip. See also White Turnip.


Similar names. See White Summer.

White-Tipped. Drw Hly MWJ.


White-Tipped Chartier. TB. For similar names see Chartier.

White-Tipped Olive-Shaped. RE Ken Pot.


White-Tipped Rocket. D&H Hen. For similar names see Red Rocket.

White-Tipped Scarlet Chartier. S&W. For similar names see Chartier.


Similar names. Early White Turnip, Extra Early White Turnip, Early White Turnip Forcing, Early White Turnip Short Top, Round White Turnip. See also White Summer.

Seedsmen's synonyms. White Bar, Ham.


Similar names. Long White Vienna, Early Long White Vienna.

Seedsmen's synonyms. Lady Finger, Sox Bgs Ebe RE G&T Lam, etc.

Wonderful. Ggf MWJ.

Similar names. Wonderful Half Long Red.

Wonderful Half Long Red. MWJ Koe Lan Lea Til.

Similar names. See Half Long Scarlet, Wonderful.


Similar names. Wood's Long Early Frame, Wood's Frame, Early Frame, Shumway's Early Frame Forcing, Scarlet Frame, Early Frame Forcing.

Seedsmen's synonyms. Early Long Scarlet, Bow.
RAMPION.

**Rhubarb.** (Also known as PIE PLANT.)

Rhubarb. Alx Ar Bkt Bow Bdg Bru Bar Cox Crs Drr Drm Eie Elt Evr Fqr Fst Pax Fer Fie Frd G&T Grw Hdl Hrn Hrm Hrs Hst Hly Mwj K&F Koe Kos Lam Lan Lnr LB Liv JL Mnd Ngd Msd May Jmm Mck McM Mel Mhl Min MV Mzy Nef NoI PiF Pnt Pot Pri Pti Rt SC Shw Shm SB Stw S&H S&W Ttp Trm W& D Wd Y&H.

American Undulated-Leaved. **RHJ.**

Australian Crimson Winter. **Pt.** For similar names see Crimson Winter.

Champagne. **Gra.**

Crimson Winter. **LBk.**

Similarly named. Australian Crimson Winter.

Early Linnaeus. **Pt.** For similar names see Linnaeus.

Early Raspberry. **Gra Pks.**

Early Tender Linnaeus. **TB.** For similar names see Linnaeus.

Extra Early. **J&S M&S.**

Extra Early Paragon. **Gra.**

Giant. **DD Fer Ger KeI Lam LB SB Tpk.**

Similarly named. Salter's Giant, Myatt's Linnaeus Giant, Giant Victoria, Moore & Simon's Giant Paragon, Giant Paragon.

Giant Paragon. **M&S.** For similar names see Giant.

Giant Victoria. **Bow Trm.** For similar names see Giant, Victoria.

Ideal Mammoth. **Tow.** For similar names see Mammoth.

Johnston's St. Martin. **D&H KeI Mck Pks Ren Sim SB.**

Similarly named. St. Martin.

Large Victoria. **Bel Grw TG Ham Hde Hrv J&S Mls Pac Web Y&H.**

Similarly named. See Victoria.


Similarly named. Early Linnaeus, Early Tender Linnaeus, Myatt's Linnaeus, Myatt's Linnaeus Giant, Victoria Linnaeus.
RHUBARB—SALSIFY. 

Lorenzo.  Vin.
Mammoth.  *Row Bui Cok Gdn Ggy Jac Kg MV Sox Vau.*

**Similar names.** Ideal Mammoth, Mammoth Monarch, Mammoth Victoria, Mammoth Red.

**Mammoth Monarch.** Bai Pug.

**Similar names.** Monarch.

**Mammoth Red.**  Cur Evr Koc.  For similar names see Mammoth.

**Mammoth Victoria.**  Ar HP.  For similar names see Mammoth, Victoria.

**Monarch.**  Del Fqr Ger GH J&M LB May NK OV Wll.

**Similar names.** Mammoth Monarch.

**Moore & Simon’s Giant Paragon.**  Entered as Giant Paragon.

**Myatt.**  Hop.

**Similar names.** Myatt's Victoria, Myatt's Linnaeus, Myatt's Linnaeus Giant.

**Myatt's Linnaeus.**  Bru Frd Hrs McK Ren Rec Sim SB.

**Similar names.** See Myatt, Linnaeus.

**Myatt’s Linnaeus Giant.**  *CE Hrn Rec.*

**Similar names.** See Myatt, Linnaeus, Giant.

**Myatt’s Victoria.**  Ar Bdg Bgs Bar CE CF Cox DD Gls Hrn Mgd Put Rec Rec Rl SC Tat Vk.

**Similar names.** See Myatt, Victoria.

**St. Martin.**  Bui C&B Ewg Gra Hen Raw Vk W&D.

**Similar names.** Johnston’s St. Martin.

**Salzer’s Giant.**  Sal.  For similar names see Giant.

**Strawberry.**  J&S.

**Similar names.** Strawberry Red.

**Strawberry Red.**  M&S.

**Similar names.** Strawberry.


**Similar names.** Large Victoria, Giant Victoria, Mammoth Victoria, Myatt’s Victoria, Victoria Linnaeus.

**Victoria Linnaeus.**  Nef.  For similar names see Victoria, Linnaeus.

**Western Market.**  Roc.

**Wine.**  Bgg.

**ROQUETTE.**

**Roquette.**  Eic Sk Thr.

SALSIFY.  *(Also called OYSTER PLANT.)*

**All America.**  Roc.

**American Long White.**  Bui.  For similar names see Long White.

**Black Salsify.**  See Scorzonera, p. 335.

**Blue-Flowered French.**  Bgs Wyg.  For similar names see White French.

**Breck’s Improved Long White.**  Entered as Long White.

**Buist’s Mammoth.**  Bui.  For similar names see Mammoth.

**Common.**  Ggy Pug Sal Sox.

**Similar names.** Common White.

**Common White.**  GH.  For similar names see Common.

**French.**  Ebr NK.  For similar names see White French.

**Giant White Russian.**  M&S.
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Golden. JL. For similar names see Wisconsin Golden.


Large White. Bow Chl Cur Ebe Fer G&T Kos Lan LB Loh PM Mns Pg Pks Roe Wer.

Similar names. See Long White.

Long French. Lan. For similar names see White French.

Long Smooth White. Brg Whl. For similar names see Long White.


Similar names. Breck's Improved Long White, American Long White, Long Smooth White, Large White.


Similar names. See White French.

McMillan's Mammoth White. McM. For similar names see Mammoth.

Mammoth. Anb Cok Drm Gdn GN Liv.


Seedsmen's synonyms. Sandwich Island, Liv.


Similar names. See Sandwich Island.

Mammoth White. Cam CF Hst Shw. For similar names see Mammoth.

Moore's Giant White Russian. Entered as Giant White Russian.

Ordinary French. Lan Stw. For similar names see White French.

Salzer's Early. Sal.

Salzer's Giant. Sal.


Similar names. Improved Sandwich Island, Mammoth Sandwich Island, Improved Mammoth Sandwich Island, Sandwich Island, Sandwich Island, Sandwich Island, Sandwich Island.

Seedsmen's synonyms. Mammoth, Liv.

Sandwich Mammoth White. Blg. For similar names see Sandwich Island.

Spanish Salsify. See Scolytus, p. 335.

Thick-Rooted. Shw.

Similar names. Thorburn's Improved Thick-Rooted.

Thorburn. Ebr.

Similar names. Improved Thorburn.

Thorburn's Improved Thick-Rooted. Entered as Thorburn's Thick-Rooted.

Thorburn's Thick-Rooted. Thru. For similar names see Thick-Rooted.
**SALSIFY—SPINACH.**

**White French.** Bai Bel Brn CE Emr Gls Hen Hly Jns Lur JMP Rec S&F Tat TB Vk.

*Similar names.* Long White French, Improved White French, Improved French, Ordinary French, Long French, Blue-Flowered French, French.

**Wisconsin Golden.** Col Ggy low Liv Mau NK Tem.

*Similar names.* Golden.

**SCOLYMUS.** *(Also known as SPANISH SALSIFY.)*

Scolymus. Bdg Mnd Thr.

**SCORZONERA.** *(Also called BLACK SALSIFY.)*


**SKIRRET.**

Skrret. Bdg Kei Mnd Thr

**SORREL.**


**Broad-Leaved French.** Bur Lar Liv Mhl Vau Vin Yng.

**Broad-Leaved French Belleville.** Mnd.

**French.** Col Emr Lan Vk.

**Garden.** MV HP Pnt Sox S&W.

**Garden Patience Dock.** Bdg.

**Large-Leaved.** Bdg Buc Drr M&S Pot.

**Large-Leaved French.** Crs Ebe Elt Fer Ger Lar M&S Nol Thr Vin W&D.

**Mammoth Lyons.** Thr.

**SPINACH.**

**All Seasons.** GN.

**American Curled Savoy Leaved.** Btl Bui GHI.

*Similar names.* See American Savoy Leaved.

**American Round-Seeded Savoy Leaved.** J&S M&S Nol.

*Similar names.* See American Savoy Leaved.

**Seedsmen’s synonyms.** Bloomsdale, J&S M&S Nol.

**American Savoy Leaved.** Chl Fst Haw.

*Similar names.* American Curled Savoy Leaved, American Round-Seeded Savoy Leaved.

**Seedsmen’s synonyms.** Norfolk Savoy Leaved, Fst.

**Aragon.** 1st.

**Arlington Pointed-Leaved.** Raw S&F.

**Beckert’s Hardy Winter.** Entered as Hardy Winter.

**Belgium Evergreen.** M&S Nol. For similar names see Evergreen.

**Seedsmen’s synonyms.** Virginiog Long-Standing, M&S.

**Bloomsdale.** Brd Bon Brk Bgs Brri Brn Bng Cam Crs Dlw Del Drm Ebe Emr Evr Fqr Fst Frd Gdn Ggy Gg GkT Grw Tg Ham Hrm Hrn Hst Hly Hlm Low Jac MWJ J&S Jns K&F Kra Lan Mgd Man Mau McK McM Mic MV M&S Nel Nol
AMERICAN VARIETIES OF VEGETABLES.

NK Pac Poo Por Pot Ren Rim S&R S&O Sox Spf Stw Tex Thr Tll Vl Van Vl Vn Vin Wna Web Wer WH Wd WS.

Similar names. Faust's Bloomsdale, Hammond's Improved Bloomsdale, Bloomsdale Savoy, Improved Bloomsdale Savoy, Bloomsdale Curled Savoy, Bloomsdale Large Curled Savoy, Bloomsdale Round-Seedled Savoy, Bloomsdale Curled, Bloomsdale Extra Curled.


Bloomsdale Curled. May OV Tpk Vl. For similar names see Bloomsdale.

Bloomsdale Curled Savoy. Big Bui Hde Mns Nbe Ptt SC Wlt Yng.

Similar names. See Bloomsdale.

Bloomsdale Extra Curled. Cam Gng Rt. For similar names see Bloomsdale.

Bloomsdale Large Curled Savoy. Sim. For similar names see Bloomsdale.

Bloomsdale Round-Seedled Savoy. Mhl. For similar names see Bloomsdale.

Bloomsdale Savoy. Alx AIL Ar Btt Btt Bby Brv CE Cle Cox Crg Ctu CA Ebr Eie EIt RT Emr GH Hrv H&C H&P J&M Kg Koe Kos Lea Mnn PM JCM JMM Mrs HP Pot Rce Rct Rsm Sic Sox SB S&W Thm Trm Vl Wt W&D.

Similar names. See Bloomsdale.

Broad-Leaved. RP Web.

Broad-Leaved Batavian. Lam.

Broad-Leaved Flanders. Alx Bui CE Cle Eic Fer Gdn GH Hst Jae Kei Lnr Neb Rec Stk Vin.

Similar names. See Flanders.

Broad Round-Leaved Summer. Buc Fer Inl Lam Pq Roc.

Similar names. See Round-Leaved, Summer.

Buckbee's Long-Standing. Entered as Long-Standing.

Buiat's Perfection Curled Savoy. Bui. For similar names see Perfection Curled.


Catillon Long-Standing. Brv D&H. For similar names see Long-Standing.

Curled Prickly-Seedled. Lan Stw. For similar names see Prickly-Seedled.


Similar names. See Savoy Leaved.

Seedsmen's synonyms. Bloomsdale, DD Emr Liv McK HP Vin, etc. Norfolk, Liv HP.

Dreer's Round-Seedled Savoy Leaved. Drr. For similar names see Savoy Leaved.

Dutch Round-Leaved. Brr. For similar names see Round-Leaved.

Early Giant Crumpled Leaf. Gra TG Rec.

Similar names. See Giant Crumpled Leaf.

Early Giant Round-Leaved. Brr. For similar names see Round-Leaved.

Early Giant Thick-Leaved. CE Fer Glä TG J&S Rec.

Similar names. See Thick-Leaved.


Similar names. See Long-Standing.

Evergreen. C&J.

Similar names. Long-Standing Evergreen, Belgium Evergreen.

Seedsmen's synonyms. Long-Standing, C&J.

Everlasting. Men.

Ever Ready. MWJ Lan JMM Stw.

Extra Curled Savoy Leaved. Ctm G&T. For similar names see Savoy Leaved.
Extra Large-Leaved. Sim.
Seedsmen's synonyms. Giant Flanders, Sim.

Similar names. See Round-Leaved.

Extra Large Round Thick-Leaved. Ken Lnr HP.
Similar names. See Thick-Leaved.

Extra Large Savoy Leaved. Eie Skk. For similar names see Savoy Leaved.
Fall. Bel Bru Elt Ger H&P Iml K&W Lea JMM Mhl Neb Pnt Ptt Por Raw S&R Sim SB 17 Vkk.
Seedsmen's synonyms. Prickly-Seeded, Bru Iml JMM Mhl For S&R, etc.

Faust's Bloomsdale. Entered as Bloomsdale.

Flanders. Ron SB.
Similar names. Long-Standing Flanders, Broad-Leaved Flanders, Round-Leaved Flanders, Large-Leaved Flanders, Giant Flanders.
Seedsmen's synonyms. Long-Standing, Ptt.

Giant. Crs Wdr. For similar names see Giant Crumpled Leaf.

Giant Crumpled Leaf. Y&H.
Similar names. Early Giant Crumpled Leaf, Mttc's Crumpled Leaf, Giant.

Giant Flanders. Sim. For similar names see Flanders.
Seedsmen's synonyms. Extra Large-Leaved, Sim.

Giant Norfolk Thick Savoy Leaved. M&S.
Similar names. See Norfolk Savoy Leaved.

Giant Thick-Leaved. Brr D&H Ggy Ptt. For similar names see Thick-Leaved.
Seedsmen's synonyms. Round Viroflay, Ptt.

Giant Viroflay. Dlw. For similar names see Viroflay.
Seedsmen's synonyms. Monstrous Viroflay, Wdr.

Goliath. Gra.


Hammond's Improved Bloomsdale. Entered as Bloomsdale.

Hardy Winter. Bkt Bri Hen. For similar names see Winter.

Hastings' Aragon. Entered as Aragon.


Holland. Bdg.

Entered as Bloomsdale Savoy, Large Round-Leaved, etc.

Italian Mammoth. Not.

Landreth. DD.

Large-Leaved Flanders. Dlw Lan Min Stv. For similar names see Flanders.

Large-Leaved Viroflay. Bdg CF Frd GH Lnr Mzy Rec Sox Tat AGT.
Similar names. See Viroflay.

Large Prickly-Seeded. Bow Pac. For similar names see Prickly-Seeded.

Large Round-Leaved. Ptt. For similar names see Round-Leaved.

Large Round-Leaved Viroflay. Btl C&B Cox G&T Hen Mas Poo Vkk Vin.
Similar names. See Viroflay.

Large Round Thick-Leaved. Bri. For similar names see Thick-Leaved.
Seedsmen's synonyms. Large Viroflay, Bdg.

Large Savoy Leaved. Bng. For similar names see Savoy Leaved.
Seedsmen's synonyms. Bloomsdale, Bng.

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Large Thick-Leaved.  GIH H&C Mgd S&W W&D.

Similar names. See Thick-Leaved.

Large Thick-Leaved Viroflay.  Ti Hrs W&D.  For similar names see Viroflay.

Large Viroflay.  Bdg CE Tat.  For similar names see Viroflay.


Lettuce-Leaved.  Ewg Mnd MV Rec Sor Thr.


Long-Standing Evergreen.  Brr Cur Cur Vi.  For similar names see Evergreen.

Long-Standing Flanders.  Pnt. For similar names see Flanders.

Long-Standing Round-Leaved.  Mzy.  For similar names see Long-Standing.


Similar names. See Long-Standing.

Long-Standing Round Thick-Leaved.  Hop MV Sor.

Similar names. See Thick-Leaved.

Long-Standing Summer.  Pac. For similar names see Long-Standing, Summer.


Similar names. See Thick-Leaved.

Long-Standing Viroflay.  M&S. For similar names see Viroflay.

Seedsmen's synonyms. Belgium Evergreen, M&S.

May's Perfection Curled.  May. For similar names see Perfection Curled.

Mette's Crumpled Leaf.  Brr. For similar names see Giant Crumpled Leaf.

Monstrous Round-Leaved Viroflay.  RE SB. For similar names see Viroflay.


Similar names. See Viroflay.


Seedsmen's synonyms. Orach, RHJ. Tetragonia, Frd.

Norfolk Curled Savoy Leaved.  Hst. For similar names see Norfolk Savoy Leaved.

Norfolk Savoy Leaved.  Bdt Bkg Brg Bui Bur Cam Cox Fst Hrs Hen JMM M&S Nef MV Poo PP T&AB Vau Wd Wdr WS.

Similar names. Henderson's Norfolk Savoy Leaved, Norfolk Curled Savoy Leaved, Giant Norfolk Thick Savoy Leaved.

Parisian Long-Standing. J&S M&S Nov. For similar names see Long-Standing.
Perennial. Sim.

Perfection Curled. Cam Gdn Jac.

Similar names. May's Perfection Curled, Buist's Perfection Curled Savoy, Shimway's Perfection.

Philadelphia. Nov.


Similar names. Prickly-Seeded Winter, Large Prickly-Seeded, Curled Prickly-Seeded, Prickly-Seeded Viroflay, Prickly-Seeded Long-Standing.

Seedsmen's synonyms. Full, Bru H&P Put Prt Raw Sim, etc. Winter, Brk Brk Cox Low Trn Thr, etc.

Prickly-Seeded Long-Standing. Brt Bkt Bur Cur Fer GH Lam Lam Lar LB Loh Neb Pks Roc Roc Stw VI.

Similar names. See Prickly-Seeded, Long-Standing.

Prickly-Seeded Viroflay. Woa. For similar names see Prickly-Seeded, Viroflay.


Similar names. See Prickly-Seeded, Winter.

Rawson's Round Thick-Leaved. Raw. For similar names see Thick-Leaved.


Seedsmen's synonyms. Summer, Cle Crs G Ger Hrs Hry Vx, etc.

Round-Leaved Flanders. Mzy Tat Thr. For similar names see Flanders.


Similar names. See Summer.

Round-Leaved Viroflay. Brk Cur Ebe Mnd Ptt Thr.

Similar names. See Viroflay.

Seedsmen's synonyms. Giant Thick-Leaved, Ptt.


Similar names. See Thick-Leaved.

Seedsmen's synonyms. Long-Standing, Thr.

Round Thick-Leaved Summer. RF Frd Gng J&M SC SF.

Similar names. See Thick-Leaved, Summer.

Round Thick-Leaved Viroflay. Thr. For similar names see Viroflay.

Salzer's Savoy Leaved. Sal. For similar names see Savoy Leaved.


Similar names. Curled Savoy Leaved, Tait's Improved Curled Savoy Leaved, Griffith & Turner Co.'s Extra Curled Savoy Leaved, Large Savoy Leaved, Extra
Large Savoy Leaved, Salzer's Savoy Leaved, Dreer's Round-Seeded Savoy Leaved, Extra Curled Savoy Leaved.

**Seedsman's synonyms.** Bloomdale, Brk Brd Fqr Hrm JL Mgd, etc. Norfolk, Bdg JL Vk.

**Savoy Round-Leaved.** Bgs Bui Dtr MWJ Lan Stw.

**Similar names.** See Round-Leaved.

**Seedsman's synonyms.** Bloomdale, Lan.

**Shumway's Perfection.** Shm. For similar names see Perfection Curled.

**Summer.** Bel Brr Cle Crs Ger Hrs Hrv Kei Man Mck Ren Sim Vk.


**Seedsman's synonyms.** Round-Leaved, Cle Crs Ger Hrv Kei Vk, etc.

**Tait's Improved Curled Savoy Leaved.** Entered as Curled Savoy Leaved.

**Tetragonia.** Frd.

**Seedsman's synonyms.** New Zealand, Frd.


**Thick-Leaved Summer.** Bel Brn. For similar names see Summer.

**Thick-Leaved Viroflay.** Brr C&J Crs Elt Pir Sor.

**Similar names.** See Viroflay.

**Thick Round-Leaved Summer.** Frd Gng SC Sb.

**Similar names.** See Round-Leaved, Summer.

**Vaughan's Norfolk Savoy.** Entered as Norfolk Savoy.


**Victoria Long-Standing.** Brn Crs Mhl M&S.

**For similar names see Victoria.**

**Victoria Round-Leaved.** Gra. For similar names see Victoria.

**Victoria Round-Leaved Long-Standing.** Ham. For similar names see Victoria.


**Winter.** Brr Brk Bgs Bui Brz CE Cle Cox Crr Ehe RE Fmr Fst GH TG Hrm Hrs Hly Low Kei Kg Man Nef Ren Ree Roe Thr Trm T&B Vin Y&H.

**Similar names.** Hardy Winter, Beckert's Hardy Winter, Prickly Winter.

**Seedsman's synonyms.** Prickly-Seeded, Brr Brz Cox Hrm Hrs Low, etc.
Acorn. Ewg Gra.

Alexander. Iow.

American Turban. Air Bow Brk CE Cle Cox DD Drr Eas Emr Fqr GIy Gry TG Hrm Haw Ken Lam Liv Jl Man May JCM Min Por Pot Raw Rec Rob RP S&R S&F S&O Sox Tpk Vin Y&II.

Similar names. See Turban.

Seedsman’s synonyms. Essex Hybrid, DD Drr Lam Por RP S&R Sox, etc.

Turk’s Cup, Raw. Warren, Drr.

Arlington Summer Crookneck. Raw. For similar names see Summer Crookneck.


Similar names. See White Bush Scalloped.

Autumnal Boston Marrow. SC. For similar names see Boston Marrow.

Autumnal Marrow. Grw.

Similar names. Colvin’s Autumnal Marrow, Autumnal Boston Marrow.

Seedsman’s synonyms. Boston Marrow, Grw.

Banana. CE.

Similar names. Mexican Banana, Shumway’s Mexican Banana.


Similar names. Low’s State.


Seedsman’s synonyms. Long Green, Brw.

Blue Hubbard. Buc Iow. For similar names see Hubbard.

Seedsman’s synonyms. Marklehead, Iow.


Similar names. Holmes’ Boston Marrow, Autumnal Boston Marrow, Improved Boston Marrow, Large Boston Marrow.

Seedsman’s synonyms. Autumnal Marrow, Grw. Vegetable Marrow, Bow.

Brazil Sugar. Bgy Bur CE Fst Man Rec Ten.

Similar names. See Faxon’s Brazilian.

Buckbee’s Giant Summer Crookneck, Buckbee’s Improved Hubbard, Buckbee’s Mammoth White Bush Scalloped, Buckbee’s Mammoth Yellow Bush Scalloped, Entered as Giant Summer Crookneck, Hubbard, Mammoth White Bush Scalloped, and Mammoth Yellow Bush Scalloped.

Buist’s Improved Marrow. Entered as Buist’s Marrow.

Buist’s Marrow. Bui.

Similar names. Buist’s Improved Marrow.

Burpee’s Bush Fordhook, Burpee’s Fordhook. Entered as Bush Fordhook and Fordhook.

Bush Fordhook. Bur. For similar names see Fordhook.

Butman. Bkt Bgg Bui Brr C&J CE Cle CF Cox Cbs Ebe Emr Frd Ggy Gry Lnr May Mhd Mls Myz Neb Pir Pnm Pri Rec Rob Rs Shm Y&II.

Similar names. Gregory’s Butman.

SQUASH.
SQUASH.

Brazil Sugar. Bgy Bur CE Fst Man Rec Ten.

Similar names. See Faxon’s Brazilian.

Buckbee’s Giant Summer Crookneck, Buckbee’s Improved Hubbard, Buckbee’s Mammoth White Bush Scalloped, Buckbee’s Mammoth Yellow Bush Scalloped, Entered as Giant Summer Crookneck, Hubbard, Mammoth White Bush Scalloped, and Mammoth Yellow Bush Scalloped.

Buist’s Improved Marrow. Entered as Buist’s Marrow.

Buist’s Marrow. Bui.

Similar names. Buist’s Improved Marrow.

Burpee’s Bush Fordhook, Burpee’s Fordhook. Entered as Bush Fordhook and Fordhook.

Bush Fordhook. Bur. For similar names see Fordhook.

Butman. Bkt Bgg Bui Brr C&J CE Cle CF Cox Cbs Ebe Emr Frd Ggy Gry Lnr May Mhd Mls Myz Neb Pir Pnm Pri Rec Rob Rs Shm Y&II.

Similar names. Gregory’s Butman.
California Field.  *Puc T&B.*

Similar names. California Field Marrow.

California Field Marrow.  *Bai.* For similar names see California Field.

Canada Winter Crookneck.  *Rgy Brk Bgs Cle DD Ew Emr Fmr Fqr Fax GH Gry Gry Liv May MV Mzy NK OV Qkr Rec Rob S&F Sex Tat Thr Tpk.*

Similar names. See Summer Crookneck.

Chicago Orange Marrow.  *GH Old Vn.* For similar names see Orange Marrow.

Seedsmen’s synonyms. Early Marrow, Frd. Early Prolific Marrow, Frd. Extra Early Marrow, Frd. Dunlap’s Early Prolific Marrow, Frd.

Chicago Warted Hubbard.  *Air Brd Brt Ber Big Bri Brn Buc Bui Bnr Brr CF Cup D&H Dmm Fmr Fqr Frd Grn TG Ham Her Hrn Hbt Iml J&S Jns Kg Kra LB Liv Mgd Man May Mek M&S Neb Nol Old Pg Pir Pnt Qkr Ren Rob Roe Rs Sim Sie Sim Spf Tem Trm Vl Vn Vk Y&H.*

Similar names. See Hubbard.

Chile.  *Sal.* For similar names see Chile.

Chilean Giant.  *Buc Roe.* For similar names see Mammoth Chile.

Chinese.  *MkS.*

Similar names. Red China.

Cocoanut.  *Rgy Buc Brr CE Cle Emr Ggy Ptt Rec Rob Tem Thr Vin.*

Similar names. Small Cocoanut, French Cocoanut.

Seedsmen’s synonyms. Pineapple, Vin.

Cocozelle.  *Bng Buc Brr Frt Koe Mau Ptt Roc Thr W&D.*

Seedsmen’s synonyms. Long Snow White Summer, Koe.

Columbian.  *Vin.*

Colvin’s Autumnal Marrow.  *Shm.* For similar names see Autumnal Marrow.

Colvin’s Orange Marrow.  *CE Lnr Liv Rec Ten.*

Similar names. See Orange Marrow.

Cream-Colored Summer Crookneck.  *Jer.*

Similar names. See Summer Crookneck.

Cream Vegetable Marrow.  *Kei Pri.* For similar names see Vegetable Marrow.

Cushaw.  *Fld Liv JL MkS Nl Rob Shw Wyr.*

Similar names. Livingston’s Cushaw, Improved Cushaw, Livingston’s Improved Cushaw.

Seedsmen’s synonyms. Large Winter Crookneck, Pnt. Crookneck, JL.


Similar names. Henderson’s Delicata.

Der Wing.  *Buc Brr Hop Man Roe Thr.*


Dunlap’s Early Marrow.  *Pnc.* For similar names see Prolific Marrow.

Dunlap’s Early Prolific Marrow.  *Ggy M&S Sal.*

Similar names. See Prolific Marrow.

Seedsmen’s synonyms. Chicago Orange Marrow, Frd. Early Marrow, Frd. Early Prolific Marrow, Frd. Extra Early Marrow, Frd.

Dunlap’s Prolific Marrow.  *Brt CE Grw TG Rec.*

Similar names. See Prolific Marrow.

Earliest Prolific.  *Wd WS.* For similar names see Prolific Marrow.

Early Bush Scalloped.  *Anb Chl Cox Evn Hns Hrs NI JMP Stk.*

Similar names. See Yellow Bush Scalloped.

Seedsmen’s synonyms. Pattypan, JMP Stk Thun.

Early Fordhook.  *Bgg Bgs.* For similar names see Fordhook.


Similar names. See Yellow Bush Scalloped.

Seedsmen’s synonyms. Early Yellow Bush, J&S Nol.
SQUASH. 343

Early Golden Custard.  Fqr.  For similar names see Golden Custard.

Early Mammoth Summer Crookneck.  For S&R Tat.

Similar Names.  See Summer Crookneck.


Early Orange Marrow.  Bel Bur Cle CF Del Elt Emr Fnr Frd GH TG Hrs Hlt H&P J&S Lea McK MV NK Qkr Ren Sox Tat Thr 17 Y&H.

Similar Names.  See Orange Marrow.

Seedsmen's Synonyms.  Chicago Orange Marrow, Fnd.  Duslap's Early Prolific Marrow, Fnd.  Early Prolific Marrow, Bow Fnd Fqr S&F Sox Y&H.  Extra Early Marrow, Fnd.  Prolific Marrow, Hrs Ren.

Early Pineapple.  NK.  For similar names see Pineapple.


Similar Names.  See Prolific Marrow.

Seedsmen's Synonyms.  Chicago Orange Marrow, Fnd.  Duslap's Early Prolific Marrow, Fnd.  Early Orange Marrow, Bow Fnd Frd Raw S&F Sox Y&H.  Extra Early Marrow, Fnd.  Orange Marrow, Brk Gry.

Early Prolific Orange Marrow.  Bgl Bow Buc C&J DD Drr Fqr Fer Fle J&S Pne Vk Wea.

Similar Names.  See Orange Marrow, Prolific Marrow.

Early Striped Bush.  Bdg.

Similar Names.  Green-Striped Bush.


Similar Names.  See Summer Crookneck.

Seedsmen's Synonyms.  Early Summer Warted, Fqr S&F.

Early Warted Summer Crookneck.  Fqr Rs S&F.

Similar Names.  See Summer Crookneck.

Seedsmen's Synonyms.  Early Summer Crookneck, Fqr S&F.


Early White Summer Crookneck.  Raw.  For similar names see Summer Crookneck.


Similar Names.  See Yellow Bush Scalloped.


Early Yellow Summer Crookneck.  Buc C&J Crs Hrs Mas Sox Vin.

Similar Names.  See Summer Crookneck.

Seedsmen's Synonyms.  Golden Crookneck, Buc.

Eggplant Bush.  CE Lea MV M&S Ree Sox Thr.

Similar Names.  Henderson's Eggplant.
AMERICAN VARIETIES OF VEGETABLES.

English Vegetable Marrow. Bdg Bui RE Fle Gng low Lnr McK Pks Por Ren S&R Sim SB Thr.

Similar names. See Vegetable Marrow.

Essex Hard Shell Turban. Fqr. For similar names see Essex Hybrid, Turban.

Seedmen's synonyms. Essex Hybrid, Fqr.


Similar names. Essex Hybrid Turban, Essex Hard Shell Turban.

Seedmen's synonyms. American Turban, Bow Drr Lanr Por RP S&R, etc.


Essex Hybrid Turban. GH S&F. For similar names see Essex Hybrid, Turban.

Eureka. Anb Liv Mns.

Everbearing. Wd.

Similar names. Wood's Everbearing.

Extra Early Bush Scalloped. CA Gig Koe Lam Stw.

Similar names. See Yellow Bush Scalloped.

Extra Early Jersey White Bush Scalloped. Bui Drr J&S.

Extra Early Orange Marrow. CE D&H Grw Ree.

Similar names. See Orange Marrow.

Extra Early Pattypan. M&S. For similar names see Pattypan.

Extra Early Prolific Marrow. Bgg. For similar names see Prolific Marrow.

Extra Early Prolific Orange Marrow. Pri.

Similar names. See Prolific Marrow, Orange Marrow.

Extra Early White Bush Scalloped. Alr Gig Hm M&S.

Similar names. See White Bush Scalloped.


Similar names. Yellow Bush Scalloped.

Extra Large Golden Custard. 1P. For similar names see Golden Custard.

Fall Crookneck. C&J CF TG. For similar names see Summer Crookneck.

Seedmen's synonyms. Winter Crookneck, C&J.


Similar names. See White Bush Scalloped.

Faxon's Brazilian. Buc Lnr Vau. For similar names see Brazil Sugar.

Ferry's Green Mountain. Entered as Green Mountain.


Similar names. Early Fordhook, Burpee's Fordhook, Burpee's Bush Fordhook, Bush Fordhook.

French Coconu. M&S. For similar names see Coconu.

Giant Summer Crookneck. Anb Brd Brt Bkt Bgg Brk Bng Buc Bur Brw C&J Cam CE Chl C&B Col CF Cok Cur D&H DD Ebe RE Evr Fst GN TG Ham
SQUASH.

Hrn Hrs Hst Hbt Hlm Hse J&S Jns Kg Lur JL Mund McM Nol Old HP P'tt Poo Pot Pri Ree Roc Rt Shw Shm Sé Spf SB S&H Ten Thr Til Vnt Vin W't Wtn W&D Wer Wd Wdr Yng Y'H.

**Similar names.** See Summer Crookneck.
**Seedsmen’s synonyms.** Mammoth Summer Crookneck, J&S Nol Shw.

**GIANT WHITE BUSH SCALLOPED.** C&B. For similar names see White Bush Scalloped.
**Seedsmen’s synonyms.** Long Island, C&B.

**GIANT WHITE SUMMER CROOKNECK.** Buc Hrs Kru Vau.
**Similar names.** See Summer Crookneck.

**GIANT YELLOW SUMMER CROOKNECK.** Alr Bui Cam Gdn Jac Liv Nol.
**Similar names.** See Summer Crookneck.

**GIANT YELLOW SUMMER STRAIGHTNECK.** Buc Bar Frd Hrn Lur Poo Thr Thh.
**Similar names.** See Summer Crookneck.

**Golden Bronze.** Brk Bar Col D&H Drr Eas Elt Fgr Gry Hrm H&P Liv Man May Pnc P'tt Thr Thr Vau Vk. .

**Golden Bush Scalloped.** Egg Brw Ebe RE Gyg Hnt Iow MWJ J&M Pir SB Tat Thm.
**Similar names.** See Yellow Bush Scalloped.

**Similar names.** Early Golden Custard, Extra Large Golden Custard, Mammoth Golden Custard, Silver Custard.
**Seedsmen’s synonyms.** Buckbee’s Mammoth Yellow Bush, Buc. Mammoth Yellow Bush, Frd Hlm J&S Man Mgd Ten, etc.

**Similar names.** See Hubbard.
**Seedsmen’s synonyms.** Red Hubbard, Brk Bur Cur Lur Mgd Ren, etc.

**Golden Summer Crookneck.** Entered as Yellow Summer Crookneck.

**Green Mountain.** Brn Frd Gls Iml Lam Rs Vk.
**Similar names.** Ferry’s Green Mountain, Rocky Mountain.

**Green-Striped Bush.** Mzy. For similar names see Early Striped Bush.

**Green Summer Crookneck.** Bur Gg M&S No'l Pri Wd.
**Similar names.** See Summer Crookneck.

**Green Winter Crookneck.** Mhd. For similar names see Summer Crookneck.

**Gregory’s Butman.** Entered as Butman.

**Gregory’s Golden Bronze.** Entered as Golden Bronze.

**Hammond’s Hard Shell Marrow, Hammond’s Mammoth Hubbard, Hammond’s Mammoth White Bush Scalloped, Hammond’s Giant Summer Crookneck.** Entered as Hard Shell Marrow, Mammoth Hubbard, Mammoth White Bush Scalloped, and Giant Summer Crookneck.

**Hard Shell Marrow.** D&H For Ham Vau.
**Similar names.** Hammond’s Hard Shell Marrow.

**Hard Shell Turban.** Cox D&H Hrm Iml Pri Ree Vk.
**Similar names.** See Turban.
**Seedsmen’s synonyms.** Essex Hybrid, Cox D&H Hrm Iml Pri S&O Vk.

**Heart O’ Gold.** Fmr Hen Liv Vau.
**Similar names.** Henderson’s Heart O’ Gold.

Hester. Low.

Holmes' Boston Marrow. Entered as Boston Marrow.


Similar names. Lohrman's Hubbard, Improved Hubbard, Maule's Improved Hubbard, Salzer's Improved Hubbard, Mammoth Hubbard, Hammond's Mammoth Hubbard, Blue Hubbard, Golden Hubbard, Red Hubbard, White Hubbard, Warted Hubbard, Leonard's Warted Hubbard, Chicago Warted Hubbard, Improved Warted Hubbard, Large Warted Hubbard, Mammoth Warted Hubbard, Toledo Warted Hubbard.

Seedsmen's synonyms. Winter, Bdg.

Improved American Turban, Improved Boston Marrow, Improved Cushaw, Improved Extra Early White Bush Scalloped, Improved Hubbard, Improved Long Marrow, Improved Large Summer Crookneck, Improved Marblehead, Improved Orange Marrow, Improved Pattypan, Improved Summer Crookneck, Improved Warted Hubbard, Improved White Bush Scalloped, Improved Yellow Summer Crookneck. Entered as American Turban, Boston Marrow, Cushaw, etc.

Italian Striped Vegetable Marrow. Pie SB.

Similar names. See Vegetable Marrow.

Italian Vegetable Marrow. For Thr. For similar names see Vegetable Marrow.

Seedsmen's synonyms. Corozelle di Napoli, Thr.

Japanese Alphabet. Chl. For similar names see Japanese Pie.


Similar names. Japanese Alphabet.

Jumbo. Pg.

Large Boston Marrow. Pan. For similar names see Boston Marrow.

Large Cream Vegetable Marrow. Kei. For similar names see Vegetable Marrow.

Large Mammoth Chile. Pks. Sim. For similar names see Mammoth Chile.

Large Marrow. Gdn Jac.

Similar names. Improved Large Marrow.

Large Summer Crookneck. Ebr. For similar names see Summer Crookneck.

Large Warted Hubbard. Hen. For similar names see Hubbard.

Large Winter Crookneck. Elt Ggy Ken Put Rs SC S&F TB.

Similar names. See Summer Crookneck.

Seedsmen's synonyms. Cashaw, Put.

Leonard's Giant Yellow Summer Straightneck, Leonard's Warted Hubbard. Entered as Giant Yellow Summer Straightneck and Warted Hubbard.

Livingston's Cushaw, Livingston's Improved Cushaw. Entered as Cushaw.

Livingston's Pie. Bel Ewg Frd MWJ Liv Rob S&B.

Similar names. See Pie.

Lohrman's Hubbard. Entered as Hubbard.
Long Cream Vegetable Marrow.  D&H.  For similar names see Vegetable Marrow.

SEEDSMEN'S SYNONYMS.  Black Michigan, Brw.  Summer Crookneck, Stk.

SIMILAR NAMES.  See Summer Crookneck.

Long Island Mammoth White Bush Scalloped.  M&S.

Long Island White Bush Scalloped.  C&B D&H For Hen Hlm Neb Sim Thr.
SEEDSMEN'S SYNONYMS.  Giant White Bush, C&B.

Long Snow White Summer.  Koe.
SEEDSMEN'S SYNONYMS.  Crozelle, Koe.

Long Summer Crookneck.  Pace.  For similar names see Summer Crookneck.

Long White Bush Vegetable Marrow.  Bru D&H RE Ewg Fle Frd Gra Kei
MCK Pks Ren Rob SB W&D.
SIMILAR NAMES.  See Vegetable Marrow.

Long White English Vegetable Marrow.  Bru.
SIMILAR NAMES.  See Vegetable Marrow.

Long White Vegetable Marrow.  But Ger Kei Sim W&D.
SIMILAR NAMES.  See Vegetable Marrow.

Low's Bay State.  Entered as Bay State.

Mammoth.  Brw Ewg Gra Kei Pac Sal.  For similar names see Mammoth Whale.

Mammoth Chile.  Air Anb Ar Bai Bak Brt Btr Bkt Bel Ber Bow Bdg Bgs Bui
Bar Brr C&J CE Chl Cle C&B Col CF Cox Crs Cnr D&H Del DD Drr Elb Elt
Emr RE Evr Fnr Fst Frd Ger Gdn Ggy Grw TG Ham Hrm Hrc Hst Hen
Hbl Hln Hop Hse H&p Low J&S K&W Ken Kg Krn Lam Lan LB Lan Liv Loh
Mgd Man Mas Man May JMM Mel Mls MV M&S Mzy Neb Nl NK Old Pac
HP JMP Pir Pnt Por Pot Pri Raw Rec Rec Rs RP S&R S&O Sim Sox Spf
S&W Tat Tem Tex TB Thr Trm Vi Vau Vk Vin Web W&D Wer Y&H.
SIMILAR NAMES.  Large Mammoth Chile, Salzer's Chile, Chileno Giant, Chile.
SEEDSMEN'S SYNONYMS.  Mammoth King, D&H.  Mammoth Yellow, Ggy.

Mammoth Cream-Colored Summer Crookneck.  Hen.
SIMILAR NAMES.  See Summer Crookneck.

SIMILAR NAMES.  See Yellow Bush Scalloped.

Mammoth Golden Custard.  Lan Qkr.  For similar names see Golden Custard.

Mammoth Hubbard.  Del Ext Ewg Ham Mls Sic Tat.
SIMILAR NAMES.  See Hubbard.

Mammoth King.  D&H.  For similar names see Mammoth Whale.
SEEDSMEN'S SYNONYMS.  Mammoth Chile, D&H.

Mammoth Prize.  GN.  For similar names see Mammoth Whale.

Mammoth Summer Crookneck.  Bow Bgs Brn Fer Gls GH Grw Hus Hrv Hen
Hop Inl J&S Lam LB Loh Mgd Mzy Neb Nl NK Pg Pnc Pct Rs Shw Thb Vi
Vk Web.
SIMILAR NAMES.  See Summer Crookneck.
SEEDSMEN'S SYNONYMS.  Giant Summer Crookneck, J&S NoL Shw.

Mammoth Valparaiso.  Shn.  For similar names see Valparaiso.

SIMILAR NAMES.  See Hubbard.

Mammoth Whale.  Bru Brw Chl D&H RE Frd J&S Liv Mls Rec Sim SB Thr Vau
Wet.
SIMILAR NAMES.  Mammoth Prize, Mammoth King, Mammoth Yellow, Rennie's Green Mammoth, Mammoth.

Mammoth White Bush Scalloped.  Btl Bkt Bow Brk Bgs Brn Bue Bui Bur Cam
CE Cle Col CF Cox Crs Cnr Drn Evr For Frd Gdn GH GN Ggy Gig Hn Ham
Hde Hen Hst Hbl Hlm Inl Jac J&M J&S Jsn Kg Kra Lam LB Liv JL Loh Mgd
AMERICAN VARIETIES OF VEGETABLES.

Man JMM McM Neb NK Old HP Pue Pmt Poo Pri Ree Roc Shw Shn Sic Thr Thn VI Vau Vk Wat Wea Wll Wd WS Yng.

SEEDSMEN'S SYNONYMS. Improved Pattypan, Buc Ham. Large Pattypan, Bur. Silver Custard, Vk.

Mammoth Yellow. Fqr Fax Ggy Ren Thm.

SIMILAR NAMES. See Mammoth Whale.

SEEDSMEN'S SYNONYMS. Mammoth Chile, Ggy.


SIMILAR NAMES. See Yellow Bush Scalloped.

SEEDSMEN'S SYNONYMS. Golden Custard, Buc Frd Hlm J&S Man Mgd Tem, etc.

Mammoth Yellow Summer Crookneck. Byg Crs Tat.

SIMILAR NAMES. See Summer Crookneck.


SIMILAR NAMES. Improved Marblehead.

SEEDSMEN'S SYNONYMS. Blue Hubbard, Iow.

Maule's Improved Hubbard. Entered as Hubbard.

May's Warted Hubbard. Entered as Warted Hubbard.

Mediterranean. Byg Bgs.

Mexican Banana. Bur DD Shn.

Moore's Cream Vegetable Marrow. Entered as Cream Vegetable Marrow.


SIMILAR NAMES. Improved Orange Marrow, Chicago Orange Marrow, Colvin's Orange Marrow, Early Orange Marrow, Extra Early Orange Marrow, Prolific Orange Marrow, Early Prolific Orange Marrow, Extra Early Prolific Orange Marrow.

SEEDSMEN'S SYNONYMS. Early Prolific Marrow, Brk Gry. Prolific Marrow, Wdr.

Patagonia. Bdg.

SEEDSMEN'S SYNONYMS. Seven Years Custard, Bdg. Buter, Bdg.

Pattypan. At Buc Cam Cie Gg Hen Jac Mcm Pir Stk Wd WS.

SIMILAR NAMES. Improved Patty Pan, White Patty Pan, Yellow Patty Pan, Dow's Early Patty Pan, Extra Early Patty Pan.


Pen-y-Byd Marrow. Gra.

SEEDSMEN'S SYNONYMS. Best in the World, Gra.

Peruvian.  Shunway's Peruvian.

Pie.  Brn.


Prolific Orange Marrow.  Bl Bkt Bgg Bri Brr Hrs Ken Man Rob Rs S&O Wer Wdr.

Prolific Marrow.  Dbl Bkt Bgg Bri Brr Hrs Ken Man Rob Rs S&O Wer Wdr.


Prolific Orange Marrow.  Air Buc Bnt Eyt Roc Shm VI.

Red China.  Bel Bgg Fst For similar names see Chinese.


Rennie's Green Mammoth.  Ren For similar names see Mammoth Whal.

Rocky Mountain.  Wll For similar names see Green Mountain.

Salzer's Chili, Salzer's Improved Hubbard.  Entered as Chili and Hubbard.

Shumway's Mexican Banana, Shumway's Peruvian.  Entered as Mexican Banana and Peruvian.


Small Cocoanut.  Fst For similar names see Cocoanut.

Silver Custard.  Brd Bdy Hen J&S Man Ree Tat Thr Vn.

Small Cocoanut.  Fst For similar names see Cocoanut.


Strickler's Green Summer Crookneck.  M&S.

Strickler's Summer Crookneck.  Fqr Ggy.

Summer Crookneck.  Anb Bai Bow Bdg Brn Brv Cle C&B Cur Drrv Drm Dun Dic Ewg Fax Fer Ger Gra Ggy TG Hns Hrm Hyc Hyc Hyn Jns Kei K&W K&F

Crookneck, White Winter Crookneck, Large Winter Crookneck, Canada Winter Crookneck, Arlington Summer Crookneck, Vaughan’s Summer Crookneck, Long Summer Crookneck, Improved Summer Crookneck, Improved Large Summer Crookneck, Giant Summer Crookneck, Buckbee’s Giant Summer Crookneck, Strickler’s Summer Crookneck, Strickler’s Giant Summer Crookneck, Mammoth Summer Crookneck, Early Mammoth Summer Crookneck, Warted Summer Crookneck, Early Warted Summer Crookneck, Yellow Summer Crookneck, Giant Yellow Summer Crookneck, Large Summer Crookneck, Green Winter Crookneck, Mammoth Yellow Summer Crookneck, Improved Yellow Summer Crookneck, Early Yellow Summer Crookneck, Cream-Colored Summer Crookneck, Mammoth Cream-Colored Summer Crookneck, White Summer Crookneck, Early White Summer Crookneck, Giant White Summer Crookneck, Green Summer Crookneck, Strickler’s Green Summer Crookneck, Long Green Summer Crookneck, Yellow Summer Straightneck, Leonard’s Giant Summer Straightneck, Giant Yellow Summer Straightneck.

Seedsmen’s synonyms. Early Warted, Rs. Long Green, Stk.

Sutton’s Long White Vegetable Marrow. M&S.

Similar names. See Vegetable Marrow.


Toledo Warted Hubbard. HP. For similar names see Hubbard.

Turban. Bgs Bru Buc CF Crs Cur Dun Ewg Gra Hrv K&W Lnr Mnd Mhl MV Mzy Pir Pri Ren Roc Shm Sox TB Thr.


Seedsmen’s synonyms. Essex Hybrid, Bru Roc. Turk’s Cap, Bgs Crs Cur Hrv Pri.

Turk’s Cap. Bgs Crs Cur Hrv Pri.

Seedsmen’s synonyms. American Turban, Raw. Turban, Bgs Cur Crs Hrv Pri.

Valparaiso. Vin.

Similar names. Mammoth Valparaiso.

Vaughan’s Summer Crookneck, Vaughan’s Giant Summer Crookneck. Entered as Summer Crookneck and Giant Summer Crookneck.


Similar names. Italian Vegetable Marrow, Italian Striped Vegetable Marrow, English Vegetable Marrow, Long White English Vegetable Marrow, Long White Vegetable Marrow, Sutton’s Long White Vegetable Marrow, Long White Bush Vegetable Marrow, White Bush Vegetable Marrow, Cream Vegetable Marrow, Moore’s Cream Vegetable Marrow, Long Cream Vegetable Marrow, Large Cream Vegetable Marrow.


Victor. Ggy.


Warted Hubbard.  Brd Btl Bkt Brh CE Col Crs Der Dun Emr RE Eld GH Ggy. Gyr Hns Hrs H&& low Kow Lam Lnr LB JL May JLM JMM MV NK Pac Pne
Pri Raw Reo S&O Sun Spf SBr Stw Tbl Til.

 Similar names.  See Hubbard.

Warted Summer Crookneck.  Frs S&F.  For similar names see Summer Crookneck.

White Bush Scalloped.  Air Bak Brd Brt Bel Bgg Bri Bag Cam Cle C&B Cur
Drm Dun Ebr RE Ewg Fnr Fax Hrn Haz Hen Hly Hnt Iow J&M J&S Jns K&F Kg Kos Kra LL Liv May Nef Nol Pac Prn Pot Rs Sal SC Spf SB T&B 17
Van Wat Wea Web W& D Wer Wdr.


White Bush Vegetable Marrow.  Gigi.  For similar names see Vegetable Marrow.

White Chestnut.  Bkt Ggy Hrn Iow J&S Vl.

 Seedsmen's synonyms.  White Hubbard, Iow.

White Hubbard.  Iow Lnr.  For similar names see Hubbard.

 Seedsmen's synonyms.  White Chestnut, Iow.

White Pattypan.  Bg Bou Bui D&C Eic Gdn Hrn Hen Lam PM McM Mel Mhl
Min JMP Qk Rm SC Shw Spf.

 Similar names.  See Pattypan.


White Pineapple.  Air Brt Bui CE DD RE Fst Frd Hns J&S Min Pac JMP Ree
SC &O Shm T&B 17 Wat.

 Similar names.  See Pineapple.

 Seedsmen's synonyms.  White Turban, Ree.

White Summer Crookneck.  Bel Bgg Brn Brn Fer Frd Hrs Kra Lam LB Lnr
Liv Mgd Man Pq S&H Vr Wdr.

 Similar names.  See Summer Crookneck.

White Winter Crookneck.  Hly.  For similar names see Summer Crookneck.

Winter.  Bdg.

 Seedsmen's synonyms.  Hubbard, Bdg.

Winter Crookneck.  AnB Bmp Bmp Bmp Brk Brg C&J CE Cle C&B CF Cox
Crr Drr Ebr Emr RE Eivr Ewr Fnr Fst Ghi Gry Ggy G&T Grv Tg Hrm
H&P K&W Kg Lnn Mund Man PM Mns Min Nol Pot Ptt Pot Raw Ree Ree Rob
RP Spf S&W Thm Trn Thn Tpm W& L Vr W&D Wyg.

 Similar names.  See Summer Crookneck.

 Seedsmen's synonyms.  Canada Crookneck, Bdg.  Full Crookneck, C&J.

Winter Luxury Pumpkin.  Bel Brr.

 Seedsmen's synonyms.  Pie Squash, Brr.

Wood's Earliest Prolific, Wood's Everbearing.  Entered as Earliest Prolific and
Everbearing.

Yellow Bush Scalloped.  Aix Air Brd Bgg Bri Brn Cm Cle C&B C&F Ewg Fnr
Haw Hen Hlm Hrm J&S Jns Lam LB Man May Nef Nol Ptt Poo Pot Pri Raw
Sal SC S&O Tat Van Wea W&D.

 Similar names.  Early Yellow Bush Scalloped, Mammoth Yellow Bush

SEEDSMEN'S SYNONYMS. Pattypan, Low SC. Cymbling Hlm.

Yellow Pattypan. SC. For similar names see Pattypan.

SEEDSMEN'S SYNONYMS. Early Yellow Bush Scalloped, Bur Pnt Trm.

Yellow Sibley. JL. For similar names see Sibley.

Yellow Summer Crookneck. Ar Broi Brt Btl Bkt Bel Bon Bgg Bri Bng Buc Bui Bur Cam CE Cox CA Dw Dr Dr Fst Gdn Hst Haw Hen Hly Jac MWJ J&M J&S Koe Lan Mau McM Mie Mhl Mis Min MV M&S Nol NI JMP Ptt Ren Rec Rim Sal Shw Sow Sw Tw Thm Trm 17 Vk Wat Wd WS.

SIMILAR NAMES. See Summer Crookneck.

Yellow Summer Straightneck. JMM Tat Vau.

SIMILAR NAMES. See Summer Crookneck.

SUNFLOWER.


Black Giant. Bon Man Mls.

Black Seed. Gls.

Chinese Giant. M&S.

Giant Russian. Ar RE Ewg Mck Ren.

Large Russian. Anb Brk Cam Cle C&B Cur Dun Eic Elt Fer Fle Hde Hrm Hen RHJ Lam Loh Mzy Nef Pkg Pks Raw Tal Tpk Wer.

Mammoth. Jer.


Prize Mammoth. Air.


Tall Russian. Kei.

White Beauty. Bur Col CA Fnr Frd Kos Tem Vk Wer.

White Russian. Gls.

SWISS CHARD.

(Also called Sea Kale Beet, Spinach Beet, Leaf Beet, Chard, Summer Spinach, and sometimes Silver Beet.)

Asparagus. Chl.
Beck's Improved. Brn Vk.
Brazilian. Shm.
Crimson-Veined Brazilian. Thr.
Draæena Leaved. Thr.
Golden. Gra.
Golden-Veined Brazilian. Thr.
Large Scarlet Brazilian. Vk.
Large Silver. Vk.
Large White Silver. Eic M&S.
Large Yellow Brazilian. Vk.
Ornamental. Ggy Shm.
Red. Gra.
Scarlet-Ribbed Chilean. Thr.
Scarlet-Veined Brazilian. Thr.
Silver. Alr Anb Ar Btl Bel Bdg Bgs Buc Bui Brb C&B Col Crs Cur Eic RE Fur
Fst Fax Frl Ger GH Grw Hrn Hen Hly Hop Iow J&S Keo Koe Lam Lur JL
Loh Mns MV Nol NK Pac Pg IP Ptt Pot Raw Ree Roe SC S&F Shw Sim Sox
S&H Thm Thn Thr Wfa Wdr Y&H.
White. Gra J&M May Sc Thm.
White Silver. RHJ.
Yellow Cutting. Mud.
Yellow-Ribbed Chilean. Thr.

TOMATO.

Acme. Alr Ar BAI Bak Brd Brj Btj Bel Ber Bly Bng Bui Brb Bur Brw Cam CE Cle C&B CF Cox Crs Cur Dlw D&H D'Dl Drw
Ebe Ebr Eic E I Ww Eyr Ewy Fmr Fst Fer Fld Frl Ger Gdn Gra Ggy Gry
Gig G&T Hns Ham Hde Hrm Hrs Hrv Hst Hen H&C Hly Hrn Hop H&P Iow
Jae MWJ RHJ J&M Jns Kei K&W Ken Kg Koe Koa Lam Lan Lea Lnr LB
Liv Loh Mnd Mgl Man PM Mns Man May JMM McM Mie Mhl Min MV
Mrs Myz Neb Xef Xol XI OV Pac Pks JMP Prn Pnt Poo Por Pot Pri Pug
Qkr Rdk Raw Ree Ren Rs RP Sal S&R SC S&S S&O Shw Sph Skk SB S&H
S&W Tat Tex TB Thm Thn Til Tp V Tn T&B Vl Vn Vn Web W&D
Wer Wh Wd WS Wyg Y&C.

Similar Names. Lohman's Acme, Livingston's Acme, Livingston's Early
Acme, Early Acme, Improved Acme.

Admiral Dewey. Pne.

Advance. Brb Fmr Frd Liv Lon S&O.

Similar Names. Early Advance, Extra Early Advance, Purple Advance, Extra
Early Purple Advance, Early Purple Advance, Cleveland's Advance.


Almeir's Dwarf Champion. Entered as Dwarf Champion.

American Purple. Tcn. For similar names see Cincinnati Purple.

Americus Hybrid. Fst.

Similar Names. Faust's Americus Hybrid.

Aristobright. LRA.

Similar Names. Dwarf Aristocrat, Livingston's Dwarf Aristocrat.

Arrington's Earliest. CA. For similar names see Earliest of All.

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Atlantic. Ewg Gra McK S&F. For similar names see Atlantic Prize.
Seedsmen's synonyms. Earliest of All, Early Ruby, Gra.
Atlantic Prize. Air Ar Bak Brd Brt Btl Bel Btg Bow Bgg Bgs Bri Brn Brn Buc Bui Bar Brr Brw C&J Cam CE Cel CF Cur Dlw D&H Del DD Drr Dnm Ebe Ebr Eic RE Fqr Fer Fle Frd Gls Gug Gry G&T TG Hns Ham Hrv H&C Hlm Hop H&P Iml Iow Jae RHJ J&M J&S Jns KF Kg Kos Kra Lam Lan Lar LB Liv Jl Loh Mnd Mgd Man Mns Mas May JCM JMM Mhl Ms MV M&S Neb Xol NK OV Old Pac Pg Prn Prt Ptt Poo For Pot Pri Png Qkr Raw Ree Roc Rs Sal S&R SC Shw S&O Sm Sm Sim Sox Spf SB S&H S&W Tat Tern Tex Thm Thr Til Trun VI Van Vk Wea Wbl Wdl Wdr Y&H.
Similar names. Early Atlantic Prize, Extra Early Atlantic, Improved Atlantic Prize, Atlantic.
Seedsmen's synonyms. Early Ruby, Brk Cur Drr H&C Sim Vk, etc. Ruby, Jns.
Autocrat. Brk J&S Thr.
Baltimore Prize Taker. Lan McM Mel. For similar names see Prize Taker.
Barbados Gooseberry. Sim SB. For similar names see Cape Gooseberry.
Seedsmen's synonyms. Ground Cherry, Ren Sim. Mexican Tomato, Sim. Strawberry, Ren Sim. Winter Cherry, Sim.
Bedell's Long Island. Entered as Long Island.
Beefsteak. Vaa.
Bell's Enormous, Bell's Satisfaction. Entered as Enormous and Satisfaction.
Bell's Extra Early. Bel. For similar names see Extra Early.
Belmont. Brk Ggy Raw S&F.
Similar names. Breck's Belmont.
Best of All. Brk Bdg Bur Drr Fqr Mhl S&H Thr Van V&D Waa.
Similar names. Sutton's Best of All, Sutton's Best of All Forcing, Best of All Forcing, Great B. B., Brinton's Best.
Best of All Forcing. Wat W&D. For similar names see Best of All.
Big Four Hundred. PM. For similar names see Number Four Hundred.
Seedsmen's synonyms. Ponderosa, PM.
Bolgiano's Prize Taker. Entered as Prize Taker.
Bolgiano's Queen. Big. For similar names see Golden Queen.
Bond's American Purple, Bond's Early Minnesota. Entered as American Purple and Early Minnesota.
Boston Market. Fqr Raw S&F.
Brandywine. Bgs Frd J&S Lan M&S.
Breck's Belmont. Entered as Belmont.
Bright and Early. Del Eas MWH Mhl Ren Vk.
Similar names. See Best of All.
Bruce's Dominion Day.  Entered as Dominion Day.

Buckbee's Beefsteak.  Buc.

Similar names:  Moore & Simon's Early Beefsteak.

Buckbee's County Fair, Buckbee's Earliest Market, Buckbee's Golden Prize, Buckbee's Snowball, Buckbee's Spot Cash, Buckbee's State Fair.  Entered as County Fair, Earliest Market, Golden Prize, Snowball, Spot Cash, and State Fair.

Buckbee's Tree.  Buc.  For similar names see Tree.

Seedsmen's synonyms:  Station, Buc.

Buckbee's World's Fair.  Buc.  For similar names see World's Fair.

Buist's Beauty.  Buc.  For similar names see Buist's Beauty.

Buckeye State.  Ax Anb Ar Bk Bkt Bel Brn Buc Bar Cme CE CF Crs Cw CA DD Dr Tr Ebr Evr Fer Gra Ggy TG Htn Hst Hly Hm M&L J&M J&S Jns Ken K&F Kg Lmr Liv Lndd Lns M&L M&L M&S Mze Msx Nol OE Old HP Pat Pri Rn Rec Rcr Rt SC Shw Shm Sim Spf SB SEH Til Tpk VI Van Vk Won WS.

Similar names:  Livingston's Buckeye State, Buckeye.

Buist's Beauty, Buist's Prize Belle, Buist's Trophy.  Entered as Beauty, Prize Belle, and Trophy.

Burbank Preserving.  Bar Hse Liv.

Burpee's Climax, Burpee's Combination, Burpee's Early Fordhook Fancy, Burpee's Matchless, Burpee's Noble, Burpee's Success, Burpee's Large Early, Burpee's Quarter Century.  Entered as Climax, Combination, Early Fordhook Fancy, Matchless, Noble, Success, Large Early, and Quarter Century.

Canada.  McK Ren.  For similar names see Canada Victor.


Similar names:  Early Canada Victor, Canada, Yellow Victor.

Cape Gooseberry.  Ax.

Similar names:  Barkadas Gooseberry.

Seedsmen's synonyms:  Strawberry, RE.

Cardinal.  Bdg Dw Ebe Efi Lea Liv MV Rec RP S&F Sim Shm Sor.

Century.  Lur Sim.  For similar names see Twentieth Century.

Chalk's Early Jewel.  Entered as Early Jewel.

Challenge.  Mls.

Similar names:  Mills' Challenge.

Chemin.  M&N Ren.

Similar names:  Early Chemin, Chemin Market.

Chemin Market.  J&S.  For similar names see Chemin.


Similar names:  See Red Cherry, Yellow Cherry.

Cherry Currant.  Brt.

Similar names:  See Red Cherry, Yellow Cherry, Red Currant.

Seedsmen's synonyms:  Grape, Brt.

Childs' Diadem, Childs' Golden Jubilee, Childs' Picture Rock, Childs' Ruby Queen.  Entered as Diadem, Golden Jubilee, Picture Rock, and Ruby Queen.

Cincinnati Purple.  Liv JCM JMM.

Similar names:  Bond's American Purple, American Purple.

Cleveland's Advance.  Entered as Advance.

Climax.  Big Bur.

Similar names:  Burpee's Climax.

Climbing.  Bel Chl.

Similar names:  Giant Climbing, Climbing Orange.

Seedsmen's synonyms:  Mansfield Tree, Bel.
Climbing Orange. Sal. For similar names see Climbing.

Cluster. Lam.


Clusterosa Yellow Egg. J&S. For similar names see Cluster.

Columbian Prize. Crs. For similar names see Golden Prize.

Combination. Bkt Buc Bur Col Ham Hill MJF May Old Sal Tem Thr.

Similar names. Burpee's Combination.

Comrade. Ggy S&F.

Conference. Fqr Ggy.

Conqueror. Bgs Crs Emr Hrv MY Pac Ren Sal Shm Sor SB T&B.

Similar names. Early Conqueror.

Cook's Favorite. Entered as Favorite.

County Fair. Buc. For similar names see World's Fair.

Cox's Trophy. Entered as Trophy.

Cream City. Cuf Van.

Creekside Glory. Sim.

Crimson Current. Iow. For similar names see Red Current.


Similar names. Henderson's Crimson Cushion, Henderson's Perfected Crimson Cushion, Crimson Robe, Early Crimson, Tait's Early Crimson.

Crimson Robe. Sal. For similar names see Crimson Cushion.

Crimson Whirlwind. Sal.

Cumberland Early Red. Lan. For similar names see Cumberland Red.

Cumberland New Jersey Red. Lan.

Similar names. See Cumberland Red, New Jersey Red.


Similar names. Cumberland Early Red, Cumberland New Jersey Red.

Current. Btc Buc Fqr Ggy Lan Pri Stw. For similar names see Red Current.

Seedsmen's synonyms. Grape, Fqr.

Democrat. Thr.

Diadem. Chl Ggy.

Similar names. Child's Diadem.

Dickmann's New Jersey. Dd. For similar names see New Jersey Red.

Dominion Day. Brn RE.

Similar names. Bruce's Dominion Day.

Dreer's Earliest of All. Der. For similar names see Earliest of All.

Duke of York. M&S.


Similar names. Livingston's Dwarf Aristocrat.

Dwarf Champion Cluster.  Pr.  For similar names see Dwarf Champion.

Dwarf Cluster.  M&N.


Dwarf Scarlet Champion.  Ebe May NK Thr Vau.

Dwarf Tree.  Gdn.  For similar names see Tree.

Dwarf Yellow Prince.  Liv.  For similar names see Yellow Prince.

Earliana.  CF J&H GN Ggy Hrs Mas Ren Rev Sim SB Thb Vk Wau.

Earliest in the World.  Gng Hly Rt.  For similar names see Earliest of All.

Earliest Large.  Wer.  For similar names see Large Early.

Earliest Market.  Buc Roe.  For similar names see Earliest of All.

Earliest of All.  D&C Drr Ebe Ewg Fle Gra GN Lon McK Ren Sal SB.

Early Abundance.  M&N.


Early Advance.  Ber Hlm Man MV Roe Sec Y&H.

Early Atlantic Prize.  Crs.  For similar names see Atlantic Prize.

Early Bermuda.  Lan.

Early Bird.  Bri Ggy J&S Rs.

Early Canada Victor.  Shm.  For similar names see Canada Victor.

Early Chemin.  Bur.  For similar names see Chemin.

Early Conqueror.  Bru Gng Liv Pks Sim Tpk.  For similar names see Conqueror.

Early Crimson.  Tat.  For similar names see Crimson Cushion.

Early Dwarf Champion.  Grw Vau.  For similar names see Dwarf Champion.

Early Eureka.  Hlm.

Early Essex Hybrid.  CE Evr Fer Hrm Inl LB Loh Pri Raw Ree Rev Y&H.

Early Favorite.  HP.  For similar names see Favorite.

Early Fordhook Fancy.  Bur.  For similar names see Fordhook.


TOMATO.

S&O Sic Sim Sox Spf Stk SB Stw S&H S&W Tat Tex Thm Thr Til Trm T&H Vl Vau Vk Wst Web W&D Wer Wil Wld Wdr Ws Wyg Y&H.


Seedsmen's Synonyms.  Tree, Row Fer H&P RP.
Early Gold Mine. M&S.

Similar names: Sutton's Early Gold Mine.

Early Hathaway Excelsior. Alx. For similar names see Excelsior.

Early Imperial. JMP. For similar names see Imperial.

Early Jersey. Lan. For similar names see New Jersey Red.


Similar names: Chalk's Early Jewel.

Early July. Brt.

Early Large Smooth Red. Alx Nef Stk. For similar names see Large Smooth Red.

Early Leader. Aub Vk.

Similar names: Vick's Leader.

Early Market. Lar.

Early Market Champion. J&S M&S. For similar names see Dwarf Champion.

Early Mayflower. Bgs D&H Fst TG Sal Sim Wat.

Similar names: See Mayflower.

Early Melrose. Hlm.


Seedsman's synonyms. Red Apple, J&S.

Early Minnesota. Bkt Buc Col Cur Del Fur Fld Gls Gra Ggy Ham Hrs Iow Kso May JMM Nk Ree Sie S&H Tem Wer Wll.

Similar names: Bond's Early Minnesota.

Early Optimus. TG. For similar names see Optimus.

Early Paragon. Hlm J&S M&S Pac Shm T&B. For similar names see Paragon.

Early Perfection. Alr Hde Liv Rs. For similar names see Perfection.

Early Picton. Gng.

Early Purple Advance. Brt Cle. For similar names see Advance.

Early Red. Gra Hs. For similar names see Extra Early.

Early Richmond. Ger Lan TB.

Similar names: Extra Early Richmond.


Similar names: Ruby, Henderson's Ruby, Childs' Ruby Queen, Shumway's Ruby Queen, Ruby Queen.


Early Smooth Red. Bui Cle JMP. For similar names see Large Smooth Red.

Early Stone. Bgg.

Early Tree. Crg GN. For similar names see Tree.

Eclipse. Mhd S&F Thr Wat.

Similar names: Eclipse Forcing, Sutton's Eclipse.

Eclipse Forcing. W&D. For similar names see Eclipse.

Eichling's Excelsior. Eic. For similar names see Excelsior.


Enormous. Anb Bel Bur Col CF Frd Ggy TG Ham Hrs Hse Iml MWJ J&S Liv Lou Mgd Mau May JMM Pg Ree Rim Sal Shw Sim Tem Vau Wat WS.

Similar names: Maule's Enormous.

Essex Early Smooth. Fqr. For similar names see Essex Hybrid.


Similar names: Early Essex Hybrid, Essex Early Smooth.

Everbearing. Ewg Kei.
Excelsior. Shw.

**Similar names.** Purple Excelsior, White's Excelsior Purple, White's Excelsior, Hathaway's Excelsior, Young's Excelsior, Eichliger's Excelsior, Early Hathaway Excelsior.

**Extra Early.** Lan.

**Similar names.** Extra Early Dwarf, Extra Early Red, Extra Early Market, Bell's Extra Early, Key's Early, Early Red, Farquhar's Faultless Early.

**Extra Early Advance.** Bur & Co Fst Grn Hbt J&S Mas Rec Sox Web Y&H.

**Similar names.** See Advance.

**Extra Early Atlantic.** McK Ren. For similar names see Atlantic Prize.

**Seedsman's synonyms.** Earliest of All, McK Ren. Early Ruby, McK Ren.

**Extra Early Cluster.** Min. For similar names see Cluster.

**Extra Early Dwarf.** Stk. For similar names see Extra Early.

**Extra Early Gem.** M&S. For similar names see Gem.

**Extra Early Market.** MWJ. For similar names see Extra Early.

**Extra Early Peerless.** M&S.

**Extra Early Purple Advance.** Bt Dd Hns Man. For similar names see Advance.

**Extra Early Red.** Gra Hns. For similar names see Extra Early.

**Extra Early Richmond.** J&M Lan Min. For similar names see Early Richmond.

**Extra Early Ruby.** Gls.

**Extra Early Tree.** May Ms OV HP Tpk. For similar names see Tree.

**Extra Early Trophy.** GH M&S. For similar names see Trophy.

**Farquhar's Faultless Early.** Entered as Faultless Early.

**Faultless Early.** Fqr. For similar names see Extra Early.

**Faust's Americanus Hybrid.** Entered as Americanus Hybrid.


**Similar names.** May's Favorite, Livingston's Favorite, Cook's Favorite, Sacramento Favorite, Trucker's Favorite, Early Favorite.

**Ferris Wheel.** Sal.

**Similar names.** Salzer's Ferris Wheel.

**Ferry's Optimus.** Entered as Optimus.

**Fifty Days the Earliest.** Sal. For similar names see Earliest of All.

**Fig.** Bdg Fqr Raw S&F.

**Similar names.** Golden Fig, Yellow Fig, Sumatra Fig, Zealand Fig.

**Seedsman's synonyms.** Pear, Fqr Raw S&F. Red Pear, Bdg.

**Fiji Island.** Min Nef Vin.

**Similar names.** Fiji Island Improved.

**Fiji Island Improved.** Entered as Fiji Island.

**First Choice.** Wdr.

**Seedsman's synonyms.** Fordhook First, Wdr.

**First Early.** WS.

**Similar names.** First of All, Hargest's First of All, May's First of All, Wood's First Early.

**First of All.** May Tpk. For similar names see First Early.
Fleming’s Mammoth King.  Fle.  For similar names see King.
    Similar names.  Fordhook Fancy, Fordhook First, Fordhook Early, Burpee’s Early Fordhook Fancy, Early Fordhook Fancy.
Fordhook Early.  Bkt Ti Lam NK.  For similar names see Fordhook.
Fordhook Fancy.  Bkt Bri Buc Bur Col Fred J&S Mas May McM Old Ren Sim Tat Thr Tlh.
    Similar names.  See Fordhook.
Fordhook First.  Brl Bkt Rej Bng Buc Brb Bur Brr CE Cle Col Crs D&H Frd Gra Ham Hrm Hlm H&P Jer Jns McM Old Por Rce Rt Rs Sal S&R S&F Sim S&H Tat Thr Tlh Vau Vk Wer Wd Y&H.
    Similar names.  See Fordhook.
Seedsmen’s synonyms.  First Choice, Wdr.
Fortune.  Bgs J&S.
Four Hundred Mammoth.  Fst.  For similar names see Number Four Hundred.
    Seedsmen’s synonyms.  Ponderosa, Fst.
    Similar names.  Henderson’s Early Freedom, Early Freedom.
French Marvel.  J&S.
Frogmore Forcing.  Van Wat W&D.
Futurity.  GN.
Garden King.  Shm.  For similar names see King.
Gem.  Bdg.
    Seedsmen’s synonyms.  Red Cherry, Bdg.
General Grant.  Bgs CE Crs Emr Gra Gry Ree Sal.
German Market.  Wer.
Giant Climbing.  Evr VI.  For similar names see Climbing.
Giant Everbearing.  GN.
Giant Prize.  Mls.
Giant Scarlet Ground Cherry.  Iow.
Giant Seedling.  CCo Frd Ree.
    Similar names.  Logan’s Giant Seedling.
Giant Tree.  Alr May.
Golden Ball.  Amr CE TG Liv JL Ree.
    Similar names.  Livingston’s Gold Ball, Ivory Ball.
Golden Beauty.  Fld McM.  For similar names see Beauty.
Golden Dome.  Sal.
Golden Fig.  Chl.  For similar names see Fig.
Golden Gage.  M&S.  For similar names see Green Gage.
Golden Husk.  GN Liv Shm.  For similar names see Husk.
Golden Jubilee.  Chl.
    Similar names.  Childs’ Golden Jubilee.
Golden Nugget.  Iow.
Golden Prize.  Buc Roc.
    Similar names.  Mammoth Prize, Buckbee’s Golden Prize, Columbian Prize.
Golden Queen.  Alx Ar Bak Brl Bdt Btl Bkt Bel Ber Bow Brk Bgs Bru Bru Bng Bur Brr Brw C&J CE Col CF Ckns Crs CA D&C Drr Elt Evr Fnr Fyr Fst Frr Frd Gdn Gry Grw TG Ham Hrs Hst Hlm Hse Iml Iow JWR J&H Jns Ken Kg Kra Lam Lur LB Liv JL Loh Man Mas Man May JCM JMM McM Mls MV Neb NK Pac Pg HP Ptt Poo Por Pot Raw Ree Ren Ree Rt RP S&R SC S&F
Golden Strawberry. Frd M&S. For similar names see Strawberry.

Golden Sunrise. C&B Ham. For similar names see Sunrise.

Golden Trophy. Alr Bel Btu Cle Crs Drw Ebe Gry TG Ham Lan Ml MV Xef Jmp Prn Rce Sox S&W TB Tpk Trm Wer.

Great B. B. Big J&S. For similar names see Best of All.

Great Mississippi. Chl.

Green Gage. Lnu.

Greenhouse. Chl.

Hamburg's Dwarf Tree. Ham. For similar names see Tree.

Hamburg's Earliest on Earth. Ham. For similar names see Earliest of All.

Hamburg's Golden Beauty. Ham. For similar names see Beauty.

Hamburg's Mammoth. Ham.

Hamburg's Prolific Bush. Entered as Prolific Bush.

Hamburg's Tall Tree. Ham. For similar names see Tree.

Hargest's First of All. Hlm. For similar names see First Early.

Hathaway's Excelsior. Bgs Liv Min Tpk Vk. For similar names see Excelsior.

Hawkeye. Jl.

Hawks' Early Large Smooth Red. Haw.

Henderson's Crimson Cushion. Entered as Crimson Cushion, Early Freedom, Crimson Cushion, Ponderosa, and Ruby.


Holmes' Early Eureka, Holmes' Early Melrose, Holmes' Royal Red, Holmes' Supreme Forcing. Entered as Early Eureka, Early Melrose, Royal Red, and Supreme Forcing.

AMERICAN VARIETIES OF VEGETABLES.

Hundred Day.  Sal Tpk.


Similar names.  Purple Husk, Yellow Husk, Golden Husk, Winter Husk.


Ignotum.  *Alr Bow Bng Brn Bru Buc Erb Bur Brr Brw C&J CE Chl Cle C&B CF Cok Crs Drw Ebe Eic RE Ewp Frd Ger Gls Gra Gng Ggy TG Ham Hrs Hlm Iml J&M J&S Lam Lan Liv Mnd Man May JCM MCK MV Mzy Neb OV Old Pac Pnr Por Pri Raw Ree Ren Ree Roc Rs S&R Shw S&O Shm Sim Spf SB Thr Tlh Tpk Vau Vk Web Wd WS.

Similar names.  Shumway's Ignotum.


Similar names.  Early Imperial, Maule's Imperial.

Improved Acme, Improved Atlantic Prize, Improved Beauty, Improved Extra Early Tree, Improved Ground Cherry, Improved Honor Bright, Improved Large Red Trophy, Improved Large Trophy, Improved Large Yellow, Improved Lorillard Forcing, Improved Mayflower, Improved Peach, Improved Red Trophy, Improved Tree, Improved Trophy, Improved Yellow Ground Cherry.  Entered as Acme, Atlantic Prize, Beauty, Extra Early Tree, Ground Cherry, Honor Bright, etc.

Ivory Ball.  Lan.  For similar names see *Golden Ball*.


Japanese Tree.  M&S.  For similar names see *Tree*.

Kansas Standard.  Anb Btl Crs.

Key's Early.  Pac.  For similar names see *Extra Early*.

King.  Kg.

Similar names.  Fleming's Mammoth King, Shumway's Garden King, King of the Early, Garden King.

King Humbert.  Drr Koe.

King of the Early.  Eic Haw Stk.  For similar names see *King*.

Klondike.  Mls.
Kuttawa Dwarf Tree.  CCo Evr.  For similar names see Tree.
La Crosse Seedling.  Sal.
Similar Names.  Salzer's La Crosse Seedling.
Landreth's Earliest.  Lan.  For similar names see Earliest of All.
Large Champion.  Shm.  For similar names see Dwarf Champion.
Large Early.  Bur.
Similar Names.  Burpee's Large Early, Earliest Large.
Large Golden Yellow.  Bdg.  For similar names see Large Yellow.
Large Red California.  Vin.
Seedsmen's Synonyms.  Fiji, Vin.
Large Red Trophy.  Buc Mns.  For similar names see Trophy.
Large Rose Peach.  Aix Liv.  For similar names see Peach.
Large Round Yellow.  DD Put SC.  For similar names see Large Yellow.
Seedsmen's Synonyms.  Golden Queen, SC.  Golden Trophy, Put.
Large Smooth Red.  Crg Min Pac.
Large Smooth Yellow.  Ebe Reo Sim.  For similar names see Large Yellow.
Seedsmen's Synonyms.  Golden Queen, Sim.
Large Trophy.  CF My Roe Shm.  For similar names see Trophy.
Large Yellow.  Brn Bui Eic RE Ewq Gra TG Kei Mzy Pri Reo S&K S&W Tat W&D.
Similar Names.  Large Smooth Yellow, Improved Large Yellow, Large Round Yellow, Large Golden Yellow.

Lemon Blush.  Brg Frd Low MWJ May Mzy Thm Thr.
Similar Names.  Thorburn's Lemon Blush.

Leonard's Earliest in the World.  Hly.  For similar names see Earliest of All.


Logan's Giant Seedling.  Entered as Giant Seedling.
Lohrman's Acme.  Entered as Acme.
Long Island.  Fmr Inc MWJ Wd.
Similar Names.  Bedell's Long Island.
Similar Names.  Thorburn's Long Keeper.
Longstreth's Golden Glory.  Lon.  For similar names see Salzer's Golden Glory.
Similar Names.  Lorillard Forcing, Improved Lorillard Forcing.
Lorillard Forcing.  Wat W&D.  For similar names see Lorillard.
McMillan's Royal Red.  Entered as Royal Red.
AMERICAN VARIETIES OF VEGETABLES.

Majestic. Bui.

Mammoth Crimson. Kg.

Mammoth Peach. Ar. For similar names see Peach.

Mammoth Prize. Buc Mls. For similar names see Golden Prize.

SEEDSMEN'S SYNONYMS. Mansfield Tree, Buc.

Mammoth Tree. Ar. For similar names see Tree.

Mammoth Yellow Ground Cherry. Toro.

Mansfield Mammoth Tree. Ar May HP. For similar names see Tree.

Mansfield Tree. Bel Buc CE DD Hst Mau Pnt Ree S&O.

SEEDSMEN'S SYNONYMS. See Tree.

Market Champion. S&O. For similar names see Dwarf Champion.

Marvel. Drr.

Maryland Pride. Mns.

Matchless. Alx Bai Bit Bkt Bel Ber Bg Big Brn Bru Bng Buc Bui Bur Brw CE Col CF Del DD Dev Ebr Etr Fmr Fst Fer Flf Frd Gls Gfy Grw Ham Hrn Haw Hbt Hlm Hop Hnt Hw MV J&M J&S Jns K&F Kg Kra Lam Lnr Liv Mns Mau May Mck Mcm Mhl Ms MV M&S NK Ov Pg Pnt Qkr Ren Ree Rim Roc Sal Shw S&O Shm Sox Spf SB Thr Thb Til Tpk Tm V1 Web W&D Wfr Wll Wd WS Wyg.

SEEDSMEN'S SYNONYMS. Barbee's Matchless.

Maule's Earliest. Fld Ham Mau. For similar names see Earliest of All.

Maule's Enormous, Maule's Imperial. Entered as Enormous and Imperial.

May's Favorite. Entered as Favorite.

May's First of All. May. For similar names see First Early.

Mayflower. Bel Bru Bar Cox Crs D&H Drr Gry Liv Mhl Pot Ren Ree S&F SB.

SEEDSMEN'S SYNONYMS. Improved Mayflower, Early Mayflower, Pierce's Mayflower, Mayflower Forcing.

Mayflower Forcing. Wat. For similar names see Mayflower.

Meteor. Koe.

Mexican. Sim.

SEEDSMEN'S SYNONYMS. Barbados Gooseberry, Sim. Ground Cherry, Sim. Strawberry, Sim. Winter Cherry, Sim.

Michell. Re.


SEEDSMEN'S SYNONYMS. Red Mikado, Pink Mikado.

SEEDSMEN'S SYNONYMS. Maule's Sixteen Hundred Dollar, Buc. Potato, Buc. Turner's Hybrid, Buc C&J Cox Fer Ggy J&S, etc.

Mills' Challenge. Entered as Challenge.

Mills' Earliest in the World. Ms. For similar names see Earliest of All.

Minnesota Queen. May OV Tpk. For similar names see Golden Queen.

Monarch. Vin.

Money Maker. Bri Gg J&S Lan MeM.

Monster. LB.
Tomato.

Monstrous Number Four Hundred. Bar Vin.

Moore's Mammoth Tree. Alias. For similar names see Tree.

Moore's Tree. McM. For similar names see Tree.

Moore's Triumph. Entered as Triumph.

Moore & Simon's Early Beefsteak. M&S.

Moore & Simon's Extra Early Gem. M&S. For similar names see Gem.

Morning Star. Sal.

Multicolor. Liv.

New Century. Big Four May. For similar names see Twentieth Century.

New Jersey Red. Bai.

New York. Ebr Tat.

Nineteen Hundred and Two. Fed.

Noble. Bar.

Nolte's Earliest. Fer.


Northern Light. GN.

Number Fifty-One. GN.

Number Four Hundred. Alr Brd Buc Bar Ham J&M Neb Roe WS.

Optimus. Aub Bow Bgs Brn Bru Buc CE Cle Crs D&H Del Ebe Fer Ggy Hrs Hst Lam Lor LB Liv May McM OV Pac JMP Por Roe Roe RP S&R S&O Shm Sim Sm SO SB Vin Web Wyg.


Paragon. Early Paragon, Livingston's Early Paragon, Livingston's Paragon.

Seedmen's Synonyms. Queen, Bui.

Paramount. D&H.


Peak. Livingstone's Peach, Improved Peach, Mammoth Peach, Purple Peach, Red Peach, Yellow Peach, Rose Peach, Large Rose Peach, Livingston's Large Rose Peach, Sutton's Peachblow, Peachblow.

Peachblow. Fqr. For similar names see Peach.

Pear. Bak Bt Brr Bug Bug Bar Dlw Ebr RE Ewg Fqr Grra TG Ken Liv Min Pac Pnc Raw Rt S&F Shm Smo Tat Vl Vlt WS.

Pear. See Red Pear.

Seedmen's Synonyms. Fig, Fqr Raw S&F.
AMERICAN VARIETIES OF VEGETABLES.

Pearce’s Princess, Pearce’s Mayflower. Entered as Princess and Mayflower.

Pepper’s Prolific Forcing. Entered as Prolific Forcing.

Perfect Gem. Sal. For similar names see Gem.


Similar names. Livingston’s Perfection, Livingston’s Early Perfection, Livingston’s Earliest Perfection, Early Perfection.

Picture Rock. Chl.

Similar names. Child’s Picture Rock.

Pink Mikado. Drr. For similar names see Mikado.

Seedsman’s synonyms. Turner’s Hybrid, Drr.

Plentiful. Ebe Ren.

Plum. Brn Buc Bui Crs Fqr Liv M&S. For similar names see Yellow Plum.


Similar names. Henderson’s Ponderosa.

Seedsman’s synonyms. Number Four Hundred, Buc Neb Brd Alr Ham J&M, etc. Big Four Hundred, PM. Mammoth Four Hundred, Fst. Monstrous Number Four Hundred, Br.


Similar names. Livingston’s Potato Leaf.

Seedsman’s synonyms. Malone’s Sixteen Hundred Dollar, Buc. Mikado, Buc. Turner’s Hybrid, Buc.

Potomac. Ggy Hrs.

Prelude. Ebe Fst Ree.

Similar names. Horsford’s Prelude.

President Cleveland. Fgr S&F.

Princess. D&H Liv.

Similar names. Pearce’s Princess.

Princess of Wales. S&F.

Prize Belle. Bgs Bui Gdn.

Similar names. Buist’s Prize Belle.

Prize Taker. G&T Hlm PM Mns.

Similar names. Baltimore Prize Taker, Bolgiano’s Prize Taker, Prize Winner.

Prize Winner. G&T. For similar names see Prize Taker.

Prolific Bush. Ham.

Similar names. Hammond’s Prolific Bush.
TOMATO.

Prolific Forcing. Wat.
Similar names. Pepper's Prolific Forcing.

Puritan. Ggy Raw S&F.
Similar names. Rawson's Puritan.

Purple Advance. Hn. For similar names see Advance.

Purple Champion. D&H. For similar names see Dwarf Champion.

Purple Cluster. Sk.

Purple Excelsior. Trm. For similar names see Excelsior.

Purple Gem. Not.

Similar names. See Husk.

Purple Peach. Buc D&H Frl Liv Roe Spf SB. For similar names see Peach.

Purple Strawberry. Frd. For similar names see Strawberry.

Quarter Century. Bar Col Han MWJ J&S Liv Mas Man Rec Til Wat.
Similar names. See Twentieth Century.

Queen. Bui G&T J&S PM Mns M&S. For similar names see Golden Queen.

Seedsmen's synonyms. Paragon, Bui.

Queen City. JCM.


Rawson's Puritan. Entered as Puritan.

Red Apple. J&S.
Similar names. White Apple.

Seedsmen's synonyms. Early Michigan, J&S.

Red Bird. Cok. For similar names see Early Bird.

Red Champion. D&H. For similar names see Dwarf Champion.

Similar names. Cherry, Winter Cherry, Ground Cherry, Improved Ground Cherry, Small Red Cherry.

Seedsmen's synonyms. Gem, Bdg.

Red Cross. Hrm K&W S&F.

Red Currant. Brd Buc Cle Crs DD Liv Mzy Rce Sal Spf SB Thr Vau.
Similar names. Small Red Currant, Currant, Crimson Currant.

Red Early Jersey. Stw. For similar names see New Jersey Red.

Redfield Beauty. Cam Hst. For similar names see Beauty.

Red Granite. Sal.

Red Mikado. Drr Mhl. For similar names see Mikado.

Red Peach. Brk Hst H&P Ren Sox Thr 'l Wn. For similar names see Peach.

Red Pear. Bbl Bow Brk Bdg Brn Buc Bui Bur CE C&B Cox Crs Cur Dlw DD Eas Elt Evr Fer Gls G&T Hst Hlt Hn H&P Lam Lan LB Liv Mgd Mns Mas Man May JMM Mck Min MV M&S Ncf NI Ov Pnt Rce Roe Rce Shw S&O Sax Spf Stw S&H Tex TB Thr Til VI Vl Vl Wm Wva.
Similar names. Yellow Pear, Pear.
Seedsmen's synonyms. Fig, Bdg. Red Plum, M&S.

Red Plum. Bbl Bkt Buc Cle Crs Gng Kei Mjy Mzr Roc S&O Sie Trm Wdr.
Similar names. See Yellow Plum.
Seedsmen's synonyms. Red Pear, M&S.

Red Queen. Crs Liv. For similar names see Golden Queen.

Red Table Queen. TG. For similar names see Golden Queen.

Red Trophy. Ar Bgs Cle Ham Man Web. For similar names see Trophy.
Rosalind. Ebr Thr Van.  
Similar names. Thorburn's Rosalind.

Rose Peach. Buc D&H Roc. For similar names see Peach.

Royal Colors. Liv.


Ruby. Del TG Jns Pri AGT. For similar names see Early Ruby.
Seedsmen's synonmys. Atlantic Prize, Jns.

Ruby Queen. Chl Shm. For similar names see Early Ruby.

Sacramento Favorite. Pac. For similar names see Favorite.


Salzer's Giant Tree. Sal. For similar names see Tree.

Salzer's Golden Glory. Sal.  
Similar names. Longstreth's Golden Glory.

Satisfaction. Bel.

Scarlet Stone. Bdg Ebe. For similar names see Stone.

Scovill's Hybrid. Bru Crs Ebe Lnr Roc.  
Shah. J&S.

Shamaner. Koe.

Shenandoah. Tpk.

Shipper's and Canner's Choice. Ham.

Shipper's Delight. Sal.  
Similar names. Salzer's Shipper's Delight.

Shumway's Garden King. Shumway's Ignotum, Shumway's Large Champion, Shumway's Ruby Queen. Entered as Garden King, Ignotum, Large Champion, and Ruby Queen.

Silver Egg. Man.

Simmers' Stone. Entered as Stone.

Small Red Cherry. Hlm Sim. For similar names see Red Cherry.

Small Red Currant. Sim. For similar names see Red Currant.

Smooth Red. May Trm. For similar names see Large Smooth Red.

Snowball. Buc Roc.  
Similar names. Buckbee's Snowball.

Similar names. See Earliana.

Spot Cash. Buc Roc.  
Similar names. Buckbee's Spot Cash.

State Fair. Buc. For similar names see World's Fair.

Station. Buc Chl Crs May Shm Sox Thr.  
Similar names. Station Tree, Upright Station Tree.  
Seedsmen's synonmys. Buckbee's Tree, Buc. Tree, Sox.

Sterling. Wat.

Sterling Castle. Elt.

Stone. Alx Alr Aib Ar Bai Brd Bt Btk Bcl Bel Ber Big Bow Brk Bdg Bgs Bri Brn Bng Buc Bui Brb Bur Brr Brw C&J Cam CE Cle C&B CoC CoX Cox

**Similar names.** Strawberry, Purple Strawberry, Golden Strawberry.

**Seedsmen’s synonyms.** Barbados Gooseberry, Ren Sim. Cape Gooseberry, RE. Ground Cherry, Bkt Brc Ewg Fqr NK Ptt, etc. Hask, Bkt Brc Bwr &J Emr Hrs, etc. Improved Ground Cherry, Col. Mexican Tomato, Sim. Winter, Brg. Winter Cherry, Bkt Brn Hen &J Thr Vk, etc.

**Success.** *Aub Bran Bur RE Fld 12 Vy Mas Man Rm Thr Wat Wd.*

**Sumatra Fig.** Sal. For similar names see *Fig.*

**Sunrise.** Bur Crs G&T SB.

**Similar names.** Golden Sunrise.

**Seedsmen’s synonyms.** *Golden Queen,* Bur Crs G&T Ren.

**Superb.** Low.

**Supreme Forcing.** Wat.

**Similar names.** Holmes’ Supreme Forcing.

**Sutton’s Best of All,** Sutton’s Best of All Forcing, Sutton’s Early Gold Mine, Sutton’s Eclipse, Sutton’s Peachblow. Entered as *Best of All,* Best of All Forcing, *Early Gold Mine, Eclipse,* and *Peachblow.*

**Table Queen.** Bkt Bdg C&J Crs Der Hrm Hen Hly K&W May S&O Sim Thb Thr W&D.

**Similar names.** See *Golden Queen.*

**Tait’s Early Crimson.** Entered as *Early Crimson.*

**Ten Ton.** *Dlw MWJ J&M Koe Lan Mel Stw.*

**Seedsmen’s synonyms.** *T. T. T.,* *Dlw Koe Stw.*

**Terra Cotta.** Mzy Thr.

**Similar names.** Thorburn’s Terra Cotta.

**Thorburn Century.** Thr Vnr. For similar names see *Twentieth Century.*

**Thorburn Novelty.** Thr.

**Thorburn’s Earliest.** Thr.


**Thorburn’s New Jersey.** Bai Thr. For similar names see *New Jersey Red.*

**Thorburn’s 1902.** Thr.

**Tilden.** Min.

**Tree.** Brn CE Re Fnr Fst Grw H&P MWJ Man MV Pac Ree Ren Roe RP Smh Sox Spf Stk TB T&B 17 Vnr.

**Similar names.** Early Tree, Extra Early Tree, Improved Extra Tree, Salzer’s Giant Tree, Mansfield Mammoth Tree, Moore’s Mammoth Tree, Mammoth Tree, Hammond’s Tall Alexander, Hammond’s Dwarf Tree, Kuttawa Dwarf

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Tree, Dwarf Tree, Improved Tree, Mansfield Wonderful Tree, Mansfield Tree, Moore's Tree, Buckbee's Tree, Japanese Tree, Station Tree.


Similar names. Moore's Triumph.


Similar names. See Favorite.


Seedsman's synonyms. Maye's Sixteen Hundred Dollar, Buc. Mikado, Bur Buc Cox Cur Evt Ggy, etc. Potato Leaf, Buc.

Twentieth Century. TG.

Similar names. See Twenty Century, Quarter Century, Burpee's Quarter Century, Thorburn Century, Century.

Upright. RE Fst Man Pae T&B.

Seedsman's synonyms. Tree, Fst Man RE T&B.

Upright Station Tree. MV Sox Thr. For similar names see Tree, Station.

Vaughan's Earliest of All. Ggy Van. For similar names see Earliest of All.

Vick's Leader. Crs. For similar names see Early Leader.

Victoria. S&O.

Virginia Corker. Lan.


Waldorf. Him May Mzy Thr.

White Apple. Fcr. For similar names see Red Apple.

White's Excelsior. Col DD Frd Gdn Hns Iow Man Neb S&O.

Similar names. See Excelsior.

White's Excelsior Purple. Btl Col. For similar names see Excelsior.

Winter. Bdg VI.

Seedsman's synonyms. Strawberry, Bdg.


Similar names. See Red Cherry.

Seedsman's synonyms. Golden Strawberry, Frd. Ground Cherry, Brr Bkt Buc Frd Hrs Sim. Husk, Bkt Buc Emr J&S Liv Thr, etc. Strawberry, Bur Bkt Buc Cur Hen J&S, etc.

Winter Husk. Hbt. For similar names see Husk.

Wonderful. Not.
Wood's First Early.  Wd.  For similar names see First Early.

World's Fair.  Blg.

**Similar Names.** Buckbee's World's Fair, Buckbee's County Fair, Buckbee's State Fair, Griffith & Turner Co.'s World's Fair, County Fair, State Fair.

Yellow Cherry.  Bae Btt Bkt Brk Bru Bue Bur Cle DD Elt Evr Fer TG Hrm K&W Lam LB Liv May JCM MV Mzy Neb OV Pac Pks Pnt Ree Rece SC Sim Spf SB S&H S&W Thr VI Vk W&O Wdr.

**Similar Names.** Improved Yellow Ground Cherry, Cherry, Improved Ground Cherry, Ground Cherry.

Yellow Fig.  Col Ggy NK.  For similar names see Fig.

**Seedsmen's Synonyms.** Yellow Plum, Col NK.

Yellow Ground Cherry.  Bur Fnr Iow Kos.

**Similar Names.** See Yellow Cherry, Red Cherry.

Yellow Husk.  Web.  For similar names see Husk.

Yellow Peach.  Bue D&H Elt RE Kra Lnr Liv MV Ren Ree Roe Sim Sox SB Thr.

**Similar Names.** See Peach.

**Seedsmen's Synonyms.** Yellow Plum, Bak Ber HP M&S.

Yellow Plum.  Anb Bai Bak Brd Btt Bkt Ber Btg Bow Brk Btg Bri Bru Bue Bui Bur Brr Brw C&F CE Cle C&G Col CF Crs Cur DD Eas Ebe Emr Evr Ewg Fnr Fst Fer Gdn Gra Gng Ggy Gry G&T TG Hrs Hbt Hlm Hnt H&P RHJ J&S Jns Kei Ken Kg Kos Lam Lnr LB Liv Loh Mas Mas May McK MV Mzy Neb Nol NK Pac HP Prn Phe Pnt Poo Por Pot Pri Raw Ree Ren Ree Roe S&R SC S&F S&O Sie Sim Sox Spf SB Stw S&H Tex TB Thr Trm Vl Vau Vk Vin Wd W&D Wer Wil Wd Wdr WS.

**Similar Names.** Red Plum, Plum.

**Seedsmen's Synonyms.** Yellow Fig, Col NK.  Yellow Pear, Bak Ber HP M&S.


**Similar Names.** Livingston's Yellow Prince, Dwarf Yellow Prince, Livingston's Dwarf Yellow Prince.

**Seedsmen's Synonyms.** Golden Dwarf Champion, Bur.

Yellow Trophy.  Gdn Jac Wd WS.  For similar names see Trophy.

**Seedsmen's Synonyms.** Golden Queen, Wd WS.

Yellow Victor.  Ggy.  For similar names see Canada Victor.

Young's Excelsior.  Yng.  For similar names see Excelsior.

Zealand Fig.  Ms.  For similar names see Fig.

**TURNIP (GARDEN TURNIP).**


**Similar Names.** Large Amber Globe, Green-Crowned Amber Globe, Green Top Amber Globe, Red-Crowned Amber Globe.

**Seedsmen's Synonyms.** Large Yellow Globe, Bur Fst Tex Pac Vk WS.  Yellow Globe, DD Hst May SC S&R Spf, etc.  Yellow Stone, Hst.


**Similar Names.** See Purple Top Strap Leaf.
Berlin. May.

**Similar names.** Small Berlin.

**Seedsmen's synonyms.** Tellow, May.

**Big White Georgia.** Hyg.

**Black Stone.** Thr. For similar names see Yellow Stone.

**Bruce's Golden Ball.** Entered as Golden Ball.

**Buckbee's Cardinal.** Buc. For similar names see Cardinal.

**Seedsmen's synonyms.** Scarlet Kashmyr, Buc.

**Buckbee's Extra Early Cames, Buckbee's Purple Top Strap Leaf, Buckbee's Red Top Strap Leaf.** Entered as Extra Early Cames, Purple Top Strap Leaf, and Red Top Strap Leaf.

**Budlong's Improved White French.** Entered as Budlong's White French.

**Budlong's White French.** C&J. For similar names see White French.

**Buist's Large Globe.** Jac.

**Bullock Green Top.** SB.

**Seedsmen's synonyms.** Yellow Aberdeen, SB.

**California Navet.** Vin. For similar names see Jersey Navet.

**Callaway.** Alx.

**Seedsmen's synonyms.** Georgia Winter, Alx.

**Cardinal.** Alx Bait Bfr GN J&S Sire.

**Similar names.** Buckbee's Cardinal, Carter's Cardinal.

**Seedsmen's synonyms.** Scarlet Kashmyr, Alx Bur J&S JL.

**Carter's Cardinal.** Evry VI. For similar names see Cardinal.

**Clyde Purple Top Mammoth.** For similar names see Purple Top Globe.


**Similar names.** Large Cow Horn, Long Cow Horn, Long White Cow Horn.

**Seedsmen's synonyms.** Large Crepper, G&T. Long White, Alx Bur Drr Fqr Fer Hen, etc. Long White Meaux, RHJ. White Tankard, D&H.

**Cox's Extra Early Snowball.** Entered as Extra Early Snowball.

**Crystal White.** Fnr May.

**Devonshire Graystone.** D&H RE Fnr SB. For similar names see Graystone.

**Dixie Land.** Gdn Jac MWJ Lan McM.

**Seedsmen's synonyms.** Southern Prize, Gdn Jac.

**Early American Red Top.** RHJ. For similar names see Red Top Strap Leaf.

**Early Bay City.** Horn.

**Similar names.** Hammond's Early Bay City.

**Early Dutch.** Ebr Emr Lan Mud MV OV Pri See Thr Tpk.

**Similar names.** See White Dutch.


**Similar names.** White Flat Dutch, White Flat Dutch Strap Leaf, Early White Flat Dutch, Improved Early White Flat Dutch, Early White Flat Dutch Strap Leaf, Early Large Flat Dutch, Early Purple Top Flat Dutch.

**Seedsmen's synonyms.** Early White Dutch, Ggy Shw. Early White Strap Leaf, Fnr. White Strap Leaf, Bdg. White Top Strap Leaf, Drm Liv JL Pnt.

**Early Flat Purple Top.** Ar CA Dlw Ggy MWJ Lan Mhl HP Rs Stw.

**Similar names.** See Purple Top Strap Leaf.

**Seedsmen's synonyms.** Early Red Flat Top, Ar Ggy HP May.
Early Flat Purple Top Strap Leaf. Ar Bgs May.

Similar names. See Purple Top Strap Leaf.

Early Flat Red Top. Ar Cam CA Dlw G&T Lan Mhl HP Stw.

Similar names. See Red Top Strap Leaf.

Seedsmen’s synonyms. Purple Top Strap Leaf, Lan Stw. Purple Top, Ar.

Early Purple Flat Top, Gvy HP.

Early Flat White Top. Gvy. For similar names see White Top Strap Leaf.

Early Golden Ball. Sim. For similar names see Golden Ball.

Seedsmen’s synonyms. Orange Jelly, Sim.

Early Golden Stone. Cle. For similar names see Yellow Stone.

Early Ivory. Chl GN.

Similar names. Ivory Ball.

Early La Crosse. Sal.

Early Large Flat Dutch. Shm. For similar names see Early Flat Dutch.

Early Large Purple Top Globe. HP. For similar names see Purple Top Globe.

Early Large Red Top Globe. Ar Rtl Bkt CA G&T MWJ Lan Min Rim Stw Wlt.

Similar names. See Red Top White Globe.

Early Large Red Top White Globe. Bgs.

Similar names. See Red Top White Globe.

Early Nimble Dick. Brn. For similar names see Nimble Dick.

Early Pure White Milan. Thr. For similar names see Purple Top Milan.

Early Purple Top. Eic K&F McM Min Rs Stk TB Van Wd WS Wyg.

Similar names. See Purple Top Strap Leaf.

Seedsmen’s synonyms. Early Red Top, Eic.

Early Purple Top Flat Dutch. Crg.

Similar names. See Early Flat Dutch.

Early Purple Top Milan. Brr C&B Cvs GH Gra Hrs Hen H&C MV Rs Sal S&W Thr Thb Web Yng.

Similar names. See Purple Top Milan.


Similar names. See Purple Top Munich.


Similar names. See Purple Top Strap Leaf.

Early Purple Top Strap Leaf Milan. Bgs.

Similar names. See Purple Top Milan.

Early Purple Top White Globe. ALe H&P Rs.

Similar names. See Purple Top White Globe.

Early Red Purple Top. Pne. For similar names see Purple Top Strap Leaf.

Early Red Top. Eic Kra McM Pug Stk Wd WS.

Similar names. See Red Top Strap Leaf.

Seedsmen’s synonyms. Early Purple Top, Eic.


Similar names. See Red Top White Globe.

Early Red Top Munich. Pac. For similar names see Purple Top Munich.

Early Red Top Strap Leaf. Alx Bur D&C RE Fnr Fst Frd Ham Hst 1Hm NK Ptt For S&R Tex Thb Wdr Y&H.

Similar names. See Red Top Strap Leaf.


Similar names. See Red Top White Globe.

Early Scuppernong. J&S.
Early Six Weeks.  Bue Crs Evr Hrm Ren Roc Sal Vl Vk.
  Similar names.  See Six Weeks.
  Snowball, Bue Roc Crs Evr.

Early Snowball.  A1x Brk Bgs CE C&B Cur  Elt Evr Fle GH Gra Hen Hop Iow J&S Ken Kg Lan Lnr Mnd Man McK Mel Mis Not Pac Pks Poo Pot Raw Ree Ren Ree Roc Rs Shm Sim SB S&H S&W Thb Thb Til T&B Wat Wea W&D.
  Similar names.  See Snowball.
  Seedsmen’s synonyms.  Early White Stone, Bdg.  Six Weeks, Bdg.  White Stone, Flen Sim SB.

Early Snow White Globe.  Bui.  For similar names see White Globe.
  Similar names.  See White Dutch.

Early White Dutch.  Brt Brr Ggy Poo S&O Tlh VI.
  Similar names.  See White Dutch.
  Seedsmen’s synonyms.  Early Flat Dutch, Ggy.

Early White Dutch Strap Leaf.  D&C.  For similar names see White Dutch.

Early White Egg.  A1x Anb Ar Bg Btl Bkt Bgs Bui Cle Cols Dd Drr Drn Eic Elt Ger Gls Gdn GH Gng Gry G&T Hns Hde Hrn Iow Jac J&S Lan Liv JMM Mhl Min Not Pfr Qkr Sie Sim Spf Y&H.
  Similar names.  See White Egg.

  Similar names.  See Early Flat Dutch.

Early White Flat Dutch Strap Leaf.  Bkt Bur Frd Gg1 Hst Hly LB Loh Pac Pgs Pks SB Tex Vk.
  Similar names.  See Early Flat Dutch.

Early White Flat Strap Leaf.  C&J.  For similar names see White Top Strap Leaf.

Early White Milan.  Brt Bkt Bri Bur C&B Drr Gls Hns Hen Iow RJJ J&M Mnd McM Ree Rs RP St&W Thr Yng Y&H.
  Similar names.  See Purple Top Milan.

Early White Model.  Del NK.  For similar names see White Model.

Early White Six Weeks.  Kei K&W.  For similar names see Six Weeks.

Early White Snowball.  Vk Wlt.  For similar names see Snowball.
  Seedsmen’s synonyms.  Early Six Weeks, Vk.

Early White Stone.  Bdg Bgs Brn Brm Cle CF Cox Crs Ebe RE Gls Gra Gng Hrm RJJ Jns Kei Kcn.
  Similar names.  See Yellow Stone.

Early White Top.  Pug.  For similar names see White Top Strap Leaf.

Early White Top Strap Leaf.  Bgs C&B Cur Elt Fmr GH Hen Neb Ptt Tem Thm W&D Wdr Y&H.
  Similar names.  See White Top Strap Leaf.
  Seedsmen’s synonyms.  Early Flat Dutch, Fmr.

Early Yellow Finland.  RJJ.  For similar names see Yellow Finland.

Early Yellow Globe.  GH.  For similar names see Yellow Globe.

Early Yellow Purple Top.  Bow.  For similar names see Purple Top Strap Leaf.

Early Yellow Stone.  Brn Cle GH Hrs.  For similar names see Yellow Stone.
  Seedsmen’s synonyms.  Golden Stone, Cle.

Early Yellow Teltow.  Bdg.  For similar names see Teltow.
  Seedsmen’s synonyms.  Marrow, Bdg.  Small Berlin, Bdg.
Eureka. Pri. 
**Similar names.** Price & Reed's Eureka.

**Seedsman's synonyms.** 'Egyptian', Pri.

**Extra Early Cames.** Buc. 
**Similar names.** Buckee's Extra Early Cames.

**Extra Early Dutch.** HP. For similar names see 'White Dutch'.

**Similar names.** See Purple Top Milan.

**Extra Early Purple Top Munich.** Bgs Eic Fst Gry Grw TG JL May Mnl OV Roc S&O Stk Tpk Vl Wat Wll. 
**Similar names.** See Purple Top Munich.

**Extra Early Purple Top Strap Leaf.** Sic. 
**Similar names.** See Purple Top Strap Leaf.

**Extra Early Purple Top Strap Leaf Milan.** Dlw Fst Grw Ham M&S Stk Tat Tex Y&H. 
**Similar names.** See Purple Top Milan.

**Extra Early Red Top Globe.** Sic. For similar names see Red Top White Globe.

**Extra Early Red Top Milan.** Ar Eic Frd Hrn Kra Lur OV Old Til Van WS. 
**Similar names.** See Purple Top Milan.

**Extra Early Snowball.** Cox. For similar names see Snowball.

**Extra Early Summer Purple Top.** Blg. 
**Similar names.** See Purple Top Strap Leaf.

**Extra Early White Egg.** Eic Hst HP Shw Stk. For similar names see White Egg.

**Extra Early White French.** Stk. For similar names see White French.

**Seedsman's synonyms.** White Egg, Stk.

**Similar names.** See Purple Top Milan.

**Extra Early Yellow Finland.** RHJ.

**Flat Purple Top.** TG J&S M&S Nol Sox. 
**Similar names.** See Purple Top Strap Leaf.

**Flat Purple Top Strap Leaf.** Bgg CF Elt K&F May JCM OV S&F. 
**Similar names.** See Purple Top Strap Leaf.

**Flat Red Top.** EBC Lan. For similar names see Red Top Strap Leaf.

**Flat Red Top Strap Leaf.** Bai. For similar names see Red Top Strap Leaf.

**Forester.** Evr Hrn Trn Vl. 
**Seedsman's synonyms.** Seven Top, Evr Hrn Trn Vl. Turnip Winter Greens, Trn.

**Frost King.** CA Thm. 
**Similar names.** Georgia Frost King.

**Fulton Mammoth.** Hst MWJ.

**Georgia Frost King.** Wlt. 
**Similar names.** Frost King.

**German Teltow.** Ebr May Thr. For similar names see Teltow.

**Golden Ball.** Alx Bax Bak Btl Bkt Bel Bly Bou Brrk Bri Bru Bug Boi Brb Brr Brw C&J CE C&B CF Cur CA Drr Drm Ebe Eic Elt Emr RF. Evr Fmr Fst
AMERICAN VARIETIES OF VEGETABLES.


**Similar Names.** Early Golden Ball, Bruce’s Golden Ball, Griffing’s Golden Ball, Robertson’s Golden Ball, Improved Golden Ball, Rice’s Improved Golden Ball, Yellow Ball.

**Seedsmen’s Synonyms.** Orange Jelly, Ebe Ebr Frd Hen Ken J&S, etc. Snowball, VI. Yellow Globe, Glh.

**Golden Globe.** Air Buc Roc Syg. For similar names see Yellow Globe.

**Golden Stone.** Ggy. For similar names see Yellow Stone.

**Seedsmen’s Synonyms.** Early Yellow Stone, Cle.

**Golden Teltow.** M&S. For similar names see Teltow.

**Graystone.** Brn RE Ewg Fle Kei McK Pks Ren Sim SB Thr. 

**Similar Names.** Improved Graystone, Devonshire Graystone.

**Seedsmen’s Synonyms.** Purple Top Mammoth, Ren. Mammoth Graystone, SB.

**Green-Crowned Amber Globe.** Lan Stw. For similar names see Amber Globe.

**Green Globe.** Th. 

**Green Top Amber Globe.** Y&H. For similar names see Amber Globe.

**Green Top Bullock.** SB.

**Green Top Scotch.** D&H Fmr. For similar names see Yellow Scotch.

**Green Top Yellow Aberdeen.** Bgs Brn Brn D&H Eas Ewg GH Ggy Kei McK M&S.

**Similar Names.** See Yellow Aberdeen.

**Griffing’s Golden Ball.** Entered as Golden Ball.

**Half Long Red Top.** Brn Hbt. For similar names see Red Top Strap Leaf.

**Half Long White Jersey.** SB. For similar names see Jersey Navet.

**Hammond’s Early Bay City.** Entered as Early Bay City.

**Hammond’s Milk White.** Ham. For similar names see Salzer’s Milk.

**Hanover.** McM Stk Tat.

**Similar Names.** Large White Hanover.

**Seedsmen’s Synonyms.** Russian, Bd. *Sweet German, Bdg Stk. White French, Bdg. White Rock, Bdg.*

**Improved Early White Flat Dutch, Improved Flat Purple Top, Improved Golden Ball, Improved Graystone, Improved Purple Top Mammoth, Improved Red Top Mammoth, Improved Sweet German, Improved White Sweet German, Improved Yellow Aberdeen, Improved Yellow Globe. Entered as Early White Flat Dutch, Flat Purple Top, Golden Ball, etc.

**Ivory Ball.** M&S. For similar names see Early Ivory.

**Jersey Lily.** Bkt Bri Fqr Lan Mel Pri Shm. For similar names see Jersey Navet.

**Jersey Lily White Globe.** Koe. For similar names see Jersey Navet.

**Jersey Navet.** Bur Cle Est Pir Tat.

**Similar Names.** White Jersey Navet, California Navet, Jersey Lily, Jersey Lily White Globe, White Lily, Half Long White Jersey.

**Laing’s Purple Top Strap Leaf.** SB Vk.

**Similar Names.** See Purple Top Strap Leaf.

**Landreth’s Southern Snow White Globe.** Entered as Southern Snow White Globe.

**Large Amber Globe.** Cur Fer G&T Lan Lvr LB JL Loh Shw SB Til Wer WS.

**Similar Names.** See Amber Globe.

**Seedsmen’s Synonyms.** Yellow Globe, Wd.

**Large Cow Horn.** May Wlt. For similar names see Cow Horn.

**Large Late Flat Purple Top.** TB. For similar names see Purple Top Strap Leaf.

**Large Norfolk.** Lan. For similar names see White Norfolk.
Large Purple Top White Globe. Bui Pnt.

**SIMILAR NAMES.** See Purple Top White Globe.

Large Red Top Globe. TG Hhn 17. For similar names see Red Top White Globe.

Large Red Top Norfolk. Loh. For similar names see White Norfolk.

Large Red Top White Globe. SC. For similar names see Red Top White Globe.

Large Snow White Globe. MWJ. For similar names see White Globe.

Large Sweet German. Del May OV. For similar names see Sweet German.

Large White. BuCur Fst Intr J&May Nef Nol Pac Rec S&H Wer Wd Wyz Y&H.

**SIMILAR NAMES.** See Long White.

**SEEDSMEN'S SYNONYMS.** Sweet German, Cur Y&H. Sweet Russian, Nef S&H.

Large White Flat Norfolk. Pks Tpk. For similar names see White Norfolk.


**SIMILAR NAMES.** See White French.

**SEEDSMEN'S SYNONYMS.** Sweet German, Prn. White Swede, Ggy.

Large White Globe. Bui Bui Cum Col CF Crg DD Eic Evr Gdn Jac Ken Liv JL
JMM Nub Pnt Roe Sal SC Shw Sjt Thr Vl Wlt Wdr.

**SIMILAR NAMES.** See White Globe.

**SEEDSMEN'S SYNONYMS.** Pomeranian White Globe, Wdr.

Large White Globe Strap Leaf. CE Hsc JMM Rec SB.

**SIMILAR NAMES.** See White Globe.

Large White Hanover. Evr Wd. For similar names see Hanover.

Large White Norfolk. Bow Brn Bui CE Cle Crs Cur Drr Fmr Fer Grs Gdn Hlq
H&P Jns Ken Kg Ltn Lea Lnr LB Man May Mzy Nub Pri Rec Shw Shm Sxt
Sjt Tat Til Vk Wlt Wd WS.

**SIMILAR NAMES.** See White Norfolk.

Large Yellow. Bir Pac Tex Vk.

Large Yellow Aberdeen. Shm. For similar names see Yellow Aberdeen.

Large Yellow Globe. Bui Cum Chl CF Cox CA Fst Gdn Liv Man JMP Pnt Raw
Shy WS.

**SIMILAR NAMES.** See Yellow Globe.

**SEEDSMEN'S SYNONYMS.** Amber, Bir Fst Pac Tex Vk WS. Yellow Stone, Raw.


Long Cow Horn. TG J&S May Nol S&Ostk Tat Vl. For similar names see Cow Horn.

**SEEDSMEN'S SYNONYMS.** Long White French, Nol. White French, J&S.

Long White. Bow Brk Bdg Bir C&B EBC C&B CF Cox Cum DD Drr Elt Emr Fmr
Fmr Fst Fer Grs Grw Hst Hen Hmn H&P Kos LB Liv Loh JCM JMM Mzy Neb
Nol Ptt Poo Por Png Qkr S&K SC S&F Shw Shm Sox Sjt S&W Tex Van Wea
W&D Wer Wdr Wyz Y&H.

**SIMILAR NAMES.** Large White.

**SEEDSMEN'S SYNONYMS.** Cow Horn, Alx Bir Drr Fmr Fer Hen, etc.

Long White Cow Horn. Bel Bgs Brn Bng Bir Brw CE Cle Crs Evr Gdn GH Ggy
Hrn J&S Pnt Rec T&B Vk Wd WS.

**SIMILAR NAMES.** See Cow Horn.

Long White French. Bir Elt Lnr Mzy Pac Pnt S&W W&D.

**SIMILAR NAMES.** See White French.

**SEEDSMEN'S SYNONYMS.** Long Cow Horn, Nol. Sweet German, Bur Pac.

Long White Meaux. RHJ.

**SEEDSMEN'S SYNONYMS.** Cow Horn, RHJ.

Long White Norfolk. Fst GH. For similar names see White Norfolk.


Maltese. Sim.

**SIMILAR NAMES.** Yellow Malta.
Mammoth Graystone. SB. For similar names see Graystone.


Milan Strap Leaf. Cle. For similar names see Purple Top Milan.

Moore & Simons' Golden Teltow. Entered as Golden Teltow.

Native Georgia Turnip. Wlt.

Nimble Dick. RE SB.


Northrup, King & Co.'s Early White Model. Entered as Early White Model.


Perfection White. May.

Pomeranian Globe. Stk. For similar names see Pomeranian White Globe.

Pomeranian Large White Globe. Crs Hse REC.


Price & Reed's Eureka. Entered as Eureka.

Price Purple Top. Ren. For similar names see Purple Top Strap Leaf.

Price Purple Top Strap Leaf. Bnd. For similar names see Purple Top Strap Leaf.

Price Purple Top Strap Leaf. Bnd. For similar names see Purple Top Strap Leaf.


Purple Top Globe. Alx CA D&H Evr Gra Kei Ren.

Purple Top Globe Munich. Bai. For similar names see Purple Top Munich.

Purple Top Globe Strap Leaf. Pir. For similar names see Purple Top Globe.

Purple Top Mammoth. Alx CA D&H Evr Gra Kei Ren.


Seedsmen's synonyms. Improved Graystone, SB.
Purple Top Munich. Brk Brh Cle Elt Emr Evr Fnr Fqr Ggy Jns Lur Mud Man MV Mzy Sec Spf S&W Thr Van Vin.

Similar names. Early Purple Top Munich, Extra Early Purple Top Munich, Purple Top Globe Munich, Early Red Top Munich.

Purple Top Scotch. Ors. For similar names see Yellow Scotch.

Seedsmen’s synonyms. Aberdeen, Ors.

Purple Top Strap Leaf. Ahr Anh Bak Brt Btl Bkt Bel Ber Bow Brk Bri Brn Buc Bui Brv CE Cle Cox Cxs Del DD Drr Drn Dun Eas Ebe Ebr Evr Fax Fld Gnr Gls Gdn GH GN Gry Ggr Gw Hsb Hde Hrn Hrs Hrv Hpt H&C Hly Hop Hse Hnt Iml Jow Jac Jns K&W Kg Kos Lur Liv JL Loh Mgd Man MnS MJM Mel Mic Ms MV Neb Nef XI Old Pac Jmp Pir Pirn Put Poo Raw Rec Roc RP Sal SC Shw S&O Shm Sox Spf Tem AGT Tlk Tpk T&B VI Vl Vm Wcn Wdr Wd Wll Wng.

Similar names. Purple Top White Strap Leaf, Buckbee’s Purple Top Strap Leaf, Laing’s Purple Top Strap Leaf, Prize Purple Top Strap Leaf, Early Purple Top Strap Leaf, Extra Early Purple Top Strap Leaf, Flat Purple Top Strap Leaf, White Flat Purple Top Strap Leaf, Early Flat Purple Top Strap Leaf, Early Flat Purple Top, Flat Purple Top, White Flat Purple Top, Large Late Flat Purple Top, Improved Flat Purple Top, Rennie’s Prize Purple Top, Early Purple Top, American Purple Top, Extra Early Summer Purple Top, Early Red Purple Top, Early Yellow Purple Top, Prize Purple Top.


Similar names. Early Purple Top White Globe, Large Purple Top White Globe. See also White Globe, Red Top White Globe.

Seedsmen’s synonyms. Red Top White Globe, Hst.

Purple Top White Strap Leaf. Brb.

Similar names. See Purple Top Strap Leaf.

Purple Top Yellow Aberdeen. A lx Brd Bow Bgs Bru Bui EB&C&B Crs CA D&H Drr Evr FeR Gdr GH GHe Hen RJH Jns Kei Lam LB Loh JMM McK Nol Pg Pnt Raw Ren Shw S&O Sim Spf SB W&D Wd WS.

Similar names. See Yellow Aberdeen.

Red-Crowned Amber Globe. Lan. For similar names see Amber Globe.

Red Globe. McK Ren Wdr. For similar names see Red Top White Globe.

Seedsmen’s synonyms. Norfolk, Ren.

Red Globe Norfolk. Sim SB. For similar names see White Norfolk.

Red Lily. Sal.


Similar names. See Red Top Strap Leaf.

Red Top Globe. A lx CE EBC Ebr Eic Evr Hns Ken McM Mel NI Pri Ree S&W Thr Wd WS.

Similar names. See Red Top White Globe.

Seedsmen’s synonyms. Purple Top Globe, Alx Evr.

Red Top Strap Leaf. Bel Ber Brk Bdg Bru Buc CE C&B Col Cur Evr Evg Gra GN Hen H&C Hop Hso Iml Kei Ken Kg Lnr Loh Mas Man JMM MV Mzy Neb Nef NoL Pnt Pot Pri Ree Ren Roc SC Shw Sim Sox SB S&W Tat Thr Vin Wat W&D.

Similar names. Buckbee’s Red Top Strap Leaf, Early Red Top Strap Leaf,

Seedsmen's synonyms. Purple Top Strap Leaf, Buc Bui Bur Drr Evr Frd Him, etc.

**Red Top White Globe.** Big Big Bur Brw CF Dlw D&H Fst Grw Hrs Hst H&C Iml Kos Man May Pac Ptt Recl Swh Sox Tex Til Wdr.


Seedsmen's synonyms. Purple Top White Globe, Hst.

**Rennie's Empress.** Rennie's Prize Purple Top. Entered as Empress and Prize Purple Top.

**Rhode Island Rock.** J&S Tlh Van.

**Rice's Improved Golden Ball.** Entered as Golden Ball.

**Robertson's Golden Ball.** Bow Bg Bgd Bgs Brn Bur Cle Col Cox Crs Fer Gra RHJ Jns Lam LB JL Loh Min Nef Pnt Pri Raw Stk Tat Vk Vin Wyg Y&H.

Similar names. See Golden Ball.

Seedsmen's synonyms. Orange Jelly, Bur Cox Fer JL Nef Vk, etc.

**Rock.** Alx.

Seedsmen's synonyms. Sweet German, Alx.

**Royal Purple Top Norfolk.** Brn RE Sim. For similar names see White Norfolk.

**St. Andrews.** Brk Fqr Gry Raw S&F.

**Salzer's Milk.** Sal.

Similar names. Hammond's Milk White.

**Scarlet Kashmyr.** Btl Brn Buc Bur Chl C&B Col Drr Fmr Fer Frd Gra Ggy Gry Ham Hrs Hen Hbt Hse Iow J&S Kra Lam Lr Liv JL Mgd Man JMM Pac Ptt Recl Swh Shm S&H Thr Vk W&D.


**Seven Top.** Alx Ar Bak Btl Bow Bur C&B Crg Crs CA DD Ebr Evr Fst Fer Gig G&T Grw Hde Hrk Hst Hly Jac MWJ J&S Kg Lam Lan Lea Lar May JCM JMM McM Pnt Rce SC Spf Tat Thm Thr Trm Vl Vau Wlt Wd WS.

Similar names. Southern Seven Top.

Seedsmen's synonyms. Forester, Evr Hrn Trm Vl. Turnip Winter Greens, Pnt SC Trm.

**Sharpe's Snowball.** Entered as Snowball.

**Six Weeks.** May Mls Shm.

Similar names. Early Six Weeks, White Six Weeks, Early White Six Weeks.


**Small Berlin.** Bgs Bur Fmr Wer. For similar names see Berlin.

Seedsmen's synonyms. Early Yellow Teltow, Bgd. Marrow, Bgd. Teltow, Bur Fmr Wer.

Snowball. Air Brd Buc Brr Crs Drr Ebr Gng Ggy Hst MWJ Kei May JMM McM Mhl Pri S&O Vl Vr Wer.

Similar names. Early Snowball, Early White Snowball, Cox's Extra Early Snowball, Sharpe's Snowball, Extra Early Snowball.

Snow White Globe. Ar Mls. For similar names see White Globe.

Southern Prize. Bui Gloh G&T Hly Jac MWJ Kg Lan MeM M&S Nos Wd WS.

**SEEDSMEN'S SYNONYMS.** Dixie Land, Gdn Jac.

Southern Seven Top. Brg Bui Gloh Man Shw. For similar names see Seven Top.

Southern Snow White Globe. Hst Lan MeM Wd WS.

**SIMILAR NAMES.** See White Globe.

Stubble. Brn.

**SEEDSMEN'S SYNONYMS.** White Stone, Brn.


**SIMILAR NAMES.** Improved Sweet German, Large Sweet German.


Sweet Russian. Brg Gyy.

**SEEDSMEN'S SYNONYMS.** Hanover, Bdg. Sweet German, Bdg Ggy Hrv. White French, Bdg. White Rock, Bdg.

Sweet Yellow Globe. Brr C&J. For similar names see Yellow Globe.

Teltow. Bgs Bur Dlw Fnr May Wtr.

**SIMILAR NAMES.** German Teltow, Early Yellow Teltow, Moore & Simon's Golden Teltow, Golden Teltow.

**SEEDSMEN'S SYNONYMS.** Berlin, May. Small Berlin, Bur Fnr Wtr.

Tennoji. Chl Thc.

Thorburn's Yellow Stone. Entered as Yellow Stone.

White American. Brn.

White Dutch. Bri Ebc Gra Hat May.

**SIMILAR NAMES.** Early White Dutch, Early White Dutch Strap Leaf, Early Dutch, Extra Early Dutch.

White Egg. Air Bai Bok Brd Bel Ber Brg Bow Bgg Brk Bdg Bri Brn Brr Buc Brb Bur Brr Brw C&J CE Chl EBC &C B C Cok Cox Crs Curt Dlw Dm Eas Emr Etv Fnr Fqr Fst Fax Fer Frd GN Ggy Grw TG Hrm Hrs Hrv Hln Hmr Hop Hs H&P MWJ J&M Jns K&W Ken Kg Koe Kos Kra Lan Lam LR JL Loh Mgl Mas Man May JCM MCM Ms MV Mzy Neb Nl X1 XK OV Pac Pg Prn Pne Pnt Ptt Poo Por Pot Pri Png Raw Ree Ree Roc Rt Rs RP Sal S&R SC St Seed S&O Shn Sox S&H S&W Tat Tem TB Thr Thb AGT Til Tpk Trn T&B VI Van Vk Vin Wea Web W&D Wer Wll Wlt Wd Wdr WS Wyg

**SIMILAR NAMES.** Early White Egg, Extra Early White Egg.

**SEEDSMEN'S SYNONYMS.** Extra Early White French, Stk.

White Flat. Brg EBC Emr Fqr C&J Lan Smm.

**SIMILAR NAMES.** See White Top Strap Leaf.

**SEEDSMEN'S SYNONYMS.** White Globe, Emr.

White Flat Dutch. Brg Drw Hde Hrm Hrs H&C Hly Jns Kei Kra Man Old JMP Rn RP SC Sim Spf Trn Wd WS.

**SIMILAR NAMES.** See Early Flat Dutch.

**SEEDSMEN'S SYNONYMS.** White Top Strap Leaf, RP SC.

White Flat Dutch Strap Leaf. RE Fst May Wd.

**SIMILAR NAMES.** See Early Flat Dutch.

White Flat Norfolk. Brd. For similar names see White Norfolk.
VARIETIES

White Flat Purple Top.  Blg PM.

Similar Names.  See Purple Top Strap Leaf.

Seedsmen's Synonyms.  Red Top White Flat, Blg.

White Flat Purple Top Strap Leaf.  Fqr.

Similar Names.  See Purple Top Strap Leaf.

White Flat Red Top.  Blg.  For similar names see Red Top Strap Leaf.

Seedsmen's Synonyms.  White Flat Purple Top, Blg.

White Flat Strap Leaf.  CF Emr RE Grw TG JCM MV Sox Tat Thr.

Similar Names.  See White Top Strap Leaf.


Seedsmen's Synonyms.  Snowball, Alr.  White Flat, Emr.

White Globe Norfolk.  M&S.  For similar names see White Norfolk.

White Globe Strap Leaf.  Bng Bur Fst Hlm Hop Wat Wd.

Similar Names.  See White Globe.


White Jersey Navet.  Wd.  For similar names see Jersey Navet.

White Lemon.  M&S.

White Lily.  Sal.  For similar names see Jersey Navet.


Similar Names.  See Purple Top Milan.

White Model.  D&H Fqr May Thr.

Similar Names.  Early White Model, Northrup, King & Co.'s Early White Model.

White Nimble Dick.  Sim.  For similar names see Nimble Dick.

White Norfolk.  Alx Bel Brk Cox Ebe Emr Ewg Gls Kei Min MV OV Pg Por S&R Sox Thr Thr Thr Vin.


White Six Weeks.  Brd Cle Emr Mau SB Wer.  For similar names see Six Weeks.

Seedsmen's Synonyms.  Nimble Dick, SB.  Snowball, Brd Wer.

White Spring.  Stk.

White Stone.  Bru Cam Fle Ggy May Pri Rce Sal Sim SB.

Similar Names.  See Yellow Stone.

Seedsmen's Synonyms.  Early Snowball, Fle Ren Sim SB.  Snowball, Ggy.  Stubble, Bru.

White Stubble.  Bru.

Seedsmen's Synonyms.  White Stone, Emr.

White Sweet.  Bel Crs Gls Hrs Loh Til Vk.

White Sweet German.  Alr Cle Ebe Gls Haw Hse Iow Kos JCM Nol Rce RP Sox Wd.

Similar Names.  Improved White Sweet German.

Seedsmen's Synonyms.  White Sweet Wahlo, Ebe.
White Sweet Waldo. Ebe.

Seedsman's synonyms. White Sweet German, Ebe.

White Tankard. D&H.

Seedsman's synonyms. Cow Horn, D&H.

White Top Flat Strap Leaf. Fqr S&F. For similar names see White Top Strap Leaf.


Similar names. White Top Flat Strap Leaf, Early White Top Strap Leaf, Early White Top, Early Flat White Top, White Flat, White Flat Strap Leaf.

Seedsman's synonyms. Early Flat Dutch, Drm Liv Jk Pnt Sww. White Flat Dutch, RP SC.


Yellow Aberdeen. Bai Bak Bt Bt Bk Bk Bg Bg Bk Bk Brr Gm CE Cle Col CF Ck Cox Cq Cur Ebe Eic Eit Emr Fnr Fqr Fst Frd Gry G'T Grw TG Hns Hrm Hrs Hst Haw Hly Hlm H&P Iow MWJ J&S Jus K&W Ken Kg Kva Lan Lnr PM Mas Man May JCM McM Mic Mhd Min MV Myx Neb Nef Nol Ov PaC JMP Pir Ptt Poo For Pot Pri Qkr ReC ReC Rt Rs Sal S&R S&F Sox SsK SB Sw S&H S&W Tat TB Thm Thr AGT Tpk UP Van Vm Vin Wat Wea Wlt Wdr Wyg.

Similar names. Improved Yellow Aberdeen, Large Yellow Aberdeen, Green Top Yellow Aberdeen, Purple Top Yellow Aberdeen.

Seedsman's synonyms. Purple Top Yellow, Drr. Scotch Yellow, Brl Cox Lan HP JMP Stw, etc. Bullock Green Top, SB.

Yellow Ball. Hnt. For similar names see Golden Ball.

Yellow Finland. Ggy M&S Thr.

Similar names. Early Yellow Finland.


Similar names. Improved Yellow Globe, Large Yellow Globe, Sweet Yellow Globe, Early Yellow Globe, Golden Globe.


Yellow Malta. Thr W&D. For similar names see Maltese.

Yellow Montmagny. W&D.

Yellow Scotch. Bd Cle Cox G'T Kg Kan Nef JMP Stw.

Similar names. Green Top Scotch, Purple Top Scotch.

Seedsman's synonyms. Yellow Aberdeen, Bdg Btl Cox Lan JMP Stw, etc.


TURNIP (RUTA-BAGA).

All Gold. GN Sal.

American. Anb Bai Bt Bk Bk Bk Ch Col DD Fmr Ggy Gry Hst Iow MWJ Kg Kra Lnr Liv Man Nol Old Ptn Pot Pug S&W Ten Thb W&D Yng.

Similar names. Improved American, American Yellow, Improved American
Purple Top, Wood's Improved American Purple Top, Wood-Stubb's Improved American Purple Top, American Imperial Purple Top, American Purple Top Yellow, Improved American Purple Top Yellow, American Purple Top

**Seedsmen's synonyms.** *Swedish, Prn.*

American Breadstone. Sim. For similar names see Breadstone.

American Imperial Purple Top. GH.

**Similar names.** See American, Imperial Purple Top.

American Purple Top. Brd Bng C&J Cam CE Cle C&B Drr Elt Emr Fer Frd Hrn Hen Liv PM Mns Mas JCM JMM Mls MV Mzy Neb Nef HP Por Raw Rce RP S&R Sie Sox Vin Wd WS Y&H.

**Similar names.** See Purple Top, American.

**Seedsmen's synonyms.** Improved Long Island, Fer Lam. Long Island, Gls.

American Purple Top Yellow. Air Ar Bn Cm GH TG JL Loh Pnt SC Vi.

**Similar names.** See American, Purple Top Yellow.

American Yellow. Pir AGT. For similar names see American.

Arctic. D&H.

Aroostook. Jer.

Aroostook Improved. Entered as Aroostook.

Ashcroft. Pri.

**Similar names.** Ashcroft's Improved Purple Top, Ashcroft's Purple Top.

Ashcroft's Improved Purple Top. Entered as Ashcroft's Purple Top.

Ashcroft's Purple Top. Sim. For similar names see Ashcroft.

Bangholm. Bow Fer Lee McK.

**Similar names.** Bangholm Purple Top, Bangholm Improved Purple Top.

Bangholm Improved Purple Top. Entered as Bangholm Purple Top.

Bangholm Purple Top. Bru RE Ewg Gra Kei Ren Sim.

**Similar names.** See Bangholm.

Bell's World's Fair. Entered as World's Fair.

Bloomsdale. Dlw Gig MWJ Koe Lan Mic Stw Tem Wer.

Bon Air. Alx.

**Similar names.** Improved Bon Air.

Brandon. McK.

Breadstone. Bkt Bel Bur Brr Cam Chl Cle Col D&H Frd Gls TG Hrs Hst Hbt MWJ J&S Jns K7 Mls Pac Raw Ren Rce Rt Rs Shm Sic Tem Thb VI Van Wd Wdr.

**Similar names.** Burpee's Breadstone, American Breadstone.


Bronze Top. Kei.

**Similar names.** Halewood Bronze Top, Hartley's Improved Bronze Top, Hazard Bronze Top.


Bruce's Purple Top. Brn. For similar names see Purple Top.

Buckbee's Giant. Buc. For similar names see Giant.


Budlong. Brk Brr Cle CF Drr Fmr Ggy Gry TG J&S JMM Rs Shm Thm Wea Wd Wdr Y&H.

**Similar names.** Improved Budlong, Budlong White, Budlong White Rock, Budlong Improved White Rock.

**Seedsmen's synonyms.** Breadstone, Cle TG J&S Raw Wd Wdr.

Budlong Improved White Rock. Entered as Budlong White Rock.

Budlong White. Fqr. For similar names see Budlong.

Budlong White Rock. Brt Brw CF Fer Frd Hse Lee Pot Rce.

**Similar names.** See White Rock, Budlong.
Buist's Improved Purple Top Yellow. Entered as Buist's Purple Top Yellow.
Buist's Purple Top Yellow. Bui. For similar names see Purple Top Yellow.
Burpee's Breadstone, Burpee's Improved Purple Top Yellow. Entered as Breadstone and Burpee's Purple Top Yellow.
Burpee's Purple Top Yellow. Bur. For similar names see Purple Top Yellow.
Burr's Improved Purple Top. Entered as Burr's Purple Top.
Burr's Purple Top. Brr. For similar names see Purple Top.
Canadian Gem. D&H.
Carter's Elephant, Carter's Imperial, Carter's Imperial Hardy, Carter's Imperial Hardy Purple Top, Carter's Imperial Hardy Purple Top Yellow, Carter's Improved Purple Top, Carter's Improved Purple Top Yellow. Entered as Elephant, Imperial, Imperial Hardy, Imperial Hardy Purple Top, Imperial Hardy Purple Top Yellow, Improved Purple Top, Imperial Purple Top, Carter's Purple Top, and Carter's Yellow.
Carter's Model Purple Top Yellow. M&S. For similar names see Green Top.
Carter's Purple Top. Cle East TG. For similar names see Purple Top.
Carter’s Yellow. Ebe. For similar names see Yellow Swede.
Champion. bru Bug fer Kei Lan Man Mck Nol HP Pri W&D.
Seedsmen's Synonyms. Yellow, Lan HP.
Champion Purple Top. Bow CE D&H Ewg G1H Gra HseRIJ Ree Ren Ree Sim SB Thr Y&H.
Similar names. See Champion.
Cox's Improved Yellow. Entered as Cox's Yellow.
Cox's Yellow. Cox. For similar names see Yellow Swede.
Cross. Kei.
Cross' Improved. Entered as Cross.
Currie's Improved Purple Top. Entered as Currie's Purple Top.
Currie's Purple Top. Curi. For similar names see Purple Top.
Defiance. Sim.
Drer's Improved Purple Top. Entered as Drer's Purple Top.
Drer's Purple Top. Drr. For similar names see Purple Top.
Drummond. Luc McK SB.
Drummond's Purple Top. Bru Ewg Fer Gra Ren Sim.
Similar names. See Purple Top.
Early Melting. Sim.
Similar names. Simmers' Early Melting.
East Lothian Purple Top. Bru D&H Kei Ren Sim SB.
Similar names. Improved East Lothian Purple Top.
Evans' Ontario Purple Top. Entered as Ontario Purple Top.
Extra Early Champion. May. For similar names see Champion.
Faust’s Improved Purple Top Yellow. Entered as Faust's Purple Top Yellow.
Faust's Purple Top Yellow. Fst. For similar names see Purple Top Yellow.
Ferry's Improved Purple Top. Ferry's Improved Purple Top Yellow. Entered as Ferry's Purple Top and Ferry's Purple Top Yellow.
Ferry's Purple Top. Tpk. For similar names see Purple Top.
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Ferry’s Purple Top Yellow. Fer. For similar names see Purple Top Yellow.
Fettercairn Green Top. Bru Sim. For similar names see Green Top.
French Improved Purple Top. Entered as French Purple Top.
French Purple Top. Vin. For similar names see Purple Top.
French Yellow. Ptt Wdr. For similar names see Yellow Swede.
Fry’s Purple Top. Mhl. For similar names see Purple Top.

**Similar Names.** Buckbee’s Giant, Webb’s Giant King.

Gloucester. SB.

**Golden Heart.** Hen.

**Similar Names.** Henderson’s Golden Heart.

**Green Top.** Ewg Gra Kei McK Ren.

**Similar Names.** Green Top White, Fettercairn Green Top, Keith’s Improved Green Top, Keith’s Green Top, Hazard’s Green Top, Carter’s Model Purple Top Yellow.

**Green Top Yellow.** Bgs. For similar names see Green Top.

**Green Top Yellow.** Rce. For similar names see Yellow Swede.

**Griffing’s Family.** Ggq. For similar names see Thorburn’s Family.

**Griffith & Turner’s Improved Purple Top.** Entered as Griffith & Turner’s Purple Top.

**Griffith & Turner’s Purple Top.** G&T. For similar names see Purple Top.

**Halewood Bronze Top.** RE McK Ren SB. For similar names see Bronze Top.

**Hall’s Westbury.** Hall’s Westbury Purple Top. Entered as Westbury and Westbury Purple Top.

**Hammond’s Improved Purple Top.** Hammond’s Improved Purple Mammoth.

**Similar Names.** Hammond’s Improved Purple Top and Hammond’s Yellow Mammoth.

**Hammond’s Purple Top.** Ham. For similar names see Purple Top.

**Seedsmen’s Synonyms.** Long Island, Ham.

**Hammond’s Yellow Mammoth.** Ham. For similar names see Yellow Swede.

**Harris’ White Purple Top.** Hrs. For similar names see Purple Top.

**Hartley.** Ggy.

**Similar Names.** Hartley Bronze Top, Hartley Improved Bronze Top.

**Hartley Bronze Top.** Bru D&H RE Gra McK Ren Sim SB.

**Similar Names.** See Hartley, Bronze Top.

**Hartley Improved Bronze Top.** Entered as Hartley Bronze Top.

**Hazard.** SB.

**Similar Names.** Hazard Bronze Top, Hazard Green Top.

**Hazard Bronze Top.** Ren. For similar names see Hazard, Bronze Top.

**Hazard Green Top.** Sim. For similar names see Hazard, Green Top.

**Heavy Cropping.** Mls.

**Similar Names.** Manle’s Heavy Cropping.

**Henderson’s Golden Heart.** Henderson’s Improved Long Island.

**Similar Names.** Steele-Briggs’ Highland Prize.

**Hurst’s Monarch.** Entered as Monarch.

**Imperial.** Dun Emr Evr Ggy Gry Jns Kel Kra Man May JCM McK Pue RP Sal S&F Sim Vau.

**Imperial Hardy.** Bgg Bui Bur CE Col Cox Elt RE Fqr Est Fax GH Hrm Hst Hbt K&W Kos Lnr Mau Mis MV Mzy Neb Qkr Rce Shm Sox Sgf Vl Web.

**Similar Names.** See Imperial Purple Top.

**Imperial Hardy Purple Top.** Ger SB. For similar names see Imperial Purple Top.

**Imperial Herdy Purple Top Yellow.** Wll.

**Similar Names.** See Imperial Purple Top Yellow.
Imperial Purple Top. Bel Bgs Bru Bru Crs Cur Evg Fer Fle GIs Gra Hrs H&P Lea Ren.

Similar names. Carter's Imperial Purple Top, Carter's Imperial, American Imperial Purple Top, Imperial Hardy, Carter's Imperial Hardy, Imperial Hardy Purple Top, Carter's Imperial Hardy Purple Top, Vick's Imperial Purple Top Yellow, Carter's Imperial Hardy Purple Top Yellow, Imperial Hardy Purple Top Yellow, Imperial Purple Top Yellow.

Imperial Purple Top Yellow. Vk. For similar names see Purple Top Yellow.

Improved American, Improved American Purple Top, Improved American Purple Top Yellow, Improved Bon Air, Improved Bronze Top, Improved Badlong, Improved East Lothian Purple Top, Improved Graystone, Improved Hall's Westbury, Improved Hazard, Improved Laing, Improved London, Improved Long Island, Improved Long Island Purple Top, Improved Long Island Yellow, Improved Monarch, Improved Purple Top, Improved Purple Top Yellow, Improved White Rock, Improved Yellow Swede. Entered as American, American Purple Top, American Purple Top Yellow, Bon Air, Bronze Top, etc.

Jumbo. McK SB.

Similar names. Steele-Briggs' Jumbo.

Seedsman's synonyms. Elephant, McK. Monarch King, McK.

Kangaroo. Ren Sim.

Similar names. Rennie's Kangaroo.

Keith's Green Top. Kei. For similar names see Green Top.

Keith's Improved Green Top, Keith's Scottish Champion. Entered as Keith's Green Top and Scottish Champion.

Kelway. Sic.

Kelway's Longport Mammoth. Entered as Longport Mammoth.

King of Sweden. RHJ Kei McK Ren Sim.

Similar names. See Webb's Giant King.

Knowfield Purple Top. Ren Sim. For similar names see Purple Top.


Similar names. See Laing's Purple Top.

Laing's Early. Emr S&F. For similar names see Laing's Purple Top.

Laing's Improved Purple Top, Laing's Improved Purple Top Strap Leaf, Laing's Improved Strap Leaf, Laing's Improved Yellow. Entered as Laing's Purple Top, Laing's Purple Top Strap Leaf, Laing's Strap Leaf, and Laing's Yellow.

Laing's Purple Top. Brd Bow Bgs Bru Bru Cle CF Evg Fer Ger Grw Hrv May Pks Pne Ren Sd Sim Spf Tpjk.

Similar names. Laing's Improved Purple Top, Laing's Improved Purple Top Strap Leaf, Laing's Improved Purple Top Yellow, Laing's Yellow, Laing's Improved Yellow, Laing's Early, Improved Laing, Laing, Laing's Improved Strap Leaf, Laing's Strap Leaf.

Laing's Purple Top Strap Leaf. Crs Vk.

Similar names. See Laing's Purple Top.

Laing's Purple Top Yellow. TG. For similar names see Laing's Purple Top.

Laing's Strap Leaf. Cox. For similar names see Laing's Purple Top.

Laing's Yellow. Egg Gng. For similar names see Laing's Purple Top.

Landreth's Improved Purple Top Yellow, Landreth's Market Garden. Entered as Purple Top Yellow and Market Garden.

Landreth's Purple Top Yellow. Lan. For similar names see Purple Top Yellow.

Large Russian. Wd. For similar names see White Russian.

Large Sweet German. Tpjk.

Large White. Bur Cam J&S Liv May Mls Shw Spf Wd

Similar names. See White Swede.
Large White Purple Top.  SC.

Similar names.  See White Swede, Purple Top.

Large White Rock.  Brt.  For similar names see White Rock.

London.  Fir S&F.


London Purple Top.  Ggy.  For similar names see London, Purple Top.

Long Island.  Brb Elt Fer Ham Hen Jer Lam Loh Man Nol Poo Rs S&W Wea W&Db Wdr Yng Y&H.


Similar names.  See Long Island.

Long Island Smooth Yellow.  Ptt.  For similar names see Long Island.

Long Island Yellow.  Brw.  For similar names see Long Island.

McKenzie's Northwestern Purple Top.  Entered as Northwestern Purple Top.

McMillan's Improved Purple Top.  Entered as McMillan's Purple Top.

McMillan's Purple Top.  McM.  For similar names see Purple Top.

Mammoth Clyde Purple Top.  Ewg.  For similar names see Purple Top.

Mammoth Russian.  Lam.  For similar names see White Russian.

Seedsman's synonyms.  White, Lam.

Mammoth White Russian.  Buc Kg Roc.  For similar names see White Russian.

Market Garden.  Lam.

Similar names.  Landreth's Market Garden.

Marquis of Lorne.  RE.

Similar names.  Marquis of Lorne Purple Top.

Marquis of Lorne Purple Top.  Bru.  For similar names see Marquis of Lorne.

Marshall's Purple Top.  Ren Sim.  For similar names see Purple Top.

Maule's Heavy Cropping.  Mau.  For similar names see Heavy Cropping.

May's Elephant, May's Improved Purple Top.  Entered as Elephant and May's Purple Top.

May's Purple Pop.  May OV.  For similar names see Purple Top.

Meyer's Purple Top Beauty.  Bri J&S.  For similar names see Purple Top Beauty.

Monarch.  Ber Bri Bru Buc Bui Bur RE Fmr Fer Frd GH Hb Hb Hop Hop Tow RHJ J&S Kei Kg Kra Lam Lnr LB Loh May MV Pac Pq HP Por Qkr Ree Roc S&R Shm Sim Sox Tpk Vau.

Similar names.  Improved Monarch, Monarch Purple Top, Hurst's Monarch, Monarch King.


Monarch King.  McK.  For similar names see Monarch.

Seedsman's synonyms.  Elephant, McK.  Jumbo, McK.

Monarch Purple Top.  Gls.  For similar names see Monarch.

Monarch Tankard.  Lnr Pg.

Seedsman's synonyms.  Elephant, Pg.


Northwestern Purple Top.  McK.

Ontario Purple Top.  RE.  For similar names see Purple Top.

Prize Winner.  CE D&H LB TB Til.

Similar names. Bruce’s Purple Top, Carter’s Purple Top, Drummond’s Purple Top, Fry’s Purple Top, Knowlefield Purple Top, London Purple Top, Mammoth Clyde Purple Top, Marshall’s Purple Top, Steele-Briggs’ Purple Top, Evans’ Ontario Purple Top, Ontario Purple Top, Improved Purple Top, Burr’s Improved Purple Top, Burr’s Purple Top, Carter’s Improved Purple Top, Currie’s Improved Purple Top, Currie’s Purple Top, Deere’s Improved Purple Top, Deere’s Purple Top, Ferry’s Improved Purple Top, Ferry’s Purple Top, Griffith & Turner’s Improved Purple Top, Griffith & Turner’s Purple Top, Hammond’s Improved Purple Top, Hammond’s Purple Top, May’s Improved Purple Top, May’s Purple Top, McMillan’s Improved Purple Top, McMillan’s Purple Top, Sharpe’s Improved Purple Top, Sharpe’s Purple Top, Thorburn’s Improved Purple Top, Thorburn’s Purple Top, Wernich’s Improved Purple Top, Wernich’s Purple Top, Wood’s Improved American Purple Top, Wood-Stubb’s Improved American Purple Top, Improved American Purple Top, French Improved Purple Top, French Purple Top, Harris’ White Purple Top, Purple Top Mammoth, Large White Purple Top. See also Purple Top Yellow.

Purple Top Mammoth.  Ren SB. For similar names see Purple Top.

Seedsmen’s synonyms. Improved Greystone, Ren.

Purple Top Yellow.  Bt1 Ber Buc Bur CF Cok CA D&C Gdn T6 Hns Hde Haw Hbt Hlm J&8 Lam Lan LB Loh Mel Mhl Min M&S Nol Pap Pug Qkr Roc Shw Tat Tex Til T7 Wlt Wd Y&H.

Similar names. Buis’s Improved Purple Top Yellow, Buist’s Purple Top Yellow, Burpee’s Improved Purple Top Yellow, Burpee’s Purple Top Yellow, Faust’s Improved Purple Top Yellow, Faust’s Purple Top Yellow, Ferry’s Improved Purple Top Yellow, Ferry’s Purple Top Yellow, Landreth’s Improved Purple Top Yellow, Landreth’s Purple Top Yellow, American Purple Top Yellow, Improved American Purple Top Yellow, Improved Purple Top Yellow.

Rennie’s Kangaroo. Entered as Kangaroo.

Scotch Yellow.  Stw. For similar names see Yellow Swede.

Scottish Champion.  Kei Sim. For similar names see Champion.

Shamrock.  Bgg Brk C&J CE Cle Emr Fqr Ggy Gry Kei Ken Man McK Mzy Neb Rec Rs S&F Wil WS.

Similar names. Shamrock Purple Top, Shamrock Improved Purple Top, Shamrock Purple Top Yellow.

Shamrock Improved Purple Top. Entered as Shamrock Purple Top.

Shamrock Purple Top.  Bru CF D&H Egw Gra Grw Ren Sim SB.

Similar names. See Shamrock.

Shamrock Purple Top Yellow.  T6. For similar names see Shamrock.

Sharpe’s Improved Purple Top. Entered as Sharpe’s Purple Top.

Sharpe’s Purple Top.  Bru Ren Sim SB. For similar names see Purple Top.

Shepherd’s Golden Globe.  For Lam.

Simmers’ Champion Purple Top, Simmers’ Defiance, Simmers’ Early Melting. Entered as Champion Purple Top, Defiance, and Early Melting.

Skirving.  Bai Eas Fle Kg Lam McK Mzy Ptt Pri Vau Vin W&D.

Similar names. See Skirving’s Purple Top.

Skirving’s Improved, Skirving’s Improved Liverpool Purple Top, Skirving’s Improved Purple Top. Entered as Skirving, Skirving’s Liverpool Purple Top, and Skirving’s Purple Top.

Skirving’s Liverpool.  Bru Sal. For similar names see Skirving’s Purple Top.

Skirving’s Liverpool Purple Top. Bgs.

Similar names. See Skirving’s Purple Top.
American Varieties of Vegetables.

Skirving's Purple Top. Anb Brd Bow Brk Bru Brb CE Cle CF Cox Crs Cur Del DD Drr Dm Egw Fnr Fst Grh Gra Gry Gry Hrn Hrn Hrv RHJ Kei K&W Kos Lnr Man Mas May JMM Mls Neb OV Pne Por Ren Ree RP S&R S&O Shm Sim Spv SB At'T Tpk Trm Vl Wea Web W&D Wyg Y&H.

Similar names. Skirving, Skirving's Improved Purple Top, Skirving's Purple Top Yellow, Skirving's Improved, Skirving's Improved Liverpool Purple Top, Skirving's Liverpool, Skirving's Liverpool Purple Top.

Skirving's Purple Top Yellow. Gw Tg Pir SC.

Similar names. See Skirving's Purple Top.

Steele-Briggs' Highland Prize, Steele-Briggs' Jumbo, Steele-Briggs' Westbury. Entered as Highland Prize, Jumbo, and Westbury.

Steele-Briggs' Perfection. SB.

Steele-Briggs' Purple Top. SB. For similar names see Purple Top.


Sweet Rock. Akk. For similar names see White Rock.

Sweet Russian. Bow Fer Hrv LB Loh Old Pg Til Vin.

Similar names. See White Russian.

Seedsmen's synonyms. White, Bow Fer LB Loh Old Pg Vin. Large White, S&H.


Similar names. See White Russian.

Thorburn Family. Ehr Thr.

Similar names. Griffing's Family.

Thorburn's Improved Purple Top. Entered as Thorburn's Purple Top.

Thorburn's Purple Top. Thr. For similar names see Purple Top.

Twentieth Century. Bui.

Twentieth Century Rock. Brt. For similar names see White Rock.

Universal Purple Top. Sim.

Vauhan's Improved. Vau.

Vick's Imperial Purple Top Yellow. Entered as Imperial Purple Top Yellow.

Wait's Improved. Y&H.

Wait's Improved Purple Top Yellow. Entered as Purple Top Yellow.

Webb's Giant King. D&H.

Similar names. King of Swedes, Giant, Buckbee's Giant.

Wernich's Improved Purple Top. Entered as Wernich's Purple Top.

Wernich's Purple Top. Wer. For similar names see Purple Top.


Similar names. Hall's Westbury, Improved Hall's Westbury, Hall's Westbury Purple Top, Westbury Improved Purple Top, Steele-Briggs' Westbury, Westbury Purple Top.

Westbury Improved Purple Top. Entered as Westbury Purple Top.

Westbury Purple Top. D&H Ren. For similar names see Westbury.

West Norfolk. Fer RHJ Pg.

White-Flesbed. Thr.

White-Flesbed Purple Top. Dlw Min. For similar names see White Swede.

White Hanover. Eic.

White Rock. Bai Bdg Brn C&J CE Cle CF Emr Gls Ggy Hrm Mau Pot Ree Rs Tat Thr.


Seedsmen's synonyms. Breadstone, Gls.
**White Russian.** Alx Anb Bgs CE Crs Frd Ggy Hop Imk Ken Liv MV Nef Nl Por Ree S&R SIE SOX Spf.

**Similar Names.** Sweet White Russian, Sweet Russian, Large Russian, Mammoth Russian, Mammoth White Russian, Buckbee's Mammoth White Russian.

**Seedsmen's Synonyms.** Large White, Anb Bui Liv. White Swede, Bdgl Frd Ree SIE SOX MV. White Sweet, Crs. White Sweet Green Top, Bgs.

**White Short Top.** Hrs. For similar names see White Swede.

**White Swede.** Alx Bai Bou Bow Bgy Bdgl Bru Com GY CA D&H Fer Frd Gln Ggy Kei Lam Lar LB McK MV Old Pg Pks Pri Ren Ree SIE SOX Tat Thr Trm Vin Web.

**Similar Names.** White-Flesched Purple Top, White Short Top, Large White, Large White Purple Top.

**Seedsmen's Synonyms.** Mammoth Russian, Lam. Russian, Alx. Sweet German, May Web. Sweet Russian, Bow Fer Old LB Loh Vin, etc. White French, McK. White Russian, Bdgl Frd Ree MV SIE SOX. Large White French, Ggy.

**White Sweet.** Crs Hrs.

**Seedsmen's Synonyms.** White French, Hrs. White Russian, Crs.

**White Sweet Green Top.** Bgs.

**Seedsmen's Synonyms.** White Russian, Bgs.

**White Tankard.** D&H Ggy Kei.

**Wood-Stubbs' Improved American Purple Top.** Entered as American Purple Top.

**Wood's Improved American Purple Top.** Entered as American Purple Top.

**World's Fair.** Bel.

**Similar Names.** Bell's World's Fair.

**Yellow Globe.** May OY Thom Tpk. For similar names see Yellow Swede.

**Yellow Swede.** Bou Bow Fer G&T Lam Lan LB Loh McK MV NI HP Tpk Wer.

**Similar Names.** Yellow Globe, Improved Yellow, French Yellow, Carter's Improved Yellow, Carter's Yellow, Cox's Improved Yellow, Cox's Yellow, Green Top Yellow, Purple Top Yellow, Scotch Yellow, Hammond's Improved Yellow Mammoth, Hammond's Yellow Mammoth.

**Seedsmen's Synonyms.** Champion, Lam HP. Purple Top Swede, Bow.

**Yellow Tankard.** Fer Frd Hop Lam LB Loh Pk Por S&G Thr.

**Seedsmen's Synonyms.** Carter's Elephant, Fer. Hurst's Monarch, Fer. Monarch, Fer Frd Lam LB Loh S&G, etc.

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**WATERMELON.**

**Alabama Sweet.** Btl Eic Ger Hde J&J M J&S Mau Show Spf Tat Tex Thm.

**Similar Names.** Pride of Alabama, Eichling's Alabama Sweet.

**American Champion.** Ber Bru Hlu Raw Shm Tat.

**Seedsmen's Synonyms.** Kobl's Gem, Ber Bru Bur Frd Hlu Raw.

**American Queen.** Ar H&P Lan. For similar names see Cuban Queen.

**Apple Pie.** Bow D&H Fqr Iow Kei M&S Old Rtk S&F Thr Vin.

**Seedsmen's Synonyms.** Colorado Citron, Bow Fqr Thr.

**Archias' Arkansas Beauty, Archias' Improved Dark Icing.** Entered as Arkansas Beauty and Dark Icing.

**Arkansas Beauty.** Ar. For similar names see Arkansas Traveler.

**Arkansas Traveler.** Gtg Hst MWJ Koe Lan Ree Rim Shw Stw.

**Similar Names.** Archias' Arkansas Beauty, Arkansas Beauty.

**Arrington's Early Market.** CA. For similar names see Early Market.

**Arrington's Sweets.** CA. For similar names see Keckley Sweets.

**Augusta Early Round White.** Alx. For similar names see Augusta Round White.
Augusta Extra Early.  MWJ.  For similar names see Augusta Round White.


Similar names.  See Rattlesnake.

Seedsmen's synonyms.  Striped Gypsy, Bui.


Similar names.  Augusta Early Round White, Augusta Extra Early, Augusta Sugar Loaf.

Augusta Sugar Loaf.  Alx Wlt.

Similar names.  See Augusta Round White, Sugar Loaf.

Benjestown.  Shw.

Black Boulder.  Bru Brw G&T Hlm J&S Lan MV M&S Reo Sox Spf Tat Thr.

Black Diamond.  Air Ar Brd Btl Bkt Ber Bue CA D&H Eic Far Fld Frd Hns Hde Hst Hly Low J&S Ky Lnr May Mel Mic MV NK Pac Rit Reo Rob Shw Shm Sox Spf Tat Tex TB Thr Tpk Van Vk.

Similar names.  Vaughan's Black Diamond, Tait's Improved Black Diamond.

Black-Eyed Susan.  Frd J&S Kg Lam Rob Shw.


Similar names.  Round Black Spanish.

Blue Gem.  Alx Bg Bui Cle CA Err Gdn Gfg G&T Hst Low MWJ J&M J&S Kg Mgd Prn Rob Shw Shm Spf Tat Tex Thr Wlt Wd WS.

Similar names.  See Kolb's Gem.


Similar names.  Landreth's Boss.

Bradford.  CA MWJ Lan Put Rim Shw S&K Thm.

Similar names.  Carolina Bradford.

Branch's Superb Rattlesnake.  Entered as Rattlesnake.

Briggs' Early.  Bgs.  For similar names see Extra Early.


Bunker Hill.  J&S.

Burpee's Cuban Queen, Burpee's Delaware, Burpee's Halbert Honey, Burpee's Hungarian Honey, Burpee's Mammoth Ironclad, Burpee's White Gem.  Entered as Cuban Queen, Delaware, Halbert Honey, Hungarian Honey, Mammoth Ironclad, and White Gem.

California.  W&D.

Similar names.  California Jumbo, California Lodi, Early California.

Seedsmen's synonyms.  Improved Odella, W&D.

California Jumbo.  Vin.  For similar names see Jumbo, California.

California Lodi.  Vin.  For similar names see Lodi, California.

Carolina Bradford.  Alx Man Wlt Wd.  For similar names see Bradford.

Childs' Ruby Gold.  Entered as Ruby Gold.

Chilean.  J&M.

Similar names.  Mammoth Chilean.
Christmas. Bel Bgg Cox Cur GH Kos May Shm.

Similar names. See Johnson Christmas.


Citron Green-Seeded. GH Rob. For similar names see Citron.


Similar names. See Citron.

City of Mexico. Sal.

Cole's Early. Brd Brt Btl Bkt Bel Ber Rgg Bdg Bgs Bri Buc Bur CE Cle Col CF Cox Crs Cur Del Drr Eas Elt RE Ex Ev Fqr Flr Frd Gia Grgy TG Hrn Hon Iow Jer J&S Jns Kei Kg Ks Lr Lr Liv JL Man Mau May MV Neb Nol NK OV Old Ptt Prr Pot Pri Qkr Rtk Ren Ree Rob Ree RP S&R S&O Shm Sie Sim Sox Spf SB S&H S&W Thr Thb Tpk Trn Vnm Vn Web Vr Wer Yng.

Similar names. Cole's Extra Early.

Cole's Extra Early. Put. For similar names see Cole's Early.

Colorado Citron. Bow D&H Fqr Gra H&P RIH Kra Tat Thr Thr Van Vin Yng.

Similar names. See Citron.

Seedsmen's synonyms. Apple Pie, Fqr Bow Thr. Colorado Preserving, SC.

Colorado Mammoth Citron. RE SB. For similar names see Citron.

Colorado Pie Citron. Ger. For similar names see Citron.

Seedsmen's synonyms. Melon Pumpkin, Ger.


Similar names. See Citron.

Seedsmen's synonyms. Apple Pie, S&F. Colorado Citron, SC.

Columbia. Alr.

Seedsmen's synonyms. Dixie, Alr.


Similar names. Burpee's Cuban Queen, American Queen, Market Queen, Gypsy Queen, Georgia Queen, Everitt's White Queen, White Queen.

Dallas Market. Hde Tex.

Dark Green Icing. Lan Stw TB. For similar names see Dark Icing.

Dark Icing. Ar Bai Brl Bkt Ber Bow Bgg Brn Brz Brl Bur C&J CE Cle C&B CF Crs Cur Drr Ex Ev Ffr Frd Ger Gdn GH Ggy Grw TG Hlm ImJ MWM J&M J&S Jns Kg Kra Lam Lr Lr Liv JL Loh Mnd Mgd PM Mau May JCM JMM Mhl Min MV...
American varieties of vegetables.

Similar names: Archias' Improved Dark Icing, Dark Green Icing, Round Dark Icing, Green Icing.

Seedsmen's synonyms: Green Mountain, Ber. Ice Rind, Bur Bkt Bow Ger PM Sc, etc. Peerless, MWJ.

Delaware. Air Bur Col Del D&C Frd GH Hst Hlm J&S Lnr Ree Rob Roe Shm Tem.


Similar names: Improved Dixie, Long Dixie, Improved Long Dixie, Johnson's Dixie, White Dixie.

Seedsmen's synonyms: Columbia, Alr.


Similar names: See Jones.

Seedsmen's synonyms: Jones' Jumbo, Alx. Jumbo, Alr.

Earliest. Koe.

Similar names: Mills' Earliest, Salzer's Earliest.

Early California. Drm TG. For similar names see California.

Early Canada. Ren.

Early Corona. J&S.

Early Dark Icing. Stk.

Early Market. MWJ.

Similar names: Arrington's Early Market.

Early Mountain Sprout. Emr. For similar names see Mountain Sweet.

Early Mountain Sweet. Bdg Hrs. For similar names see Mountain Sweet.

Early Peerless. Cok Shw. For similar names see Peerless.

Early Triumph. Pg Stk. For similar names see Triumph.

Eden. Alx Wht Wd.

Egyptian Red. Sal.

Eichling's Alabama Sweets. Entered as Alabama Sweets.

Empire State. Hst.

Everbearing. Buc.

Everitt's White Queen. Entered as White Queen.

Excelsior. Tpk.

Similar names: Haskell's Excelsior.

Expansion. Sal.

Extra Early. Dlw Koe Lan Pac Stw T&B.

Similar names: Extra Early Sugar, Harris' Early, Briggs' Early.

Extra Early Sugar. Cok. For similar names see Extra Early.

Favorite. Mls T'at. For similar names see Florida Favorite.

Ferry's Peerless, Ferry's Sweet Heart, Ferry Iceberg. Entered as Peerless, Sweet Heart, and Iceberg.

Similar names. Improved Florida Favorite, Favorite, Girardeau's Favorite.

Seedsmen's synonyms. Pierson, CA.

Florida Gem. M&S. For similar names see Kolb's Gem.

Florida Ivy. Cam. For similar names see Ivy.

Fordhook. Shw. For similar names see Fordhook Early.

Fordhook Early. Ar Bkt Bir Buer Buc Bur Col CF Cox Del Fqr Fld Frd G, V Gg G&T Hrs Hbt H&C Him Hse Hnd lrw J&M J&S Kg Koe Lam Lar Liv JL Mau May MIs M'I Neb NK Pg HP Ptn Qkr Rec Rec Rec Rob Rec Rob Roe S&B S&O Shm Sor SB S&H Tbrn Vbr Vk Wb Y&H.

Similar names. Fordhook.

Frame's Mammoth. Entered as Santiago.

French Preserving Citron. M&S. For similar names see Citron.

Frontenas. J&S.

Gem. Hnt Lan Stw. For similar names see Kolb's Gem.

Georgia. Lnr.

Similar names. Georgia Blues, Pride of Georgia, Georgia Rattlesnake.

Georgia Blues. CA. For similar names see Georgia.

Seedsmen's synonyms. Blue Gem, CA.

Georgia Queen. Hrn. For similar names see Cuban Queen.


Similar names. See Rattlesnake, Georgia.


Giant Sweet. Sal.

Similar names. Salzer's Giant Sweet.

Girardeau's Favorite. Bue Bur Cle Crs Del Ggf TG MWJ Lnr PM Pac Roe Vin Wd WS.

Similar names. See Florida Favorite.

Girardeau's Triumph. Entered as Triumph.

Glory of Asia. Sal.

Similar names. Salzer's Glory of Asia.

Gloussier. Hst Wit.

Seedsmen's synonyms. Blue Gem, Wit.

Golden Honey. Btl Bgs Cok D&H GH Hns Shw.

Similar names. See Hungarian Honey.

Golden Rind. Alx Sal.

Similar names. Salzer's Golden Rind.

Golden Sugar. Kg.

Goodwin Imperial. Shm Thr.

Gragg. Ggy.


**Similar names.** Jordan’s Gray Monarch, Mammoth Gray Monarch, Monarch.


**Great and Good.** Kg.

**Similar names.** King’s Great and Good.

**Green and Gold.** Air Bai Bkt Bel Bry Brk Bdg Bru Buc Bur CE Col Cox Crs DD Ebe Elt Evr Fst Ger GH Gra Gry Grw TG Hse H&P Iow Kg Kos Liv Man May Pac Prn Pri Ren Ree Roc RP Sal Shm Tat T&B VI Vin Wea W&D.

**Similar names.** Henderson’s Green and Gold.

**Green Citron.** Bow Bri C&J Ebe Hde Hrs J&S. For similar names see Citron.

**Green Icing.** Ber. For similar names see Dark Icing.

**Green Mountain.** Ber.

**Seedsmen’s synonyms.** Dark Icing, Ber.

**Green Preserving Citron.** Pac Y&H. For similar names see Citron.

**Grist.** Shw.


**Similar names.** Striped Gypsy, Long Striped Gypsy, Round Striped Gypsy.

**Seedsmen’s synonyms.** Georgia Rattlesnake, Cur Evr Fer J&S Lam Liv, etc. Jackson, Lan. Rattlesnake, Anb Btl Ebr Elt Lan W&D, etc. Southern Rattlesnake, Bow Cox Grw K&F Pnt.

**Gypsy Queen.** Wat Yng. For similar names see Cuban Queen.

**Seedsmen’s synonyms.** Rattlesnake, Yng.

**Halbert Honey.** Bur.

**Halbert’s Prize.** Shw.

**Hammond’s Pickaninny’s Delight.** Entered as Pickaninny’s Delight.

**Harris’ Earliest.** Man Ms. For similar names see Extra Early.

**Haskell’s Excelsior.** Entered as Excelsior.

**Hastings’ Florida Favorite.** Entered as Florida Favorite.

**Hastings’ Tinker.** 1st.

**Hendersons’ Green and Gold.** Entered as Green and Gold.

**Honey.** Ggg.

**Hoosier King.** Air Brd Buc Cle Del Dry Drm Evr Frd H&C H&P Kg Lur Liv Man J&M Rob Roc Shm Spf Vl Yng.

**Similar names.** Market King, Ice King, May’s Ice King.

**Hungarian Honey.** Brd Btl Bel Ber Bgg Bdg Bri Bru Buc Bur Brr Chl Cle Col CF Cox Crs Cur Emr RE Fqr Frd Ger Gls GH Gra Grw Hrs Hst Hbt Hse H&P Jns Lur Mnd Mm May MV Pac HP Pir Ptt Por Pri Raw Ree Ren Roc Rob Roc Sal S&R S&F Shm Sie Sox SB S&W Tem Thr Tlh Trm T&B Vau Vk W&D Wdr Y&H.

**Similar names.** Burpee’s Hungarian Honey, Golden Honey.

**Iceberg.** Fer.

S&O Shm Sox Spf Sfk S&H S&W Tat Tex Thr Til Tpk Trm T&B Vl Vn Vn Vn Wnt Web W&D Wll Wd Wdr Wyg Yng.

**Similar Names.** Ice Rind, Buckbee's Ice Cream, Improved Ice Cream, Peerless Ice Cream.

**Seedsmen's synonyms.** Peerless, Buc Brk Btl Bow Bur Vk, etc. Ferry's Peerless, Gey. Mountain Sweet, Bai Pri Vn. Icing, Bdg Ebe. Ice Rind, Bdg. Strawbery, Bdg.

**Ice King.** Ber May OV. For similar names see Hoosier King.

**Ice Rind.** Ar Btl Bkt Bow Bdg Bui Bur Brw CE CF Fst Frd Ger Hns Imd J&S Lnr JMM Mhl M&S Pac Pir Ree S&O Sic Tat.

**Similar Names.** See Ice Cream.

**Seedsmen's synonyms.** Dark Icing, Bkt Bow Bur Frd Ger PM, etc. Ice Cream, Bdg. Icing, Ar Btl Fst Hns Pir Ree, etc. Light Icing, Bui Brw J&S Mhl M&S Pac, etc. Round Light Icing, CE. Strawberry, Bdg.

**Icing.** Btl Bdg Ebe Ete Hns Pir Ree S&O Shm.

**Similar Names.** See Round Light Icing.

**Seedsmen's synonyms.** Ice Cream, Bdg Ebe. Ice Rind, Ar Btl Bdg Fst Pir Ice Rind Dark-Skinned, Hns Ree. Ice Rind Light-Skinned, Hns Ree. Strawberry, Bdg.

**Immense.** Kg.

**Improved Dixie, Improved Florida Favorite, Improved Georgia Rattlesnake, Improved Ice Cream, Improved Gypsy, Improved Ironclad, Improved Jones, Improved Kolb's Gem, Improved Long Dixie, Improved Mountain Sprout, Improved Mountain Sweet, Improved Odella, Improved Phinney, Improved Phinney's Early. Entered as Dixie, Florida Favorite, Georgia Rattlesnake, Ice Cream, etc.**

**Indiana Sweet Heart.** Cam Evr Haw H& P Kg Lan Mie Stw Vl.

**Similar Names.** See Sweet Heart.

**Ironclad.** C&J CF Crg Drv Gdn GH Hns MWJ JMM Mhl Sal Shm Tpk Wyg.

**Similar Names.** Improved Ironclad, Burpee's Mammoth Ironclad, Mammoth Ironclad.

**Ivy.** Bov Com CA.

**Similar Names.** Florida Ivy.

**Jackson.** Kg Lan Wd WS.


**James River.** Lan.

**Japanese Pie Citron.** Shm. For similar names see Citron.

**Joe Johnson.** Kg Wd. For similar names see Johnson Christmas.

**Johnson Christmas.** DD Roc Sal Wdr.

**Similar Names.** Christmas, Salzer's Johnson Christmas, Joe Johnson.

**Johnson's Dixie.** TG J&S Tex. For similar names see Dixie.

**Jones.** Bur C&J Cam Crs Frd Hst Hen Hse Jac MWJ Liv PM Mns Mau Neb Ree SC Shw S&O Spf Tat Vl Wt Wd WS.

**Similar Names.** Jones' Jumbo, Primus Jones, Duke Jones.

**Seedsmen's synonyms.** Lord Bacon, MWJ. Jumbo, Crs Frd S&O. Prize Jumbo, Frd.

**Jones' Jumbo, Jones' Pride of Georgia.** Entered as Jumbo and Pride of Georgia.

**Jordan.** Ree.

**Similar Names.** Jordan's Gray Monarch.

**Jordan's Gray Monarch.** Entered as Gray Monarch.

**Jumbo.** Air Ar Bak Btl Buc Cle Crs CA Dl Dl Dm Dm Ebr Frd Gdn GH Hde Hlm Hse H&P Jac MWJ J&S Kg Lur Liv May MV M&S Nol Old Pnt Ree Rob Roc RP SC Shw S&O Shm Sox Spf Tat Tex Trm Vn Vn Wnt Web Wyg Yng.

**Similar Names.** Prize Jumbo, California Jumbo, Jones' Jumbo.

**Seedsmen's synonyms.** Duke Jones, Alx Alr. Jones, Crs Frd S&O. Prize Jumbo, Frd.
Kansas Stock. Btl Hns Pir Trm.

**SIMILAR NAMES.** Nebraska Stock.

**Kentucky Wonder.** Anb Ar Btl Bgg Bar CE Crg Del Emr Fmr Fld Ger GH Grw Hns 1k&CM&S J&M Kg Kra Lnr LB PM JMM MV Neb Nol XI NK Pac Por Raw Rec Rob Roc RP Sal &R Shw S&O Shm Sox Sf TP Tex Tll Trm VI Web WS.

**King’s Great and Good, King’s Immense.** Entered as *Great and Good* and *Immense*.

**Kleckley Sweats.** Axl Alr Brd Bil Ber Buc Btr Btr JU&J Chl CFcox Drr Eic Frr Fld Frd Gdn Gra G&G PTG Hde Hst Hc&Hl ImI MwJ J&S J&M Kg Kra Lnr Mgd Mai May JMM MV &S Nol XI NK Old Pir Pnt Qkr Rec Rob Roc RP Shw S&O Shm Sf F&J Htt TB Thm Thr Thk Trm VI Van Vkle Wat WS Yng.

**SIMILAR NAMES.** Arrington's Sweets.

**SEEDSMEN'S SYNONYMS.** Monte Cristo, Iow Pnt.

**Klondike.** Fmr LB NK.


**SEEDSMEN’S SYNONYMS.** American Champion, Ber Brr Bar Frd Hlm Raw.

**Lagonda.** Hst.

**Landreth’s Boss, Landreth’s Long Light Icing.** Entered as *Boss* and *Long Light Icing*.


**SIMILAR NAMES.** See Round Light Icing.


**Livingston’s Nabob.** Entered as *Nabob*.

**Lodi.** Bai Bow Ger J&M Pac.

**SIMILAR NAMES.** California Lodi, White Lodi.

**SEEDSMEN’S SYNONYMS.** San Joaquin, Bow.

**Lone Star.** Ele SfK Tat Tex.

**Long Dixie.** Ar Hst Lan HP Ptt SC Sim Sf Spf Thm.

**SIMILAR NAMES.** See Dixie.

**Long Icing.** Roc. For similar names see *Long Light Icing*.

**Long Island.** Evw Gra Tt Kei Tpk.

**Long Light Icing.** Axl CE Cle Drr Fer Ger H&C Lan Lan Lnr Loh MV Rec Rim TB Wea.

**SIMILAR NAMES.** Landreth’s Long Light Icing, Long White Icing, Long Icing.

**SEEDSMEN’S SYNONYMS.** Gray Monarch, MV. Jordan’s Gray Monarch, WD.

**Long Striped Gypsy.** Shm. For similar names see Gypsy.

**Long White Icing.** Ar Big Bow Bui Bur C&J J&S Kra Man JMM Shm Van Vkle Wat.

**SIMILAR NAMES.** See Long Light Icing.

Lord Bacon. MWJ McM.

SEEDSMEN'S SYNONYMS. Improved Jones, MWJ.

Lord Baltimore. G&T.

Louisiana Melting Sugar. M&S. For similar names see McIver's Sugar.

McIver's Sugar. Bkt Bar Col Cox D&H Drr G&T MWJ Kg Mic MV Pg Qkr Ren Sox SB Thm Web Yng.

SIMILAR NAMES. McIver's Wonderful Sugar, Will's Sugar, Louisiana Melting Sugar, Wonderful Sugar, Maule's Wonderful Sugar, Wonderful.

SEEDSMEN'S SYNONYMS. Wonderful, Del. Wonderful Sugar, Rob S&H.

McIver's Wonderful Sugar. Air Ber Cle Evr Fld Frd Tg Hmn Hrn Hst Hlm Iow J&S Kg Kra Lnr Liv JL Mgd M&S Neb Pnt Shw Shm Sim Sox Sb S&H Thb Vun Vk WS.

SIMILAR NAMES. See McIver's Sugar.

Majestic. M&S.

Mammoth Chilean. Thm. For similar names see Chilean.

Mammoth Gray Monarch. Air Col TG. For similar names see Gray Monarch.


SIMILAR NAMES. See Ironclad.


Mammoth White Icing. Bak. For similar names see Round Light Icing.

SEEDSMEN'S SYNONYMS. Gray Monarch, Bak Buc.

Market King. M&S. For similar names see Hoosier King.

Market Queen. M&S. For similar names see Cabin Queen.

Maule's Wonderful Sugar. Entered as Wonderful Sugar.

May's Ice King, May's Ice Cream. Entered as Ice King and Ice Cream.

Melon Peach. NK Vun.

SIMILAR NAMES. Vine Peach.

Memphis. Hen Shm.

Mills' Earliest. Mls. For similar names see Earliest.

Miracle. Thb.

Monarch. Grw. For similar names see Gray Monarch.

SEEDSMEN'S SYNONYMS. Light Icing, Grw.

Monte Cristo. Buc CE Cok Ebr Fer Fld Gdn H&'t Iow Jns Kg Lnr Mic Old Recn Roe Shw Shm TB.

SEEDSMEN'S SYNONYMS. Kleckley Sweats, Iow Pmt.

Moore's Majestic. Entered as Majestic.


SIMILAR NAMES. See Mountain Sweet.

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AMERICAN VARIETIES OF VEGETABLES.

S&F Shw S&O Shm Sim Sox Spf SB S&H S&W Tat Tem Tex Thm Thr Thb Til Tpk Trm Van Vk Vin Wea Web W&D Wer Wil Wd Wdr Wyg Yng YkH.

SIMILAR NAMES. Improved Mountain Sweet, Early Mountain Sweet, Mountain Sprout, Improved Mountain Sprout, Early Mountain Sprout.

SEEDSMEN'S SYNONYMS. Ice Cream, Bai Pri Vin.

Muskile. Tat.


SIMILAR NAMES. Livingston's Nabob.

National. Mail.

Nebraska Stock. Neb. For similar names see Kansas Stock.

New Century. Tlh.

Nigger Head. Tat.

Odella. TG Sq L&D.

SIMILAR NAMES. Improved Odella.

SEEDSMEN'S SYNONYMS. California, W&D.

Oh My. Sal.

Orange. Btl Bgg Bdg C&J CE Crs Fst Frd Ger Hns H&P Iow Min Ren Ree SC Shw Shm Tat Tpk.

Paule's Bonny Best. J&S.


SIMILAR NAMES. Early Peerless, Ferry's Peerless, Peerless Ice Cream.

SEEDSMEN'S SYNONYMS. Ice Cream, Brd Btl Bow Bur J&S Vc, etc. Buckbee's Ice Cream, Buc. Dark Icing, MWJ.

Peerless Ice Cream. Haw. For similar names see Ice Cream.


Perfection. Pg.

Phinney. Chl Kei Kg Kra Ren Sim Thr Vau Vin.


SIMILAR NAMES. Improved Early Phinney, Phinney's Extra Early, Phinney's Early Oval, Phinney's Improved, Phinney.

Phinney's Early Oval. Mas. For similar names see Phinney's Early.


SIMILAR NAMES. See Phinney's Early.

Pickaninny's Delight. Ham.

SIMILAR NAMES. Hammond's Pickaninny's Delight.

Pierson. CA.

SEEDSMEN'S SYNONYMS. Florida Favorite, CA.

Premium Triumph. Bui. For similar names see Triumph.


SIMILAR NAMES. See Citron.

Pride of Alabama. Cam. For similar names see Eichling's Alabama Sweet.
Pride of Georgia. Alx Bai Brd Btl Bkrt Ber Bag Bai Bur CE Cle C&B Cox Crs CA DD Ebr Eie E1t E1n Frd GH Ggy Grw Hns Hde Hrn Hst Hly Hlm H&P Jow MWJ J&M J&$ Lea Lnr L1v JL Man PM Mau May JCM J&M Mhl MV Mzy Neb Pac Ptt Rec Rob Roc RP Sal Shr S&O Sox Spl Stk Swl Tat Tat Thn Thr Trm T&B. V'1 Vk W&D Whl Wd WS.

Primus Jones. MWJ. For similar names see Jones.

Prize Jumbo. Vko. For similar names see Jumbo.


Rattlesnake. And Btl CF Dlw DD Drr Ebr Eie E1t Eyr F1d G&T Hlm H&P JWM J&M Lea J&M Mhl Min Mzy Shw Stk Stw Tat Thm Tpk Van W&D Wer Yng.

SEEDSMEN'S synonyms. Gypsy, Amb Btl Ebr E1t Lan W&D, etc. Gypsy Queen, Yng. Jackson, Bdg Lan. Striped Gypsy, Bdg Drr Hlm Mhl.

Rocky Ford. Btl Hns Pir Trm.

SIMILAR NAMES. Rocky Ford Long Green.

Rocky Ford Long Green. Sal. For similar names see Rocky Ford.

Round Black Spanish. Rec. For similar names see Black Spanish.

Round Dark Icing. H&C Wat. For similar names see dark Icing.

Round Light Icing. Brn Fer H&C Hlm Iml Lnr Lan LB.

SIMILAR NAMES. Childs' Ruby Gold.

Safeguard. May.

Salzer's Earliest. Sal. For similar names see Earliest.


San Joaquin. Bai Bw.

SEEDSMEN'S synonyms. Lod, Bw.

Santiago. TG Pq.

SIMILAR NAMES. Mammoth Santiago, Frame's Mammoth Santiago.

Scaly Bark. Bel Bag Bdg CE Cle C&B Cox Cur DD Ebe E1t GH H1n J&S K&W Lnr Mhl Mzy Nef Poe Rec Rob Roc RP Sal SC S&O Shm Sox Spl Stk Tat Tpk T&B W&D.


SIMILAR NAMES. Seminole Early, Seminole Extra Early.

Seminole Early. Bow. For similar names see Seminole.

Seminole Extra Early. Cox. For similar names see Seminole.


Southern Rattlesnake. Bai Big Bw Cox Grw TG K&W Pnt SC Thr.

SIMILAR NAMES. See Rattlesnake.

SEEDSMEN'S synonyms. Gypsy, Bow Cox Grw K&W Pnt. Striped Gypsy, SC.

Southern Sugar Loaf. Shw. For similar names see Sugar Loaf.

Southern Triumph. Tat. For similar names see Triumph.

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Stokes' Early. D&H. For similar names see Stokes' Extra Early.

Similar names. Stokes' Early.

Striped Gypsy. Bdg Bui Bur CF Crs Drr H&C Hlm PM Mkl M&S Pri Qkr SC.

Similar names. See Gypsy.


Sugar Loaf. MJW.

Similar names. Southern Sugar Loaf, Augusta Sugar Loaf.


Similar names. Ferrys' Sweet Heart, Indiana Sweet Heart.

Sweet Siberian. Hen.

Tait's Improved Black Diamond. Entered as Black Diamond.


Similar names. Early Triumph, Girardeau's Triumph, Premium Triumph, Southern Triumph.

Utah. Wit.

Vaucluse. Bur Ree Rob Shm Tem.

Similar names. Vaucluse Red-Seeded.

Vaucluse Red-Seeded. J&S PM. For similar names see Vaucluse.

Vaughan's Black Diamond. Entered as Black Diamond.

Vicks Early. Bld Ber Brk Bdg Brn Brb Bur CF Cox Dnm Eas Emr Evr Fqr Fst Gry TG H&P Ky Lea Lnr Man PM May Mic Neb XI Prn Pnt Raw Ree Rob S&F Shw S&O Sim Sox Tat VI Vk Vin Wei Wyg Y&H.

Similar names. Vick's Extra Early.

Vick's Extra Early. CE Del GH Hop Ree Shm Tem.

Similar names. See Vick's Early.

Vine Peach. MJW. For similar names see Melon Peach.

Volga. Bkt Btg Bdg CE Crs Ger Hrs J&M Loh MV Mzy Ree Rob Sor Vk Vin W&D.

White Dixie. M&S. For similar names see Dixie.


Similar names. See Kobbs Gem.

White Lodi. Pac T&B. For similar names see Lodi.

White Queen. Evr. For similar names see Cuban Queen.

Will's Sugar. Wl. For similar names see McIver's Sugar.

Wonderful. Drr JMM. For similar names see McIver's Sugar.

Seedsmen's synonyms. McIver's Sugar, Drr.

Wonderful Japanese Pie Citron. Alr. For similar names see Citron.

Wonderful Sugar. Bae CFGN Man Mls Old Pac Rob Roc Sal Spf Tat Tem Thr.

Similar names. See McIver's Sugar.

Seedsmen's synonyms. McIver's Sugar, Rob S&H.
INJURIOUS EFFECTS

OF

PREMATURE POLLINATION;

WITH

GENERAL NOTES ON ARTIFICIAL POLLINATION AND
THE SETTING OF FRUIT WITHOUT
POLLINATION.

BY

CHARLES P. HARTLEY.
Assistant in Physiology, Plant-Breeding Laboratory.

VEGETABLE PATHOLOGICAL AND PHYSIOLOGICAL
INVESTIGATIONS.

Issued October 4, 1902.

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a Detailed to Botanical Investigations and Experiments.
b Detailed to Seed and Plant Introduction.
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1902.
LETTER OF TRANSMITTAL.

U. S. Department of Agriculture,
Bureau of Plant Industry,
Office of the Chief,

Sir: I have the honor to transmit herewith a paper on the Injurious Effects of Premature Pollination, with General Notes on Artificial Pollination and the Setting of Fruit without Pollination, and respectfully recommend that it be published as No. 22 of the Bureau series of bulletins. The paper was prepared by Mr. Charles P. Hartley, assistant in physiology in the Plant-Breeding Laboratory, Vegetable Pathological and Physiological Investigations, and was submitted by the Pathologist and Physiologist.

Respectfully,

B. T. Galloway.
Chief of Bureau.

Hon. James Wilson,
Secretary of Agriculture.
The importance which plant breeding has assumed in the improvement of varieties of cultivated plants makes it desirable that careful attention be given to every detail involved in the production of hybrids. The accompanying paper, by Mr. Charles P. Hartley, assistant in physiology in the Plant-Breeding Laboratory, Vegetable Pathological and Physiological Investigations, is the result of a study of the effects of premature pollination in its relation to the setting of fruit. The investigation has demonstrated the decidedly injurious effect of premature pollination in several cases, and the fact is emphasized that in order to secure successful results in the production of hybrids and the setting of fruit, careful consideration must be given to the time when pollen should be applied to the stigma. It is believed that the results here presented will be of service to investigators and to workers in plant breeding.

Albert F. Woods,
Pathologist and Physiologist.

Office of the Pathologist and Physiologist,
Washington, D. C., May 21, 1902.
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PLATES.

Plate I. Fig. 1.—Growing tobacco blossoms at time of emasculation. Fig. 2.—
Same blossoms as in fig. 1, two days later.

II. Fig. 1.—Same blossoms as in Pl. I, fig. 1, eight days later. Figs. 2, 3, 4, 5.—Photomicrographs of tobacco pollen tubes.

III. Tobacco blossoms and seed pods.

IV. Methods of emasculation; also a grape cluster showing difference in size between seedless and seeded berries.

TEXT FIGURE.

Fig. 1. Flowers of *Sabbatia angularis*: (a) Appearance while pollen is being shed; (b) Stigma and anthers avoiding each other; (c) Receptive stigma and deciduous anthers.
INJURIOUS EFFECTS OF PREMATURE POLLINATION;
WITH GENERAL NOTES ON ARTIFICIAL POLLINATION AND THE SETTING OF FRUIT WITHOUT POLLINATION.

INTRODUCTION.

It is quite generally taken for granted that if pollen is placed on the stigmas of flowers some time before they are receptive it will simply remain there until the stigmas become mature, and then germinate and fertilize the flowers. Darwin, in speaking of the various kinds of flowers with which he experimented in order to show the devitalizing effect of self-fertilization, says:

As the flowers which were crossed were never castrated, it is probable or even almost certain that I sometimes failed to cross-fertilize them effectually, and that they were afterwards spontaneously self-fertilized. This would have been most likely to occur with dichogamous species, for without much care it is not easy to perceive whether their stigmas are ready to be fertilized when the anthers open. But in all cases, as the flowers were protected from wind, rain, and the access of insects, any pollen placed by me on the stigmatic surface while it was immature would generally have remained there until the stigma was mature, and the flowers would then have been crossed as was intended.

Such would perhaps have been the case with some flowers, but the experiments herein described show that it is not true of all. On the contrary, they furnish proof for a statement to the effect that a premature pollination is destructive to the flowers of some plants, preventing them from forming seeds. The experiments and microscopic examinations show that with tobacco at least premature pollination not only results in a failure of the flower to set seeds, but that the growth of the pollen tubes into ovaries before the ovules are mature enough for fertilization results in an injury which causes the flowers to immediately fall.

The facts that tobacco flowers fall in about thirty-six hours after pollen is applied to the immature pistils, whether the flowers be previously emasculated or not, and that they do not fall if emasculated and not pollinated, nor if pollinated with other pollen than tobacco

«Cross and Self-Fertilization in the Vegetable Kingdom, p. 23.
pollen, and further, that pollen tubes are found penetrating the styles and ovaries of the fallen flowers, give good reasons for the statement that the application of pollen to the pistils of some flowers before the pistils are mature enough to receive the pollen produces an injury which results in the death of the flowers.

In working with the different kinds of flowers herein mentioned, except *Datura tatula*, the following method was employed: Ten similar flower buds were selected and treated in exactly the same manner and labeled by means of numbers, the ten flowers of each experiment bearing the same number. When the results were to show the effects of the different methods of treatment, the experiments were performed at the same time and on similar flowers equally distributed on the same plants. This made all conditions alike for the experiments to be compared, except the treatment of the blossoms.

At the end of the remarks regarding each kind of flower, a table is given describing all the experiments with that flower. In these tables, as elsewhere, the experiments are designated by the original numbers attached to the flowers when the work was begun.

**EXPERIMENTS WITH TOBACCO BLOSSOMS.**

The conclusions in regard to the work with tobacco blossoms are drawn from the behavior of 670 hand-pollinated flowers of Cuban tobacco (*Nicotiana tabacum*). The different questions or phases of the work were tested by experiments consisting in every instance of 10 similar flowers, making in all 67 experiments. Quite often several of these numbered experiments were exact repetitions and as such their results compare favorably. By combining these like experiments we get results based upon work with larger numbers of flowers. Thirty-two of the 67 experiments, while throwing light on the questions here considered, were made primarily for the purpose of settling other questions and to test the longevity of tobacco pollen, and so will not be referred to in this article. This will explain why the experiments with tobacco blossoms given in Table I are not numbered consecutively. It may be mentioned here that pollen that had been kept in tinfoil for three months, while still capable of producing germinative seeds, was not so destructive to immature pistils as was fresh pollen, perhaps because the old dry pollen germinated less readily on the young stigmas before the exudation of stigmatic fluid which indicates the receptive period. At one time it was thought that this explanation was corroborated by the fact that no seed pods resulted from pollen two months old when used on mature flowers in the field, while pollen three months old gave good results on similar flowers in the greenhouse. It was thought that perhaps the dry pollen germinated with greater ease in the moist greenhouse. Such may have been the case, but it is now thought that the hot summer weather affected the pollen. The pollen
used in the field, though only two months old, was exposed to, and perhaps injured by, the hot weather of July and August, while that used in the greenhouse experienced the cooler weather of April, May, and June. When fresh pollen was used the destructive effect of premature pollination was as pronounced on the flowers in open air as on those in the greenhouse. That a saturated atmosphere is sufficient to start the growth of tobacco pollen was shown by placing some on the under surface of a cover glass over a drop of water in the well of a microscopic slide. The next day pollen tubes were found growing from many of the grains.

The seeds resulting from these experiments were not all planted to test their germination, but seeds from several of the tobacco experiments were tested and the large plump ones (Pl. III, fig. 6), which, when crushed, showed that they contained oil, germinated well, while the smaller, light, chaffy ones failed to germinate. It was therefore thought unnecessary to test the germination of all the seed, and good ones were distinguished for the most part by their appearance.

When the first flowers were operated upon—i. e., those of experiments 1, 2, and 3—very little attention was paid to the age of the flowers chosen, other than to see that they had not yet opened. This is now known to account for the great variation in the number of pods obtained. (See Table I.) As the work proceeded, however, it was found that the age of the flower at the time of pollination was of the utmost importance in order to obtain results of value, and the time was recorded in hours in performing all experiments after the first six. Finding that the age of the flower operated upon was the most vital condition entering into the experiments, a very careful study of the growth of the flowers was made. A number of young flower buds of various ages were labeled with tags upon which were placed the date and size of the bud, and each day thereafter the size and condition of these buds and the resulting flowers and seed pods were written on the respective labels. This was repeated several times. The weather conditions were found to exert a marked effect on the rapidity of development, but it was noticed that the size and appearance of the corollas were good indications of the advancement of the inclosed anthers and stigmas, so that consequently the corollas were used in the experiments as a means of designating the age of the flower buds operated upon. The 35 experiments performed with tobacco to settle the destructive influence of premature pollination are outlined and their results given in Table I (p. 17). Tobacco being a self-fertilizing flower, the stigma is receptive at the time the anthers open, and the anthers usually begin to shed pollen when the flower begins to open.

Comparing the length of the corolla with the length of time before the corolla is fully open and the stigma receptive, we find the following conditions to exist when the plants are thrifty and the weather fairly favorable:
Four days before the stigma is receptive the corolla does not extend beyond the calyx lobes, which are one-half inch long. The flower labeled c, in Pl. I, fig. 1, is in this stage of development and is the same as those which were chosen for experiments 22 and 35. (See Table I.) The growth of an unmolested bud of this age can be studied by comparing the small unlabeled bud on the right in Pl. I, fig. 1, with resulting flower and seed pod in Pl. I, fig. 2, and Pl. II, fig. 1, respectively.

Three days before the stigma is receptive the corolla is one-fourth to one-half inch longer than the calyx (flowers d and 6, Pl. I, fig. 1). Flowers of this age were chosen for 10 of the experiments given in the table.

Two days before opening, the corolla is three-fourths to 1 inch longer than the calyx, as shown by flowers 1 and 2 in Pl. I, fig. 1. Flowers of this age, as well as younger ones, were found to be killed by pollination. (Compare figs. 1 and 2, Pl. I.)

One day before opening, the corolla is $1\frac{1}{2}$ to $1\frac{3}{4}$ inches longer than the calyx, the terminal one-fourth inch being of a red color. Flowers 3, 4, 5, and a, Pl. I, fig. 1, are of this age and can be pollinated with fair success (experiments 4, 6, etc.), but the results will be much better if the work is done twelve hours later (as in experiments 16 and 36), or if the flowers are emasculated at this age, or younger, and pollinated when the pistils become receptive (experiment 7 or 20).

The next day the corolla and anthers open at the same time and the receptive pistil is of proper length and maturity to receive the pollen directly from the opening anthers. One month after pollination the seed pod is ripe.

Having obtained this data in regard to the manner of growth, the flowers were designated in the notes made at the time the experiments were performed as "three days before pistils would have been receptive," "one day before pistils would have been receptive," etc.

By the time the results of the first 10 experiments were obtained it was definitely known that an abundance of fresh pollen applied to tobacco flowers two or three days before the pistils become receptive results in the falling of the flowers without setting fruit, while flowers operated upon one day before becoming fully open and receptive give fair percentages of fruits, as shown by experiments such as Nos. 7 or 8. But it was necessary to find out why the former failed while the latter gave fair percentages. It might be supposed that the younger flowers were more injured by emasculation, but several experiments soon proved that this is not the case. In experiment 20 the flowers were emasculated three days before becoming receptive and pollinated when receptive, resulting in 100 per cent of fruits, while in experiment 21 they were emasculated and pollinated three days before becoming receptive, resulting in no fruit whatever. The only difference in experiments 20 and 21 is in the time of pollination. Other
EXPERIMENTS WITH TOBACCO BLOSSOMS.

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experiments, for example Nos. 18 and 19, which are described in Table 1 (p. 17), prove that the falling of the young flowers is not in any way caused by the early emasculation, while in experiments 35, 38, and 40 they fell soon after being prematurely pollinated, although they had not been emasculated.

A study of figs. 1 and 2, Pl. I, will also show that the falling of the flowers is not associated with the emasculation. For fig. 1 the photograph was taken immediately after emasculating and pollinating the flowers, and for fig. 2 the photograph was taken forty-eight hours later. The lettered flowers on the right-hand stem of the plant were simply emasculated at the same time the numbered flowers on the left-hand stem were emasculated and pollinated. The prematurely pollinated flowers, 1, 2, and 6, shown in these illustrations, had all fallen within forty or less hours of the time they were pollinated, while those of the same age, a, c, and d, that were emasculated and not pollinated, continued to grow. These flowers were found fallen at 9 o'clock in the morning, the exact time of their falling not being known; but three other tests made at different times showed that in good growing weather such prematurely pollinated blossoms fall in about thirty or thirty-six hours after being pollinated. Flowers 3, 4, and 5 were treated exactly as were flowers 1, 2, and 6, but set seed instead of falling, because they were almost mature when pollinated. Fig. 1, Pl. II, is from a photograph of the same plant as shown in Pl. I, taken eight days later than fig. 1, and shows the seed pods which grew from flowers 3, 4, and 5, while the lettered ones that were emasculated but not pollinated are just fallen, making a difference of six days between the falling of those prematurely pollinated and those not pollinated.

There was always a great difference noticeable in the manner of falling of the prematurely pollinated blossoms and those that fell from other causes, such as non-pollination. When the fall was the effect of premature pollination, the separation of the flower from the plant was rapid and complete and not accompanied by any previous wilting of the flower, but invariably occurred at a joint situated at the base of the peduncle shown at a, Pl. III, fig. 3. Flowers 1 and 2, Pl. III, fell within some time less than thirty-nine hours after being pollinated, while flowers 3 and 4, which were emasculated at 12 m., February 27, and not pollinated, had not yet fallen at 9 a.m., March 5, when they were cut and photographed.

While comparing blossoms that had been emasculated and prematurely pollinated with similar ones that had been emasculated and bagged but not pollinated, the persistence with which the pistils retained their fresh receptive appearance was very noticeable and led to a few slight tests of the length of time the pistils could remain receptive and still result in the production of seed when pollinated. By referring to experiment 18 in Table 1, it will be noticed that the 10 flowers emasculated June 7 and found receptive June 9 were not
pollinated till June 14, at which time the corollas of the flowers were dead or badly withered, while the pistils were still fresh and receptive. On June 20 five pods were found growing, but they did not appear as thrifty as those of experiment 16 in which the pistils were pollinated at the proper time. In experiment 9 the pistils became receptive May 13, but were not pollinated until the next day, when pollen that had been left in the laboratory for three days was applied. The stigmas at the time of pollination were covered with a large drop of stigmatic fluid, in which the pollen seemed to dissolve and disappear from view. The experiment resulted in the setting of but three pods. It is thought that the reason for so poor a percentage of seed pods is the placing of the dry pollen in so large a drop of stigmatic fluid, perhaps causing the pollen grains to swell and burst; but this is only conjecture, for no attempt was made to ascertain the true behavior of the pollen grains.

In experiment 37 the pollen was placed on about one-fourth the entire surface of receptive stigmas and on only one side of the small suture taut divides the stigma into equal parts. While the pods were still green four or five showed a marked one-sidedness, but when they had ripened and were cut for examination they all seemed as symmetrical as the general crop of pods. On cutting them, however, the good plump seeds were almost altogether in one-half of the ovary, the other half containing light, chaffy, undeveloped seeds.

It being fully determined that pollen applied to the entire stigmatic surface of premature pistils results in the falling of the flowers, some tests were made to determine the effects of smaller quantities of pollen. In experiment 41 fresh pollen was applied to one-fourth of the stigmatic surfaces of pistils that would have been receptive in three days, and the flowers were bagged without emasculation. Four days later but one flower had fallen, while it is safe to say that had the stigmas been entirely covered with pollen 90 per cent would have fallen. They were naturally self-pollinated and 8 set pods. No explanation is known why an occasional prematurely pollinated flower failed to fall (experiments 39 and 40) unless it be that accidentally a portion of the stigmatic surface escaped pollination and the flowers continued to grow because there was still a chance for them to set some seeds. Experiments 44 and 46 (see table) were treated as was experiment 41, except that the flowers were emasculated. But two pods set in experiment 44 and four in experiment 46; the other flowers withered and fell, not because a small quantity of pollen was applied prematurely, but because of a lack of pollination after becoming receptive. In experiment 37 the pollen was placed on only one side of the medial suture and seeds were found mostly in one-half of the pods, while in experiments 44 and 46 it was placed across the stigma in a line at right angles to the suture, and the well-developed seeds were found scattered among the undeveloped ones in both halves of the seed pod. From the partition which divides the ovary (Pl. III, fig. 7) a sharp line can be traced up
both sides of the pistil and be seen to terminate in the suture just mentioned. That there is a close relation between the pollination of one-half of the stigma and the setting of seeds in the corresponding half of the ovary is certain, but no attempt was made to ascertain whether pollen grains placed on one-half of the stigma are ever able to fertilize ovules in the opposite half of the ovary. The fact that pollen tubes all descend in the delicate conductive tissue occupying the center of the pistil might indicate that the tubes are free to grow to any portion of the ovary, but stained sections show that they grow parallel with one another and seem to follow the long, thin-walled cells of the conductive tissue (Pl. II, fig. 3). In the ovary the tubes make many short turns in various directions (Pl. II, fig. 5).

While flowers two days before opening fall as completely as any, when their stigmas are entirely covered with pollen, they nevertheless recover from a slight premature pollination better than younger flowers. This can be noticed by contrasting experiments 44 and 46 with experiment 47.

As will be noticed in the tables, several substances were substituted for pollen. This was done in an effort to find if other substances could injure the stigmas and cause the flowers to fall as in the case of premature pollination. Nothing besides pollen was found to have this effect. Its damage goes deeper than the stigma.

As a mere irritation of the stigma is thought to have a tendency to cause some flowers to set fruit, it may not be amiss to view these experiments with this in mind. Of 60 emasculated flowers that had their stigmas covered with substances other than pollen, 14 set fruits, while of the 20 that were emasculated but never pollinated 2 set fruits. As a general thing the capsules resulting from the flowers that were not pollinated, and likewise those resulting from flowers whose stigmas were covered with some substance other than pollen, contained only small compressed undeveloped seeds, but the two pods obtained in experiment 52 by treating the fully receptive stigmas with magnesium sulphate contained some spherical seeds of almost full size which looked like good seeds, but when cut into proved to be hollow spheres.

By combining like experiments in which flowers of various ages were plentifully pollinated with fresh pollen, we get the following percentages of seed pods, of which it can be said that none resulting from the pollination of flowers earlier than one day before opening contained germinative seeds:

| From 20 flowers pollinated four days before opening, 1 seed pod set. | 5 |
| From 40 flowers pollinated three days before opening, 2 seed pods set. | 5 |
| From 20 flowers pollinated two days before opening, 0 seed pods set. | 0 |
| From 40 flowers pollinated one day before opening, 31 seed pods set. | 77 |
| From 20 flowers pollinated one-half day before opening, 19 seed pods set | 95 |
| set | |
| From 20 flowers pollinated when fully receptive, 19 seed pods set | 95 |
Dividing these into two groups, namely, those pollinated more than one day before opening and those pollinated one day or less than one day before opening, they show that the former set 4 per cent of seed pods which contained no germinative seeds, while the latter set 86 per cent of seed pods which contained germinative seeds.

MICROSCOPIC STUDY OF TOBACCO PISTILS AND OVARIES.

Soon after becoming detached from the plant some of the prematurely pollinated blossoms were carried to the laboratory and the stigmas and pistils examined. That the pollen grains had germinated and penetrated the stigma could be seen, but the growth of the pollen tubes down the style could not be followed in the fresh material. This led to the premature pollinating of one series of blossoms and the mature pollinating of another series for microscopic study. The flowers of both these series were emasculated and kept bagged so that no pollen reached their stigmas except that purposely placed there. By this means the rapidity of growth of the pollen tubes was to some extent determined. At various intervals some flowers of each series, as well as some of various ages that had never received pollen, were cut and killed in Flemming's chromic-aceto-osmic acid solution and carried through alcohols and imbedded, sectioned, mounted, and stained with the safranin-gentian-violet triple stain. By this means the pollen tubes could be found penetrating the stigmas (Pl. II, fig. 2), in the styles (fig. 3), entering the ovary and dispersing among the ovules of the prematurely pollinated flowers (figs. 4 and 5).

Flowers collected twenty-two hours after being prematurely pollinated showed pollen tubes on and penetrating the stigma and some a short distance into the style but none in the ovaries, while in ovaries of flowers that had fallen because of being prematurely pollinated pollen tubes were abundant. Figs. 4 and 5 show pollen tubes in the ovaries of such flowers. In the sections that have been photographed pollen tubes are more abundant than they appear in the photomicrographs, but do not show because they are not in the same focusing plane.

Although the ovaries of the prematurely pollinated flowers contain many pollen tubes, none has been found entering the micropyle of an ovule, and in just what way the flower is destroyed has not been determined; but the kindness of Dr. Webber in examining the sections enables the writer to state definitely that the ovules, though encompassed with pollen tubes, are much too immature for fertilization, the embryo sacks being in the one and the two celled stages. The study of an abnormal condition of this kind may help to explain the attractive force which enables pollen tubes to find and enter ovules at the proper time.
**TABLE 1.—Experiments with tobacco blossoms.**

[Each experiment performed upon 10 similar flower buds.]

<table>
<thead>
<tr>
<th>Days.</th>
<th>Experiment No.</th>
<th>Pistils would have been receptive in—</th>
<th>When emasculated.</th>
<th>When pollinated.</th>
<th>Remarks regarding pollen and pollination.</th>
<th>When examined, with remarks on condition.</th>
<th>Number of fruits.</th>
<th>Remarks.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 to 3</td>
<td>1900.</td>
<td>Apr. 26.</td>
<td>Apr. 26.</td>
<td>Fresh pollen applied abundantly</td>
<td>May 10, and May 21; pods were ripe</td>
<td>5</td>
<td>Flowers varied in age.</td>
</tr>
<tr>
<td>2</td>
<td>1 to 3</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>May 21.</td>
<td>2</td>
<td>Quite young flowers used.</td>
</tr>
<tr>
<td>3</td>
<td>1 to 3</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>May 10; pod was ripe May 21.</td>
<td>4</td>
<td>Flowers varied in age.</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>May 11.</td>
<td>May 11.</td>
<td>May 11</td>
<td>Only a few grains of fresh pollen applied to each pistil.</td>
<td>May 21, June 8, 7 ripe pods.</td>
<td>9</td>
<td>Only 9 flowers pollinated.</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>Fresh pollen applied abundantly</td>
<td>May 21; ovaries black but not fallen.</td>
<td>8</td>
<td>When pollinated 9 pistils showed injury.</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>May 21; June 8, pods were ripe</td>
<td>7</td>
<td>Large drop of stigmatic fluid on stigma when pollinated.</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>3 p.m., May 12</td>
<td>11 a.m., May 12.</td>
<td>11 a.m., May 12</td>
<td>Pollen 1 day old applied abundantly</td>
<td>May 21; pistils dead but not fallen.</td>
<td>6</td>
<td>Pods lack vigor.</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>10 a.m., May 12</td>
<td>10 a.m., May 12.</td>
<td>...</td>
<td>...</td>
<td>May 21, all found fallen.</td>
<td>5</td>
<td>Tenth one died before pollinated.</td>
</tr>
<tr>
<td>9</td>
<td>1</td>
<td>10 a.m., May 12</td>
<td>11 a.m., May 12.</td>
<td>...</td>
<td>...</td>
<td>June 4, all found fallen.</td>
<td>4</td>
<td>Were receptive when pollinated.</td>
</tr>
<tr>
<td>10</td>
<td>2</td>
<td>4 p.m., May 12</td>
<td>4 p.m., May 12.</td>
<td>...</td>
<td>...</td>
<td>June 10, 9 good growing pods.</td>
<td>3</td>
<td>Fallen flowers fixed for study. (See Pl. II, figs. 4 and 5.)</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
<td>2 p.m., May 12</td>
<td>2 p.m., June 4.</td>
<td>...</td>
<td>...</td>
<td>June 9, full size and receptive.</td>
<td>2</td>
<td>Very small pod, no seeds.</td>
</tr>
<tr>
<td>12</td>
<td>1</td>
<td>11 a.m., June 7</td>
<td>12 a.m., June 14.</td>
<td>...</td>
<td>...</td>
<td>June 20, 9 thrifty seed pods.</td>
<td>1</td>
<td>Grew but little after pollination.</td>
</tr>
<tr>
<td>13</td>
<td>1</td>
<td>10:30 a.m., June 7</td>
<td>2 p.m., June 9.</td>
<td>...</td>
<td>...</td>
<td>June 29, 10 thrifty growing pods.</td>
<td>10</td>
<td>Many good seeds. (See Pl. III, figs. 6 and 7.)</td>
</tr>
<tr>
<td>14</td>
<td>1</td>
<td>3 p.m., June 9</td>
<td>11 a.m., June 12.</td>
<td>...</td>
<td>...</td>
<td>June 12, 11 a.m., all 10 found fallen.</td>
<td>10</td>
<td>A few good seeds.</td>
</tr>
<tr>
<td>15</td>
<td>1</td>
<td>3 p.m., June 9</td>
<td>4 p.m., June 9.</td>
<td>...</td>
<td>...</td>
<td>July 11, only 1 grew after pollination.</td>
<td>6</td>
<td>Compare with experiment 35.</td>
</tr>
<tr>
<td>16</td>
<td>1</td>
<td>11 a.m., June 28</td>
<td>10 a.m., Oct. 30.</td>
<td>...</td>
<td>...</td>
<td>Nov. 14, 9 good healthy pods, Dec. 21.</td>
<td>2</td>
<td>Very small pod, no seeds.</td>
</tr>
<tr>
<td>17</td>
<td>1</td>
<td>Never</td>
<td>10 a.m., Oct. 30.</td>
<td>...</td>
<td>...</td>
<td>Nov. 14, 9 small pods, 4 were one-sided.</td>
<td>1</td>
<td>Grew but little after pollination.</td>
</tr>
<tr>
<td>18</td>
<td>1</td>
<td>12 a.m., Oct. 30</td>
<td>12 a.m., Oct. 30.</td>
<td>...</td>
<td>...</td>
<td>Nov. 14, 9 all pods had fallen</td>
<td>0</td>
<td>Many good seeds. (See Pl. III, figs. 6 and 7.)</td>
</tr>
<tr>
<td>19</td>
<td>1</td>
<td>2 p.m., Oct. 30</td>
<td>2 p.m., Oct. 30.</td>
<td>...</td>
<td>...</td>
<td>Nov. 14, 9 all pods had fallen</td>
<td>0</td>
<td>A few good seeds.</td>
</tr>
<tr>
<td>20</td>
<td>1</td>
<td>11 a.m., Oct. 30</td>
<td>11 a.m., Oct. 30.</td>
<td>...</td>
<td>...</td>
<td>Nov. 14, 9 all pods had fallen</td>
<td>0</td>
<td>Compare with experiment 35.</td>
</tr>
</tbody>
</table>
### Table 1. — Experiments with tobacco blossoms—Continued.

<table>
<thead>
<tr>
<th>Experiment No.</th>
<th>Pistil would have been receptive in—</th>
<th>When emasculated.</th>
<th>When pollinated.</th>
<th>Remarks regarding pollen and pollination.</th>
<th>When examined, with remarks on condition.</th>
<th>Number of fruits</th>
<th>Remarks.</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td>Days 5, 11 a.m., Jan. 5</td>
<td>1901</td>
<td>11 a.m., Jan. 5</td>
<td>Fresh pollen applied abundantly</td>
<td>Jan. 10, 9 fallen; Jan. 29, 1 pod still growing.</td>
<td>1</td>
<td>0 grew but little after pollination.</td>
</tr>
<tr>
<td>40</td>
<td>3, 11.30 a.m., Jan. 5</td>
<td></td>
<td>11 a.m., Jan. 5</td>
<td>Fresh pollen applied to one-fourth surface of stigmas.</td>
<td>Jan. 10, 1 pod fallen; Jan. 29, 1 pod growing.</td>
<td>1</td>
<td>Pod small.</td>
</tr>
<tr>
<td>41</td>
<td>11 a.m., Jan. 10</td>
<td></td>
<td>11 a.m., Jan. 5</td>
<td>Fresh pollen applied to one-fourth surface of stigmas.</td>
<td>Jan. 14, 1 pod fallen; Jan. 29, 8 growing.</td>
<td>3</td>
<td>Self-pollinated Jan. 13.</td>
</tr>
<tr>
<td>44</td>
<td>2 p.m., Jan. 19</td>
<td></td>
<td>2 p.m., Jan. 19</td>
<td>Fresh pollen applied to one-fourth surface of stigmas.</td>
<td>Jan. 29, 8 fallen; Feb. 9, 2 growing pods.</td>
<td>2</td>
<td>Pods contained a few good seeds.</td>
</tr>
<tr>
<td>45</td>
<td>2, 11.30 a.m., Jan. 29</td>
<td></td>
<td>11.30 a.m., Jan. 29</td>
<td>Corn flour substituted for pollen</td>
<td>Feb. 9, 9 a.m., none fallen, still receptive.</td>
<td>3</td>
<td>Pods small, seeds poor. (See Pl. III, fig. 9 and 10.)</td>
</tr>
<tr>
<td>46</td>
<td>10 a.m., Jan. 31</td>
<td></td>
<td>10 a.m., Jan. 31</td>
<td>Fresh pollen applied to one-fourth surface of stigmas.</td>
<td>Feb. 9, 5 fallen; Mar. 13, 1 ripe pods.</td>
<td>4</td>
<td>Pods contained a few good seeds.</td>
</tr>
<tr>
<td>47</td>
<td>2, 12 a.m., Jan. 31</td>
<td></td>
<td>12 a.m., Jan. 31</td>
<td>Fresh pollen applied to one-fourth surface of stigmas.</td>
<td>Feb. 9, 8 still growing; Mar. 8, 8 ripe pods.</td>
<td>8</td>
<td>Do.</td>
</tr>
<tr>
<td>48</td>
<td>2, 11 a.m., Feb. 1</td>
<td></td>
<td>11 a.m., Feb. 1</td>
<td>Air-shaked lime substituted for pollen</td>
<td>Feb. 9, 8 still fresh; Feb. 28, 6 fallen.</td>
<td>4</td>
<td>Pods photographed. (See Pl. III, fig. 8.)</td>
</tr>
<tr>
<td>49</td>
<td>2, 10.30 a.m., Feb. 5</td>
<td></td>
<td>10.30 a.m., Feb. 5</td>
<td>Azalea pollen substituted for tobacco pollen</td>
<td>Feb. 9, 8 still fresh and receptive; Apr. 8, 1 ripe pods.</td>
<td>1</td>
<td>Pod small and seeds chalky.</td>
</tr>
<tr>
<td>50</td>
<td>2, 9 a.m., Feb. 15</td>
<td></td>
<td>9 a.m., Feb. 15</td>
<td>Corn flour substituted for pollen</td>
<td>Feb. 28, 4 fallen; Apr. 8, 4 ripe pods.</td>
<td>4</td>
<td>Pods half size, seeds chalky.</td>
</tr>
<tr>
<td>51</td>
<td>Mar. 12</td>
<td></td>
<td>Mar. 12</td>
<td>Emasculated and bagged, but never pollinated.</td>
<td>Apr. 8, 2 small pods, others withered.</td>
<td>2</td>
<td>Pods one-half and one-third size, seeds chalky. Seeds spherical, but hollow.</td>
</tr>
<tr>
<td>52</td>
<td>4, Mar. 12</td>
<td></td>
<td>Mar. 12</td>
<td>Magnesium sulphate substituted for pollen</td>
<td>Apr. 8, 2 ripe pods (half size), others withered.</td>
<td>2</td>
<td>Do.</td>
</tr>
<tr>
<td>53</td>
<td>1, 13 p.m., Apr. 8</td>
<td></td>
<td>Apr. 8</td>
<td>Emasculated and bagged, but never pollinated.</td>
<td>Apr. 25, all fallen dead.</td>
<td>0</td>
<td>Ovaries did not enlarge.</td>
</tr>
<tr>
<td>54</td>
<td>1, 9 a.m., Apr. 29</td>
<td></td>
<td>Apr. 29</td>
<td>Magnesium sulphate substituted for pollen</td>
<td>May 24, all fallen dead.</td>
<td>0</td>
<td>Do.</td>
</tr>
</tbody>
</table>

* Experiments 42 and 43 were not recorded until the day after the work was performed; so results are not considered reliable.
EXPERIMENTS WITH BLOSSOMS OF DATURA TATULA.

The destructive effect of a premature pollination having been found to be so pronounced in the case of tobacco flowers suggested a trial of its effect on a related plant. Some young jimson weeds (Daturna tatula) were placed in pots and kept in a greenhouse, where they soon came into flower, but unfortunately did not bloom profusely enough to furnish similar flowers in sufficient quantity to admit of experiments such as were performed with tobacco flowers. The following method was therefore adopted: From day to day these plants were examined and flowers in various stages of advancement were operated upon and the records made on labels attached to the plants at the petiole of each flower. As the seed pods resulting from the labeled flowers ripened or dried up they were cut and a record made of the size of the capsule, the number and condition of the seeds, etc. On the completion of the work an examination and classification of these labels showed results similar to those obtained in the case of tobacco flowers, with the one exception that the capsules of the prematurely pollinated flowers did not fill loose from the plants, but hung on for several weeks, although the ovaries did not grow any after pollination and contained no seeds. Pods resulting from flowers to whose stigmas pollen had been applied at the proper time were of normal size—1½ inches in diameter—and full of good, plump seeds; while pods from prematurely pollinated flowers were scarcely larger than they were when the flowers were pollinated, usually one-eighth to one-fourth of an inch in diameter, and contained no seeds. The only instances in which good seeds were found in pods from prematurely pollinated flowers were those in which the stigmas had been pollinated when exceedingly young and the flowers not emasculated. In some cases of this kind, and the same is true of tobacco flowers, the very young stigmas overcame the results of the early pollination and the flowers were later self-pollinated and produced seed. Indeed, the work with Datura blossoms indicates fully as strongly as does that with tobacco flowers that there may be a stage a certain time before maturity when the flowers suffer more from premature pollination than they would suffer from an earlier pollination. It may be necessary for the pistils or stigmas to reach a certain stage of development before pollen tubes can penetrate them.

EXPERIMENTS WITH COTTON BLOSSOMS.

While hand pollinations were being made in order to obtain hybrids between Sea Island and upland cottons, the question arose as to whether the pollen could be applied at the time of emasculation with as good results as if applied to perfectly mature pistils. If such could be done much labor would be saved. Accordingly the work was arranged
in experiments of 10 flowers each in order to compare the results of the two methods. The pollinating was done on Sea Island cotton with pollen of the Mit Afi\textsuperscript{i} variety. With the exception of experiments 5 and 6 the cotton experiments were with flower buds that would have opened naturally the day after they were emasculated. Such a bud is shown by Pl. IV, fig. 13. Figs. 14 and 15 show how emasculation was performed. Experiments 5 and 6 were with very young buds that would have opened in four or five days. The flowers of experiment 5 were pollinated when emasculated and those of experiment 6 two days later. No fruits set in either experiment. The flowers of experiment 1 were pollinated when emasculated, one day before the flowers would naturally have opened, and produced but one small boll; while the flowers of experiment 2, as near like the others as could be chosen on the same plants and emasculated at the same time, were not pollinated until the next day, and produced seven good bolls. In order to obtain Mit Afi\textsuperscript{i} pollen that was pure and that had not been mixed with other kinds of pollen by the visits of insects, the flowers were collected before opening, and in each case just one day before the pollen was applied to the flowers. Experiment 3 was an exact repetition of experiment 1 and produced no bolls; while experiment 4, an exact repetition of experiment 2, produced ten good bolls. These results are decidedly in favor of waiting until the pistils are fully mature before applying the pollen, but work similar to the above, performed in 1901 on two different varieties of upland cotton, has given results so different from those obtained with Sea Island cotton that further study of the cotton flower is necessary before its reaction to premature pollination is understood. Although differing from the results obtained with Sea Island, the work with upland varieties still speaks in favor of waiting until the pistils are mature before applying the pollen, not so much, however, in order to obtain a greater percentage of bolls as to obtain bolls of larger size and more symmetrical shape, many bolls from the prematurely pollinated blossoms being small and one-sided.

The work with the upland varieties was conducted in the same manner as that with the Sea Island, pollen of Sea Island being used in experiments 7, 8, and 9. The flowers of experiment 7 on the Braddy variety were pollinated when receptive and produced 10 good bolls. Those of experiment 8 were pollinated when emasculated and again the next day, and produced 5 bolls, 3 of which were larger on one side than on the other and hardly as large as the bolls of experiment 7. The flowers of experiment 9 were pollinated when emasculated and produced 9 small bolls, 4 of which were decidedly larger on one side than on the other.

Experiments 10, 11, and 12 were upon the King variety of upland cotton, and pollen of the same variety was used. The flowers of
EXPERIMENTS WITH COTTON BLOSSOMS.

21

experiment 10 were pollinated when receptive and produced 6 good bolls. Those of experiment 11 were pollinated when emasculated and again the next day and produced 10 small bolls, 5 of which were decidedly one-sided. The flowers of experiment 12 were pollinated when emasculated and produced 7 rather good bolls.

In making the second pollination of experiment 8 it was noticed that the pistils of the flowers in experiment 7 which had not been prematurely pollinated were longer than those of experiment 8, but they were not measured because it was then too late to determine whether they had been precisely of the same length when emasculated. To determine whether premature pollination checks the growth of young pistils, the pistils of experiments 10 and 11 were accurately measured at the time of emasculation, 8 of each experiment being each five-eighths of an inch and 2 three-fourths of an inch in length, so that the aggregate length of the pistils was 6 3/4 inches. The flowers of experiment 11 were pollinated twenty-one hours before they were fully open and again twenty-one hours later, when the pistils were again carefully measured and found to give an aggregate length of 8 1/4 inches, an increase of 1 5/8 inches since emasculation, during which time the pistils of experiment 10, which were not prematurely pollinated, had made an aggregate increase of 2 1/4 inches. This is to say that the application of pollen to 10 immature pistils reduced their growth during twenty-one hours by five-eighths of an inch.

The conclusion to be drawn from the cotton experiments is in favor of making an extra visit to the emasculated flowers to apply the pollen rather than to apply it when the flowers are emasculated. This is not only because larger percentages of fruits will result, but more especially because better fruits are obtained.

It is the opinion of the writer that the variation in the results obtained with Sea Island and upland cotton flowers similarly treated is largely due to the fact that the pistils were closely approaching a receptive condition. Of course this would cause no variation in the results, providing the size of the flowers and length of time before opening indicate the same stage in the development of the ovules of both kinds of cotton, but this may not be the case. The one-sidedness of many of the bolls resulting from early pollination indicates that only a portion of the ovules were mature enough for fertilization. Perhaps pollination a few hours earlier would have resulted in the falling of all the flowers. Tobacco flowers pollinated one day before opening give fair results, while those pollinated two days before opening are killed. It is thought that the same will be found true of cotton flowers, as indicated by the results of experiments 5 and 6, but more work with cotton blossoms is necessary before their behavior will be well understood.
<table>
<thead>
<tr>
<th>Experiment number</th>
<th>Pistils would have been receptive in—</th>
<th>When emasculated</th>
<th>When pollinated</th>
<th>Variety of cotton and kind of pollen used</th>
<th>When examined, with remarks on condition</th>
<th>Number of mature fruitlets</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>18 hours</td>
<td>4 p.m., Sept. 12</td>
<td>4 p.m., Sept. 12</td>
<td>Sea Island, Mit Aflri pollen 1 day old</td>
<td>Oct. 11, all fallen except 1 small boll.</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>do</td>
<td>11 a.m., Sept. 13</td>
<td>do</td>
<td>do</td>
<td>Oct. 11, 7 bolls growing, 2 started but afterwards fell.</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>24 hours</td>
<td>11:30 a.m., Sept. 13</td>
<td>11:30 a.m., Sept. 13</td>
<td>do</td>
<td>Oct. 11, 8 set but soon died and fell.</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>20 hours</td>
<td>2 p.m., Sept. 13</td>
<td>10 a.m., Sept. 14</td>
<td>do</td>
<td>Oct. 11, 10 good bolls still growing.</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>4 or 5 days</td>
<td>3 p.m., Sept. 13</td>
<td>3 p.m., Sept. 13</td>
<td>Sea Island, fresh Mit Aflri pollen</td>
<td>Oct. 11, pistils did not grow to mature length.</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>do</td>
<td>3:30 p.m., Sept. 13</td>
<td>10 a.m., Sept. 15</td>
<td>do</td>
<td>Oct. 11, pistils did not grow to mature length.</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>7</td>
<td>1901</td>
<td>10 a.m., Aug. 28</td>
<td>10 a.m., Aug. 29</td>
<td>Braddy, upland cotton, Sea Island pollen, 1 day old.</td>
<td>Oct. 9, 10 healthy bolls</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>8</td>
<td>do</td>
<td>11 a.m., Aug. 28</td>
<td>11 a.m., Aug. 28</td>
<td>Braddy, upland cotton, Sea Island pollen, fresh for first pollination, and 1 day old for second.</td>
<td>Oct. 9, 5 fell soon after pollination.</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>22 hours</td>
<td>12 m., Aug. 28</td>
<td>12 m., Aug. 28</td>
<td>Upland cotton, fresh Sea Island pollen</td>
<td>Oct. 9, 1 fell soon after pollination.</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>10</td>
<td>do</td>
<td>12 a.m., Aug. 29</td>
<td>10 a.m., Aug. 30</td>
<td>King upland cotton, King pollen, 1 day old</td>
<td>Oct. 9, 4 fell soon after pollination.</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>11</td>
<td>21 hours</td>
<td>1 p.m., Aug. 29</td>
<td>1 p.m., Aug. 29</td>
<td>King upland cotton, King pollen, fresh for first application, and 1 day old for second.</td>
<td>Oct. 9, 10 small, mostly one-sided bolls.</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>12</td>
<td>18 hours</td>
<td>3:30 p.m., Aug. 29</td>
<td>3:30 p.m., Aug. 29</td>
<td>King upland cotton, King pollen, fresh</td>
<td>Oct. 9, 3 fell soon after pollination.</td>
<td>7</td>
<td>7</td>
</tr>
</tbody>
</table>
EXPERIMENTS WITH ORANGE BLOSSOMS.

Only 15 experiments of 10 flowers each were performed with orange blossoms and the results were rendered somewhat unsatisfactory for two reasons: (1) The trees blossomed profusely, but set only a small quantity of fruit. Although no actual calculation was made, it was evident when the trees were examined, September 27, that had the total number of blossoms put forth in the spring produced as good a percentage of fruits as those experimented with, the trees would have yielded a much heavier crop. (2) Some portions of the trees produced a greater percentage of fruits than other portions. This was especially true of the older limbs, while the younger wood in the tops of the trees produced almost no fruit. Luckily, the records made when the experiments were begun designated the portions of the trees which the blossoms of each experiment occupied, thus explaining some apparent contradictions in the results. For example, experiment 9 (see Table III) should have given results similar to those of experiment 8, but unfortunately the blossoms of experiment 9 were located in a nonproductive portion of the tree and on the same limb as those of experiment 6, which resulted in no fruits, although it should have produced results similar to those of experiment 7 had its blossoms been located in as productive a portion of the tree.

This work was undertaken for the purpose of determining the effect of pollinating orange blossoms before the pistils became receptive. But an examination of blossom buds of different ages showed that the stigmas were receptive (if the presence of stigmatic fluid is a sure indication of receptiveness) in buds that would not have been fully open for nine days. Such a bud is shown by Pl. IV, fig. 4, and an emasculated bud of the same age is shown by fig. 5. The stigmatic fluid can not be easily distinguished in the photograph, but when the emasculated bud is held in the hand a drop of light-colored fluid is seen in the center of the stigma. The fluid is viscid and pollen adheres readily and abundantly to the very young stigmas. While these young buds did not possess the conditions of nonreceptiveness, they were so young that it was thought better to test the effect of pollinating them at this age rather than work with younger buds. The detailed results of the experiments can be obtained from Table III, which follows. The first nine experiments were performed with flower buds nine days before they would have been open, like the one represented in Pl. IV, fig. 4, and the other six with flowers four days older, like the one shown in fig. 3. The records suggest that better success results from work with the buds last mentioned, but it was demonstrated that fruits containing good, well-developed seeds will result from flowers pollinated nine days before they would naturally have received pollen. This was demonstrated with flowers of both seedy and seedless varieties. That the pollen so prematurely applied fecundated the ovules is proved by
the fact that the resulting fruits of trees of seedless varieties contained
good seed which germinated almost as well as seeds of fruits from the
same tree the flowers of which were pollinated at the normal time.
Indeed, the seeds resulting from these premature pollinations germi-
nated to a greater per cent than seeds taken at random from fruits of
a seedy orange.

One might expect the seedlings resulting from the pollination of
such immature pistils to show feebleness, but such is not the case.
They are now 6 inches tall and growing with as much vigor as any in
the seed bed. They also show polyembryonic tendencies to as great
a degree as the other seedlings, having from one to as many as four
separate plants growing from a single seed.

Seven fruits resulting from prematurely pollinated flowers of a
Melitensis navel were compared with six from the same tree which
resulted from flowers emasculated nine days before opening and hand
pollinated when the pistils were fully mature. The following are the
averages:

<table>
<thead>
<tr>
<th>Number of fruits</th>
<th>Weight (Grams)</th>
<th>Diameter (Inches)</th>
<th>Number of seeds</th>
<th>Seeds that germinated</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>183</td>
<td>2.91</td>
<td>5</td>
<td>73</td>
</tr>
<tr>
<td>6</td>
<td>242</td>
<td>3.10</td>
<td>8</td>
<td>87</td>
</tr>
</tbody>
</table>

The last four experiments were for the purpose of ascertaining
whether seedy oranges are disposed to set fruit without pollination,
as is customary with navel oranges. The 20 buds that were emascul-
ated and bagged without pollination, as well as 20 that were emas-
culated and had their stigmas irritated by the application of magnesiu
sulphate, alike failed to set any fruits.
### Table III.—Experiments with orange blossoms.

[Each experiment performed upon 10 similar flower buds.]

<table>
<thead>
<tr>
<th>Experiment No</th>
<th>Flowers would have been fully open in—</th>
<th>When emasculated</th>
<th>When pollinated</th>
<th>Number pollinated, others having fallen before pollination</th>
<th>Remarks regarding pollen and pollination</th>
<th>When examined, with remarks on condition</th>
<th>Number of frui</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9 days</td>
<td>9 a.m., Feb. 25</td>
<td>10 a.m., Feb. 25</td>
<td>10</td>
<td>St. Michael, a seedy orange, pollen from same tree.</td>
<td>May 21, 5 fruits were growing</td>
<td>2</td>
<td>Seeds germinated well.</td>
</tr>
<tr>
<td>2</td>
<td>9 days</td>
<td>11.30 a.m., Feb. 25</td>
<td>3 p.m., Mar. 6</td>
<td>10</td>
<td>do</td>
<td>May 21, 4 fruits were growing</td>
<td>0</td>
<td>do.</td>
</tr>
<tr>
<td>3</td>
<td>9 days</td>
<td>9:30 a.m., Feb. 25</td>
<td>3 p.m., Mar. 6</td>
<td>9</td>
<td>do</td>
<td>May 21, 1 fruit was growing</td>
<td>0</td>
<td>Seeds germinated well.</td>
</tr>
<tr>
<td>4</td>
<td>9 days</td>
<td>9 a.m., Feb. 25</td>
<td>10 a.m., Feb. 25</td>
<td>10</td>
<td>do</td>
<td>May 24, 3 fruits were growing</td>
<td>0</td>
<td>Seeds germinated well.</td>
</tr>
<tr>
<td>5</td>
<td>9 days</td>
<td>11.30 a.m., Feb. 25</td>
<td>4 p.m., Feb. 25</td>
<td>10</td>
<td>Melitesis navel, St. Michael pollen</td>
<td>May 21, 2 fruits were growing</td>
<td>0</td>
<td>Lamb bearing fruits died.</td>
</tr>
<tr>
<td>6</td>
<td>9 days</td>
<td>11 a.m., Feb. 26</td>
<td>11 a.m., Feb. 26</td>
<td>10</td>
<td>do</td>
<td>May 25, 3 fruits were growing</td>
<td>0</td>
<td>An average of 6 seeds per fruit: 4 planted, of which 3 germinated.</td>
</tr>
<tr>
<td>7</td>
<td>9 days</td>
<td>11 a.m., Feb. 26</td>
<td>11 a.m., Mar. 6</td>
<td>9</td>
<td>do</td>
<td>May 24, 4 fruits were growing</td>
<td>0</td>
<td>An average of 5 seeds per fruit: 11 planted, all of which germinated.</td>
</tr>
<tr>
<td>8</td>
<td>9 days</td>
<td>12.30 p.m., Feb. 26</td>
<td>do</td>
<td></td>
<td>do</td>
<td>May 25, 1 fruit was growing</td>
<td>0</td>
<td>Fruit contained 9 seeds; 9 planted, of which 5 germinated.</td>
</tr>
<tr>
<td>9</td>
<td>9 days</td>
<td>2 p.m., Mar. 2</td>
<td>2 p.m., Mar. 2</td>
<td>4</td>
<td>do</td>
<td>May 25, 5 fruits were growing</td>
<td>1</td>
<td>An average of 4 seeds per fruit: 11 planted, of which 8 germinated.</td>
</tr>
<tr>
<td>10</td>
<td>9 days</td>
<td>3 p.m., Mar. 2</td>
<td>11 a.m., Mar. 7</td>
<td>10</td>
<td>do</td>
<td>May 25, 3 fruits were growing</td>
<td>1</td>
<td>An average of 11 seeds per fruit: 16 planted, of which 13 germinated.</td>
</tr>
<tr>
<td>a12</td>
<td>9 days</td>
<td>11 a.m., Mar. 9</td>
<td>11 a.m., Mar. 9</td>
<td>10</td>
<td>Magnesium sulphate substituted for pollen.</td>
<td>May 25, all 10 found fallen</td>
<td>0</td>
<td>One became ½ inch in diameter before falling.</td>
</tr>
<tr>
<td>a13</td>
<td>9 days</td>
<td>12 a.m., Mar. 9</td>
<td>Never</td>
<td></td>
<td>do</td>
<td>do</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>a14</td>
<td>9 days</td>
<td>2 p.m., Mar. 9</td>
<td>2 p.m., Mar. 9</td>
<td>10</td>
<td>Magnesium sulphate substituted for pollen.</td>
<td>do</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>a15</td>
<td>9 days</td>
<td>3 p.m., Mar. 9</td>
<td>Never</td>
<td></td>
<td>do</td>
<td>do</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

*Experiments performed on tree of St. Michael, a seedy variety.*
EXPERIMENTS WITH TOMATO BLOSSOMS.

The work so far having been performed on flowers the pistils of which are naturally protected against a premature pollination, it was desired to try some flower the stigma of which is naturally exposed to pollination before it is receptive. It is to be supposed that flowers of the latter kind would not be killed by premature pollination as tobacco flowers are, for nature could not expose the young flowers to so imminent a danger of destruction without the plant becoming extinct or its manner of flowering changed by natural selection. The tomato blossom was found to present the conditions desired, for here the young stigma is exposed more or less for two or three days before it is receptive. (See Pl. IV, fig. 9.)

All of the work on tomato flowers was performed in the greenhouse, where there were grown eight different varieties. These vines grew very vigorously and were pruned and trained to vertical wires as the growth proceeded. Near the conclusion of the work the vines had reached a height of 8 or 9 feet and had such a mass of foliage that pruning was frequently necessary. The following notes of the 25 experiments performed with tomato blossoms are given in about the words written in the notebook as the work progressed. Some explanations and references to figures are inserted, and to avoid too many repetitions the wording has been changed in some places, and the description of the kind of blossom buds chosen is omitted except in experiments 1 and 5. Experiment 5 was performed on fully open flowers, as explained in the notes of that experiment. The kind of blossom buds chosen for all the other experiments is explained in the notes of experiment 1 and illustrated by Pl. IV, fig. 10. Fig. 11 of the same plate shows another of the same age which has been decapitated, and fig. 12 one of same age that has been emasculated. It will be noticed that decapitation prepares the flower for premature pollination just as well as emasculation, but this process of decapitation can not be used in hybridization work since there is danger of the flower becoming self-fertilized by the pollen remaining in the decapitated flower. The flowers were usually simply decapitated because decapitation was more quickly performed and perhaps of less injury to the flowers, although the experiments do not show any injurious effects from emasculation (decapitation employed in experiments 3 and 4, and emasculation in similar experiments 7 and 9). (See Table IV, p. 35.) However, in all experiments where it was necessary to remove all of the pollen the flowers were decapitated and then emasculated. In some cases one experiment is an exact repetition of another, while in other cases it is a repetition so far as practical results are concerned, but different in minor details, as, for example, in the variety of tomato from which the pollen was taken. In all these experiments, except experiment 5, the flowers and resulting fruits were kept covered with paper bags from the commencement of the work until the fruit was ripe.
EXPERIMENTS WITH TOMATO BLOSSOMS.

Experiment 1.—March 1, 2 p. m. Ten young flowers of Lorillard variety were decapitated and pollinated at once with pollen from Atlantic Prize. Only young buds with a total length of one-half inch and with their sepal lobes still touching at their apexes were chosen. (Pl. IV, fig. 10, shows the size and appearance of the flower buds chosen for this and all following experiments except experiment 5.) The sepal lobes of these flowers were at this time one-eighth of an inch longer than the petals, stamens, and pistils, which were all of about equal length. In unmolested flowers similar to these it was observed that from this age on the pistils grew more rapidly than the other parts, and usually protruded one-sixteenth to one-eighth of an inch beyond the mature stamens (Pl. IV, fig. 8).

March 19. A few of these flowers were to-day examined, and it was found that some had fallen from the plants, while others were ready to fall at a touch.

April 3. These 10 flowers were all found loose at the base of the stem, and the flowers black, dried, and shriveled.

Results of the experiment: No fruits set.

Experiment 2.—March 1, 2.30 p. m. This experiment is in every particular an exact repetition of experiment 1, and the 10 flowers examined March 19 and April 3 showed results exactly the same as those of experiment 1.

Experiment 3.—(Compare with experiment 4 and contrast with 1 and 2.) March 1, 3 p. m. These 10 flowers on the same plants as flowers of experiments 1 and 2 were decapitated and then bagged to be pollinated with Atlantic Prize pollen when the pistils have become mature, as shown by other blossoms of the same age to-day, labeled to determine the rapidity of growth of unmolested flowers on these vines.

March 7. On this date the blossoms labeled to indicate the rapidity of growth showed reflex petals and receptive stigmas. An examination of the flowers of experiment 3 showed the decapitated sepals to be reflexed and the stigmas receptive as near as could be determined with a hand lens. These 10 flowers were accordingly pollinated with fresh pollen of Atlantic Prize.

April 3. These 10 flowers were to-day examined and 9 large green tomatoes found developing. One blossom had fallen without setting fruit, but 2 of the 9 large tomatoes were on this same stem, which might possibly be the cause of the falling of the other flower, as 2 tomatoes were enough for so small a stem to support. These fruits now range from 1 to 3 inches in diameter.

Results of the experiment: June 8. Nine large ripe tomatoes.

Experiment 4.—(Compare with experiment 3 and contrast with 1 and 2.) March 1, 4 p. m. This experiment is an exact repetition of experiment 3.

March 7. These 10 blossoms treated similarly to those of experiment 3.

April 3. Nine large green tomatoes found; 1 flower had fallen without setting fruit.

Results of the experiment: June 8. Nine large ripe tomatoes.

Experiment 5.—March 1. In order to ascertain the percentage of blossoms which would set fruit if pollinated in the manner usually employed in growing tomatoes under glass for commercial purposes, 10 fully opened blossoms were thus pollinated and labeled, but left unbagged. These 10 flowers were of the Lorillard variety and were pollinated in a hasty manner with pollen of Atlantic Prize by simply touching the protruding pistils with a watch glass into which pollen had been shaken from flowers of the latter variety.

April 3. These 10 flowers were examined and 8 large green tomatoes found developing, 1 flower having fallen without setting fruit, and another in the same fruit cluster was still attached and had a strong stem and large green calyx, but the ovary was exceedingly small and had not begun to develop. The last 2 mentioned are in the same fruit cluster with 2 of the 8 large green tomatoes, and this fact may be an explanation of their nondevelopment, since 2 large tomatoes are as many as so small a stem can well support.

Results of the experiment: Eight large well-formed tomatoes.
INJURIOUS EFFECTS OF PREMATURE POLLINATION.

Experiment 6.—(Compare with experiments 1, 2, and 8 and contrast with 7.) March 11, 10 a.m. Ten flowers of the Lorillard variety were decapitated and the stamens entirely removed. The blossoms were then immediately pollinated with fresh pollen of Atlantic Prize.

April 3. Eight of these 10 flowers have fallen loose at the base of the stem, and the flowers are black and shriveled, while the other 2 are still attached by strong fleshy stems. The ovaries, though not enlarged, are plump and green, like tiny tomatoes.

June 10. Two small ripe tomatoes gathered and found to contain 8 seeds each.

Results of the experiment: Two small ripe tomatoes.

This experiment differs from experiments 1 and 2 only in that the flowers were emasculated rather than simply decapitated.

Experiment 7.—(Compare with experiments 3 and 4 and contrast with 6 and 8.) March 11, 11 a.m. Ten flowers of the same variety and in every particular similar to those of experiment 6 were decapitated and the stamens entirely removed and the flowers bagged to be pollinated when the pistils become receptive as indicated by other flowers of the same age to-day, labeled to show the rapidity of development.

March 16, 2 p.m. These 10 blossoms were pollinated with fresh pollen of Atlantic Prize.

April 3. The above 10 blossoms examined and 8 good green tomatoes found developing, 1 flower having fallen while the other was still attached by a strong fleshy stem, but the small green ovary was undeveloped.

Results of the experiment: Eight good tomatoes.

Experiment 8.—(Compare with experiments 1, 2, and 6 and contrast with 3, 4, 7, and 9.) March 11, 12 m. Ten young blossom buds on Sutton's Best of All were decapitated and the stamens entirely removed, and the stigmas covered immediately with fresh pollen of Atlantic Prize.

April 3. These 10 flowers examined and all found fallen loose at the base of the stem and black and shriveled.

Results of the experiment: No fruits.

Experiment 9.—(Contrast with experiment 8.) March 11, 12.30 p.m. Ten blossom buds of the same variety, and in all respects similar to those of experiment 8, were similarly treated in regard to emasculation and decapitation, but were bagged without pollination. These 10 flowers are to be pollinated with fresh pollen of Atlantic Prize when the pistils become receptive as indicated by other labeled blossoms of the same age.

March 16, 2.30 p.m. These 10 flowers were pollinated with fresh pollen of Atlantic Prize, the decapitated petal lobes being reflexed, showing that the flowers would have been fully opened had they been left unmolested.

April 3. Ten good large tomatoes found developing.

Results of the experiment: Ten large, well-formed tomatoes.

It will be seen by contrasting experiments 8 and 9 that they differ only in the time of the application of the pollen to the pistils. In experiment 8 the pollen was applied to the immature pistils, while in experiment 9 it was applied to mature pistils.

It being noticed that several of the varieties in the greenhouse were setting a few fruits, although there had been no opportunity for the blossoms to become pollinated, the question naturally arose as to whether tomatoes will set fruit if secluded from wind and insects, and experiments 10 and 11 were undertaken in order to throw some light on this point.

Experiment 10.—March 16, 3 p.m. This experiment consisted simply in bagging 10 young blossom buds on the variety Livingston's Beauty. The blossom buds were
unopened and in the same condition as those described in the preceding experiments. In bagging, two blossoms were placed in each bag.

May 9. An examination showed two small fruits, the other flowers having fallen without setting fruits.

Results of the experiment: Two small fruits.

As it was not known at this time that the tomato sometimes sets fruit without the flowers having received pollen, no further attention was given to these small fruits. As shown by later work, however, it is possible that these fruits set without receiving any pollen and, of course, if such was the case they were without seeds. No definite conclusions can be drawn from this experiment, since the two fruits may have set without their flowers having been pollinated at all, or by means of self-fertilization, or by one flower becoming pollinated with pollen from the other flower in the same bag.

Experiment 11.—This experiment was performed at the same time and is a repetition of experiment 10, except that it is on the variety Atlantic Prize. The experiment resulted in the falling of nine of the blossoms without setting fruit, while the tenth remained green, with a thick green stem and calyx, but failed to develop a fruit.

Results of the experiment: No fruits.

The results thus far having definitely shown that good results could not be obtained by the immediate pollination of the immature pistils, the question arose as to the cause of the failure—whether the pistils were injured by the premature application of pollen, or whether the pollen had lost its vitality before the pistils became mature. In order to test this point some further experiments were undertaken, beginning with experiment 12. If the pistils were uninjured by the application of pollen at the time the flowers were decapitated, it is evident that another pollination when the pistils became receptive would give as good results as in those experiments in which the flowers received but one pollination—that at the time when the pistils were receptive.

Experiment 12.—(Compare with experiment 14 and contrast with 13.) March 19, 10 a.m. Ten flowers of Sutton’s Best of All were decapitated and at once pollinated with fresh pollen of Lorillard. Other similar flower buds were labeled at the same time in order to show the time when the pistils became receptive.

March 27, 9 a.m. These 10 flowers were again pollinated with fresh pollen of Lorillard. The decapitated calyx lobes were reflexed and the pollen of the previous pollination could still be seen upon the stigmas.

April 3. An examination of several of these flowers showed that about half had fallen, while the others seemed to be setting fruit.

May 9. Seven fine fruits were found growing.

Results of the experiment: Seven good fruits.

This experiment indicates that the immature pistils were uninjured by the first pollination, and the failure to obtain fruits in the preceding experiments in which the pistils were prematurely pollinated must be accounted for in some other way, perhaps by the loss of vitality in the pollen.
Experiment 13.—(Compare with experiments 3, 4, and 7 and contrast with 6, 12, and 14.) March 19, 10.30 a.m. Ten flower buds on the same variety, and in all respects similar to those of experiment 12, were decapitated and bagged without pollination, to be pollinated with pollen of Lorillard when the stigmas become receptive.

March 27, 9.30 a.m. These 10 flowers were pollinated with fresh pollen of Lorillard. The stigmas appeared receptive when viewed through a hand lens and the pollen adhered readily to them.

April 3. An examination of a few of these flowers showed that some small tomatoes were forming, but their development was not sufficiently advanced to determine results.

May 9. Six good, large fruits were found growing.

Results of the experiment: Six good, large fruits.

Experiment 14.—(Compare with experiment 12 and contrast with 13.) March 19, 12 m. This experiment is a repetition of experiment 12, except that the pollen used was from different flowers of the same variety instead of from those of the Lorillard variety.

March 27, 11 a.m. The flowers were again pollinated with fresh pollen from different flowers of the same variety. One of the 10 was found fallen and another, which was of a yellowish color, about ready to fall.

Results of the experiment: May 9, seven good fruits.

Experiment 15 was planned to be a repetition of experiments 7 and 9 and to contrast with experiment 14, in order to determine whether the flowers are injured by premature pollination. However, when these flowers were receptive and were being pollinated, it was discovered that some of them had become injured in some way after being emasculated, while others could not be found, thus making it necessary to give up experiment 15.

A comparison of experiment 14 with experiments 7 and 9 suggests that early pollination has no detrimental effect upon the pistils, but as experiments 7 and 9 were performed at a different time and pollen from a different variety was used, the conditions are not similar enough to warrant such a conclusion. In order to get more conclusive proof that premature pollination does not injure the young pistils and prevent them from performing their functions when they become mature, experiments 16 and 17 were performed.

Experiment 16.—(Compare with experiments 12 and 14 and contrast with 13.) April 3, 2 p.m. Ten young blossom buds of the Lorillard variety were decapitated and immediately pollinated with fresh pollen of Livingston Potato Leaf. When the pistils have become mature, as indicated by other flowers of the same age today, labeled to show the rapidity of development, these 10 flowers are to be again pollinated with fresh pollen of Livingston Potato Leaf.

April 11, 9 a.m. The 10 blossoms were again pollinated with fresh pollen of Livingston Potato Leaf. The flowers were fresh with decapitated calyx and corolla lobes reflexed and the pistils apparently receptive, although still bearing the pollen of the first pollination.

May 9. Nine good, large fruits were found developing.

Results of the experiment: Nine good, large fruits.

Experiment 17.—(Compare with experiments 7, 9, and 13 and contrast with 12, 14, and 16.) April 3, 3 p.m. Ten young flower buds on the same plants and in all
respects similar to those of experiment 16 were decapitated and bagged without
being pollinated, but are to be pollinated with fresh pollen of Livingston Potato Leaf
when the pistils become mature.

April 11, 10 a. m. These 10 flowers were pollinated with fresh pollen of Livin-
gston Potato Leaf. The flowers were fresh with decapitated calyx and corolla lobes
reflexed and the pistils apparently receptive. No difference in appearance was
noticed between these flowers and those of experiment 16.

May 9. Ten good, healthy green fruits found growing.

Results of the experiment: Ten good fruits.

On the same day, and of course before the results of experiments 16
and 17 were known, experiments 18 and 19 were commenced. It was
thought likely that experiment 17 would give so much better results
than experiment 16 that it would be necessary to explain in what way
the first pollination in experiment 16 and similar experiments had
injured the pistils. If the injury was due, as in the case of tobacco
flowers, to the growth of pollen tubes down the immature pistils, sub-
stances other than pollen would not act in that way; while if the injury
should prove to be due simply to the coating on the stigmas, some
other substance might have the same injurious effect. Since quite a
number of ripe tomatoes had been examined and found to contain no
seeds, it was thought that this tendency to set fruit without pollination
might be increased by the irritation of the stigmas by the application
of some substance other than pollen. Consequently in some of the
following experiments magnesium sulphate was employed in the place
of pollen.

Experiment 18.—April 3, 4 p. m. This experiment is similar to experiment 16 in
all respects except that magnesium sulphate was used in place of fresh pollen to coat
over the surface of the stigmas immediately after decapitation. Ten flower buds
of the same variety and in all respects similar to those of experiment 17 were decapi-
tated and the pistils dipped at once into powdered magnesium sulphate, and the
flowers bagged.

April 11, 10.30 a. m. The 10 flowers were pollinated with fresh pollen of Liv-
ingston Potato Leaf. The darkened appearance of the stigmas of the flowers when
pollinated indicated some injury due to the magnesium sulphate.

May 9. Three good fruits found developing. Two of the blossoms were still fresh
and green, with large stems and large green calyx lobes, but had failed to set fruit,
while the rest of the 10 flowers had fallen without setting fruit.

Results of the experiment: Three good fruits.

Experiment 19.—April 3, 4.30 p. m. Ten blossom buds of the same variety and in
all respects similar to those of experiment 18 were decapitated, and the pistils
dipped at once into powdered magnesium sulphate and the flowers bagged.

April 11. The 10 flowers were examined and found in the same condition as those
of experiment 18 at this time.

May 9. Two of the blossoms were found still fresh and green with large stems and
large, green calyx lobes, but they had failed to set fruit, while the other 8 blossoms
had fallen without setting fruit.

Results of the experiment: No fruits.

Experiment 20.—April 3, 5 p. m. Five blossom buds of Lorillard and 5 of Sutton's
Best of All were emasculated and bagged.

April 11, 11.30 a. m. The stigmas of these blossoms were coated with magnesium
INJURIOUS EFFECTS OF PREMATURE POLLINATION.

sulphate. The 10 blossoms were in good, fresh condition, with reflexed calyx and corolla lobes and protruding pistils showing fresh receptive stigmas.

May 9. One small green tomato found developing. Three of the flowers were found with large green stems and calyces, but failed to set fruit. The other 6 were found fallen without having set fruit.

Results of the experiment: One ripe seedless tomato 1½ inches in diameter.

The results of this experiment gave additional proof that the seedless tomatoes previously found growing in the greenhouse had resulted from flowers that had never been pollinated. Experiment 22 was an exact repetition of experiment 20, but resulted in the falling of all the flowers without setting fruit.

It having been shown by experiments 12, 14, and 16 that the failure to obtain fruits in experiments 1, 2, and 8 was not caused by the presence of the pollen on the immature pistils, it would seem to be due to loss of vitality of the pollen before the pistils became receptive. To test this point experiments 21 and 22 were performed.

Experiment 21.—(Contrast with experiment 17.) May 9, 4 p. m. Ten blossom buds of Sutton's Best of All were emasculated and bagged to be pollinated when the pistils become mature with pollen of Lorillard collected to-day at 5.30 p. m.

May 14, 1.30 p. m. These 10 flowers were to-day pollinated with pollen of Lorillard collected May 9 and placed in a watch-glass closely covered and kept in the greenhouse near the tomato vines in order that it might be exposed to the same conditions of temperature, etc., as the pollen placed upon the immature pistils in the previous experiments. The decapitated sepals and petals of these flowers were reflexed and the pistils had a good healthy appearance when pollinated.

June 6. Eight of the flowers were found detached below the ovaries, which had not enlarged after pollination. One flower set a fruit which attained a size of 2½ inches in diameter and contained 22 seeds. The other flower could not be found.

Results of the experiment: One fruit.

The fact that experiments 6 and 21 produced 3 small fruits containing but few seeds shows that the pollen had not lost quite all its vitality during the five days from the time it was collected till the pistils on which it was placed became mature.

Experiment 23.—(Contrast with experiment 16.) May 9. Ten blossoms of Sutton's Best of All were emasculated and at once pollinated with fresh pollen of Lorillard. Some of the pollen was reserved for a second application to these flowers when the pistils become mature.

May 14, 2 p. m. The 10 flowers were pollinated with pollen of Lorillard collected May 9 and kept in the greenhouse since that time. When pollinated the second time all parts of the flowers were in a fresh, healthy condition, the stigmas showing white from the application of pollen May 9.

June 9. All of the flowers were found detached below their ovaries, which had not enlarged since pollination.

Results of the experiment: No fruits.

Experiment 24.—(Compare with experiment 25 and contrast with 20 and 22.) May 14, 3 p. m. Ten young blossom buds of Sutton's Best of All were emasculated and bagged. These blossoms are never to be pollinated.

June 6. All of the 10 blossoms were found fallen below the ovaries, which had not enlarged.

Results of the experiment: No fruits.
Experiment 25.—This experiment is an exact repetition of experiment 24, except that it was performed on the Lorillard variety.

Results of the experiment: No fruits.

While the work with tomato blossoms indicates no injurious effects from the growth of pollen tubes down the immature pistils, it proves the fallacy of the commonly accepted opinion that when pollen is placed on young stigmas it will remain there and fertilize the flower when the pistils finally become receptive. It is also shown that tomato blossoms will sometimes, though seldom, set fruit without pollination, and the number of fine, large, seedless, and almost seedless tomatoes that grew on the vines under glass without any attention having been paid to the pollination of the flowers shows that the absence or scarcity of pollen on the stigmas will sometimes result in the production of better, firmer, and less seedy tomatoes than those which result from a natural pollination. An examination of tomato flowers growing out of doors showed that the stigmas of the fully opened flowers were completely covered with pollen, and tomatoes on the same vines consequently were found to contain the usual large number of seeds. One of these of average size—3 inches in diameter and 2 1/2 inches thick—and not unusually seedy, contained 308 seeds; while some of the same variety and of the same size that were grown under glass contain no seeds, and others but a dozen or two. The fine tomatoes above mentioned, some of which contained no seeds and the others but few, grew on large thrifty vines which bore but a few fruits each, owing to the failure of their flowers to receive pollen. Had these vines borne at the time a crop of tomatoes containing the normal number of seeds it is likely that the ones without seeds, as well as those with but few seeds, would not have reached the size they did. As it was, however, the tomatoes without seeds reached a diameter of 2 1/2 and 3 inches and were firm and of excellent quality. If some of the fruits on a vine have set as a result of a liberal pollination, while others have set as a result of a slight pollination, or even without pollination, it is natural to suppose that the nourishment of the vine would go largely to the fruits containing an abundance of seeds, while seedless ones would be dwarfed. That such is the case has been shown by the experiments of Munson\(^a\) and Bailey\(^b\). The same effect is shown by Pl. IV, fig. 16, which is a photograph of a cluster of Wilmot Hamburg grapes grown under glass. The small berries are ripe and have the same color and flavor as the large ones, but are entirely seedless and doubtless set without pollination. The large berries contain several seeds each and likely resulted from blossoms that were naturally pollinated, perhaps by insects that found their way into the hothouse.

When there is competition on the same plant between seedless and seeded fruits the latter receive the most nourishment and become the

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larger, but by careful breeding it is not unlikely that a tomato can be obtained that will produce seedless fruits as large as the seeded fruits we now have. The large size of seedless bananas and pineapples indicates that this is possible. But since the most convenient way of propagating the tomato at present is by means of seeds, it is not a tomato entirely seedless that is wanted, but a large, well-shaped, firm tomato with but few seeds.

While a comparison of the experiments in which the flowers were emasculated and never pollinated with the experiments in which the flowers were emasculated and magnesium sulphate substituted for pollen would seem to suggest that the irritation of the receptive stigmas may stimulate the setting of fruits, yet fruits set so rarely without flowers having received pollen that a very large number of flowers would have to be tested in order to determine whether the mere irritation of the stigmas by the application of substances other than pollen has any tendency to cause fruits to set.
### Table IV.—Experiments with tomato blossoms.

[Each experiment performed upon 10 similar flower buds.]

<table>
<thead>
<tr>
<th>Experiment number</th>
<th>Pistils would have been receptive to in</th>
<th>When emasculated or decapitated</th>
<th>When pollinated</th>
<th>Remarks regarding pollen and pollination</th>
<th>When examined, with remarks on condition</th>
<th>Number of ripe fruits</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
<td>4 p.m., Mar. 1</td>
<td>10 a.m., Mar. 11</td>
<td>Fresh Lortillard pollen</td>
<td>Mar. 19, some fallen, others falling</td>
<td>0</td>
<td>Apr. 3, all fallen and dry. Do.</td>
</tr>
<tr>
<td>2</td>
<td>42</td>
<td>4 p.m., Mar. 1</td>
<td>10 a.m., Mar. 11</td>
<td>Fresh Lortillard pollen</td>
<td>May 9, 6 good fruits growing</td>
<td>0</td>
<td>June 8, 9 large ripe tomatoes.</td>
</tr>
<tr>
<td>3</td>
<td>43</td>
<td>4 p.m., Mar. 1</td>
<td>10 a.m., Mar. 11</td>
<td>Fresh Lortillard pollen</td>
<td>May 9, 6 good fruits growing</td>
<td>0</td>
<td>June 8, ripe and gathered.</td>
</tr>
<tr>
<td>4</td>
<td>44</td>
<td>4 p.m., Mar. 1</td>
<td>10 a.m., Mar. 11</td>
<td>Fresh Lortillard pollen</td>
<td>May 9, 6 good fruits growing</td>
<td>0</td>
<td>June 8, ripe and gathered.</td>
</tr>
<tr>
<td>5</td>
<td>45</td>
<td>4 p.m., Mar. 1</td>
<td>10 a.m., Mar. 11</td>
<td>Fresh Lortillard pollen</td>
<td>May 9, 6 good fruits growing</td>
<td>0</td>
<td>June 8, ripe and gathered.</td>
</tr>
<tr>
<td>6</td>
<td>46</td>
<td>4 p.m., Mar. 1</td>
<td>10 a.m., Mar. 11</td>
<td>Fresh Lortillard pollen</td>
<td>May 9, 6 good fruits growing</td>
<td>0</td>
<td>June 8, ripe and gathered.</td>
</tr>
<tr>
<td>7</td>
<td>47</td>
<td>4 p.m., Mar. 1</td>
<td>10 a.m., Mar. 11</td>
<td>Fresh Lortillard pollen</td>
<td>May 9, 6 good fruits growing</td>
<td>0</td>
<td>June 8, ripe and gathered.</td>
</tr>
<tr>
<td>8</td>
<td>48</td>
<td>4 p.m., Mar. 1</td>
<td>10 a.m., Mar. 11</td>
<td>Fresh Lortillard pollen</td>
<td>May 9, 6 good fruits growing</td>
<td>0</td>
<td>June 8, ripe and gathered.</td>
</tr>
<tr>
<td>9</td>
<td>49</td>
<td>4 p.m., Mar. 1</td>
<td>10 a.m., Mar. 11</td>
<td>Fresh Lortillard pollen</td>
<td>May 9, 6 good fruits growing</td>
<td>0</td>
<td>June 8, ripe and gathered.</td>
</tr>
<tr>
<td>10</td>
<td>50</td>
<td>4 p.m., Mar. 1</td>
<td>10 a.m., Mar. 11</td>
<td>Fresh Lortillard pollen</td>
<td>May 9, 6 good fruits growing</td>
<td>0</td>
<td>June 8, ripe and gathered.</td>
</tr>
<tr>
<td>11</td>
<td>51</td>
<td>4 p.m., Mar. 1</td>
<td>10 a.m., Mar. 11</td>
<td>Fresh Lortillard pollen</td>
<td>May 9, 6 good fruits growing</td>
<td>0</td>
<td>June 8, ripe and gathered.</td>
</tr>
<tr>
<td>12</td>
<td>52</td>
<td>4 p.m., Mar. 1</td>
<td>10 a.m., Mar. 11</td>
<td>Fresh Lortillard pollen</td>
<td>May 9, 6 good fruits growing</td>
<td>0</td>
<td>June 8, ripe and gathered.</td>
</tr>
<tr>
<td>13</td>
<td>53</td>
<td>4 p.m., Mar. 1</td>
<td>10 a.m., Mar. 11</td>
<td>Fresh Lortillard pollen</td>
<td>May 9, 6 good fruits growing</td>
<td>0</td>
<td>June 8, ripe and gathered.</td>
</tr>
<tr>
<td>14</td>
<td>54</td>
<td>4 p.m., Mar. 1</td>
<td>10 a.m., Mar. 11</td>
<td>Fresh Lortillard pollen</td>
<td>May 9, 6 good fruits growing</td>
<td>0</td>
<td>June 8, ripe and gathered.</td>
</tr>
<tr>
<td>15</td>
<td>55</td>
<td>4 p.m., Mar. 1</td>
<td>10 a.m., Mar. 11</td>
<td>Fresh Lortillard pollen</td>
<td>May 9, 6 good fruits growing</td>
<td>0</td>
<td>June 8, ripe and gathered.</td>
</tr>
<tr>
<td>16</td>
<td>56</td>
<td>4 p.m., Mar. 1</td>
<td>10 a.m., Mar. 11</td>
<td>Fresh Lortillard pollen</td>
<td>May 9, 6 good fruits growing</td>
<td>0</td>
<td>June 8, ripe and gathered.</td>
</tr>
<tr>
<td>17</td>
<td>57</td>
<td>4 p.m., Mar. 1</td>
<td>10 a.m., Mar. 11</td>
<td>Fresh Lortillard pollen</td>
<td>May 9, 6 good fruits growing</td>
<td>0</td>
<td>June 8, ripe and gathered.</td>
</tr>
<tr>
<td>18</td>
<td>58</td>
<td>4 p.m., Mar. 1</td>
<td>10 a.m., Mar. 11</td>
<td>Fresh Lortillard pollen</td>
<td>May 9, 6 good fruits growing</td>
<td>0</td>
<td>June 8, ripe and gathered.</td>
</tr>
<tr>
<td>19</td>
<td>59</td>
<td>4 p.m., Mar. 1</td>
<td>10 a.m., Mar. 11</td>
<td>Fresh Lortillard pollen</td>
<td>May 9, 6 good fruits growing</td>
<td>0</td>
<td>June 8, ripe and gathered.</td>
</tr>
<tr>
<td>20</td>
<td>60</td>
<td>4 p.m., Mar. 1</td>
<td>10 a.m., Mar. 11</td>
<td>Fresh Lortillard pollen</td>
<td>May 9, 6 good fruits growing</td>
<td>0</td>
<td>June 8, ripe and gathered.</td>
</tr>
<tr>
<td>21</td>
<td>61</td>
<td>4 p.m., May 9</td>
<td>10 a.m., May 14</td>
<td>Lortillard pollen 5 days old</td>
<td>May 9, 6 good fruits growing</td>
<td>0</td>
<td>June 8, 9 large ripe tomatoes.</td>
</tr>
<tr>
<td>22</td>
<td>62</td>
<td>4 p.m., May 9</td>
<td>10 a.m., May 14</td>
<td>Lortillard pollen 5 days old</td>
<td>May 9, 6 good fruits growing</td>
<td>0</td>
<td>June 8, 9 large ripe tomatoes.</td>
</tr>
<tr>
<td>23</td>
<td>63</td>
<td>4 p.m., May 9</td>
<td>10 a.m., May 14</td>
<td>Lortillard pollen 5 days old</td>
<td>May 9, 6 good fruits growing</td>
<td>0</td>
<td>June 8, 9 large ripe tomatoes.</td>
</tr>
<tr>
<td>24</td>
<td>64</td>
<td>4 p.m., May 9</td>
<td>10 a.m., May 14</td>
<td>Lortillard pollen 5 days old</td>
<td>May 9, 6 good fruits growing</td>
<td>0</td>
<td>June 8, 9 large ripe tomatoes.</td>
</tr>
<tr>
<td>25</td>
<td>65</td>
<td>4 p.m., May 9</td>
<td>10 a.m., May 14</td>
<td>Lortillard pollen 5 days old</td>
<td>May 9, 6 good fruits growing</td>
<td>0</td>
<td>June 8, 9 large ripe tomatoes.</td>
</tr>
</tbody>
</table>
CONCLUSION.

The following summary of results obtained with tobacco, cotton, orange, and tomato flowers contrasts the effects of immature and mature pollinations. The orange work does not lend itself well to this comparison, for it is unsafe to say that the young pistils were not receptive when pollinated:

<table>
<thead>
<tr>
<th></th>
<th>Prematurely pollinated</th>
<th>Resulting number of fruits</th>
<th>Maturely pollinated</th>
<th>Resulting number of fruits</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 tobacco blossoms</td>
<td>3</td>
<td>40 tobacco blossoms</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>40 cotton blossoms</td>
<td>32</td>
<td>40 cotton blossoms</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>40 orange blossoms, 6 experiments</td>
<td>15</td>
<td>42 orange blossoms, 5 experiments</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>40 tomato blossoms</td>
<td>2</td>
<td>70 tomato blossoms</td>
<td>60</td>
<td></td>
</tr>
</tbody>
</table>

To determine whether cotton bolls would set without pollination, or by the substitution of other substances for pollen was not attempted, but a summary of this work with the other three flowers is as follows:

<table>
<thead>
<tr>
<th></th>
<th>Emasculated and stigmas covered with substances other than pollen</th>
<th>Resulting number of fruits</th>
<th>Emasculated and bagged without pollination</th>
<th>Resulting number of fruits</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 tobacco blossoms</td>
<td>14</td>
<td>20 tobacco blossoms</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>20 orange blossoms, seedy variety</td>
<td>0</td>
<td>20 orange blossoms, seedy variety</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>30 tomato blossoms</td>
<td>1</td>
<td>20 tomato blossoms</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Much has been said in apology for the lack of success of attempted hand pollinations, advocating perseverance, and regarding it as a great accomplishment if even 5 or 10 per cent of the flowers set seed. But this is erroneous, for if one is working with plants that naturally cross readily and is not trying to make a cross between two very different plants, the results should certainly not be considered successful unless a greater percentage of fruits is obtained than set on the same plants naturally without artificial pollination. We increase the production of fruits by giving attention to plants in other respects, and likewise by a careful study of the flowers upon which we work we can obtain greater percentages of fruits by hand pollination, including emasculation, than set naturally. After the behavior of tobacco, cotton, and tomato flowers was quite well understood, and they were correctly operated upon for obtaining the best results, the following percentages of fruit were obtained:

<table>
<thead>
<tr>
<th>Flowers hand pollinated</th>
<th>Fruits obtained</th>
<th>Per cent.</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 tobacco (experiments 7, 10, 29, and 36)</td>
<td>38</td>
<td>95</td>
</tr>
<tr>
<td>40 cotton (experiments 2, 4, 7, and 10)</td>
<td>33</td>
<td>82</td>
</tr>
<tr>
<td>60 tomato (experiments 3, 4, 7, 9, 13, and 17)</td>
<td>52</td>
<td>86</td>
</tr>
</tbody>
</table>
CONCLUSION.

The writer is fully convinced that persons having hand-pollinations to make with unfamiliar flowers, or with flowers with which their previous work has been unsatisfactory, will find it profitable to make some small experiments in order to determine the method to which the flowers respond with a large percentage of fruits. These experiments can usually be made with the proper pollen and flowers so that the fruits will contain seed of the desired kind.

While attention is constantly being called to the many adaptations of flowers for accomplishing various purposes, such as cross-fertilization, it might be well to attempt to discover if some adaptations for preventing premature pollination have not been brought about by natural selection. That many flowers are admirably formed to successfully prevent premature pollination is certain, but that such devices have been brought about for this purpose will perhaps never be certain. Proterogenous flowers that open or unfurl in blooming usually do so when their pistils have reached a receptive condition. The pistils of such flowers are perfectly protected from pollen from all sources until they are receptive. Pl. IV, fig. 6, shows a fully open, receptive begonia flower, while fig. 7 shows the two calyx lobes securely closed over the young pistil of a similar but younger flower. Proterandroous flowers open while the pistils are immature, but even here modifications are met with which insure the pistils against premature pollination. The stigmatic surfaces are often folded together, thus preventing pollination even though the immature pistil be exposed. Fig. 1 shows the interesting behavior of flowers of *Sabbatia angularis*; a shows the condition of the flower when the anthers discharge their pollen, two petals and one stamen having been cut away in order to show the young pistil, which at this stage has no stigmatic surface exposed. Instead of growing straight out and thus coming in contact with the drying anthers, the pistil invariably grows out to one side, passing between the filaments of the stamens. The stamens at this stage begin to bend to the side of the flower opposite the one occupied

![Fig. 1.—Flowers of *Sabbatia angularis*: (a) Appearance while pollen is being shed; (b) Stigma and anthers avoiding each other; (c) Receptive stigma and deciduous anthers. (From drawings by E. E. Lower.)](image)
by the pistil, as shown by b, fig. 1, and by the time the pistil straightens and exposes its stigmatic surfaces the stamens have assumed a recumbent position and have drooped their anthers, as shown by c. The modifications of this proterandrous flower successfully prevent self-fertilization and premature pollination without interfering with the proper shedding of pollen.

The many adaptations of flowers to insure pollination at a certain time is interesting and suggestive of the importance to be attached to the time for applying pollen when hand-pollinating. Movements on the part of stamens so as to bring the pollen to the pistil at a certain stage in the growth of the flower, and especially movements on the parts of the pistils themselves which bring the stigmas into contact with the stamens, are admirable adaptations. With some flowers, such as those of corn, the pistils have no definite length, but continue to grow in search of pollen, as it were. If pollinated upon protruding from the husks, corn silks perform their functions, turn brown, and become dry without making a growth of more than 2 or 3 inches beyond the end of the ear, but if kept secluded from pollen they will continue to grow for a week and will attain a length greater by 14 or more inches than would otherwise have been the case.

During the work with the various flowers herein mentioned nothing has been more noticeable than the individuality possessed by flowers of different forms. It seems impossible to say that the flowers of one plant will respond in a given manner because those of another plant so respond. From these experiments it is evident that flowers of different genera of the same order, as the tomato and tobacco, respond differently to the effects of premature pollination, while the flowers of Datura tatula, of the same order, suffer as do those of tobacco, but do not fall.

Two of the five kinds of flowers experimented with mature their pistils before their stamens and were uninjured by premature pollination, while the three that mature their anthers and stigmas at the same time were injured. It is perhaps accidental that such is the case with these five flowers, but it is to be hoped that future work will reveal some means of distinguishing flowers that will, from those that will not produce seed when prematurely pollinated. For the plant breeder it is quite important to know with what flowers one can apply the pollen at the time of emasculation and thus avoid the extra labor of removing the bags, pollinating, and again bagging the flowers when the pistils have become receptive.

It is apparent that several of the phenomena suggested by the results of these experiments have not been sufficiently proven. However, concerning the following points the writer feels no doubt:

That the application of good tobacco pollen to immature tobacco pistils causes the flowers so treated to fall from the plant because of the growth of pollen tubes into their ovaries;
That tobacco and tomato plants sometimes set and ripen fruits without the flowers having received any pollen, and that such fruits contain no germinative seeds:

That but few fruits will be obtained by the pollination of immature cotton and tomato pistils, but that good percentages may be obtained if the pollination is performed when the pistils are receptive.

The lesson taught by these experiments is that some flowers can not be successfully pollinated when the work of emasculation is performed, while others can, and that no arbitrary mode of procedure can be given for all flowers. A study of the behavior of each kind of flower will reveal its peculiarities and its requirements, and, understanding these, hand-pollinations should be highly successful.
PLATES.
PLATE I.

Figs. 1 and 2.—The upper portions of the same two main stems of a growing tobacco plant.

The photograph for fig. 1 was taken 3 p. m., June 21, 1900, immediately after the numbered flowers had been emasculated and pollinated, and the lettered flowers had been emasculated but not pollinated.

The photograph for fig. 2 was taken 3 p. m., June 23, or just forty-eight hours later than that for fig. 1, and shows that premature pollination has caused flowers 1, 2, and 6 to fall, while the more mature flowers, 3, 4, and 5, show no injury from pollination, but, on the contrary, were fecundated and set seed pods, as shown in Pl. II, fig. 1.

Flowers 1 and 2, fig. 1, would not have been receptive for two days and flower 6 for three days, and according to results of experiments they were expected to fall about thirty-six hours after pollination.

Flowers 3, 4, and 5 would have been fully open and receptive in one day and were expected to give a fair percentage of seed pods.

If early emasculation had caused the falling, flowers c and d should have fallen also.

The advancement of an un molested flower may be studied by observing the small bud on the right in fig. 1 and its growth as shown by fig. 2 and the forming seed pod in Pl. II, fig. 1.
Fig. 1.—Growing Tobacco Blossoms at Time of Emasculation (Three-Fourths Natural Size).

Fig. 2.—Same Blossoms as in Fig. 1, Two Days Later (Three-Fourths Natural Size).
PLATE II.

Fig. 1.—The same portion of the same plant shown in Pl. I, photographed eight days later than fig. 1. The emasculated flowers b and c have not yet fallen, while the seed pods resulting from flowers 3 and 4 have attained considerable size.

Figs. 2, 3, 4, and 5.—Photomicrographs of pollen grains and pollen tubes in sections of flowers that fell because of premature pollination.

Fig. 2.—Section of a tobacco stigma showing pollen grains which have germinated and sent their tubes into the style. Flower from which this section was made was emasculated and pollinated May 25, 11 a.m., two days before it would have opened. May 27, 11 a.m., it was found fallen and was fixed for microscopic study. (×250 diameters.)

Fig. 3.—Pollen tubes farther down the style. Figs. 2 and 3 are sections of the same pistils. (×315 diameters.)

Fig. 4.—Mass of pollen tubes near the point where they enter the ovary from the style. The flower from which this section was made was one of experiment 21 (see Table I). (×160 diameters.)

Fig. 5.—Pollen tubes in ovary on the placenta at attachment of ovules. Figs. 4 and 5 are from different sections of the same ovary. (×75 diameters.)
FIG. 1.—SAME BLOSSOMS AS IN PL. 1, FIG. 1, EIGHT DAYS LATER (THREE-FOURTHS NATURAL SIZE).
Flowers 1 and 2 were pollinated March 3, two days before they would have been fully open, No. 2 being emasculated. Thirty-nine hours after being pollinated these flowers had fallen. No. 1 shows the anthers just opening.

Flowers 3, 4, and 5 were emasculated February 27. No. 3 was not pollinated, while Nos. 4 and 5 had their stigmas coated over with corn flour. March 5, Nos. 3 and 4 were still fresh, while the corolla of No. 5 had fallen and the ovary begun to enlarge.

No. 6.—A ripe pod torn open to show normal seeds for comparison with chaffy seeds that sometimes form in pods the flowers of which were not pollinated or had other substances substituted for pollen as in Nos. 9 and 10.

No. 7.—A normal ripe seed pod.

No. 8.—A green pod formed from a flower which was emasculated and had its stigma coated with air-slacked lime.

Nos. 9 and 10.—Ripe pods of experiment 45 in which the stigmas were coated with corn flour. After being photographed pod 9 was examined and found to contain only light, chaffy seed like those shown in the opened pod 10.
Plate III.

Tobacco blossoms and seed pods (natural size).
PLATE IV.

Fig. 1.—An orange forty-three days after pollen was applied to the stigma.

Figs. 2, 3, 4, and 5.—Flowers of a Melitensis navel orange, showing different stages in their development.

Fig. 2.—Fully open flower, showing abortive anthers characteristic of seedless varieties. Two petals were removed for convenience in photographing.

Fig. 3.—Flower five days younger than No. 2, and the kind used in experiments 10 to 15, inclusive. The stigma at this age bears a large drop of stigmatic fluid.

Fig. 4.—Flower nine days younger than No. 2, and the kind used in experiments 1 to 9, inclusive.

Fig. 5.—Flower same age as No. 4, showing appearance after emasculation. The stigmas at this early age show stigmatic fluid.

Fig. 6.—A fully opened pistillate begonia flower, showing receptive pistil.

Fig. 7.—A pistillate begonia flower slightly younger than No. 6 and showing the calyx lobes tightly closed, perhaps to protect the young pistil from premature pollination.

Fig. 8.—A fully opened tomato blossom of the Lorillard variety, showing receptive stigma extending a short distance beyond the surrounding stamens, which are about to open and shed their pollen.

Fig. 9.—A blossom of Lorillard three days younger than No. 8, showing the stigma already exposed.

Fig. 10.—A blossom of Lorillard that would have been fully open like No. 8 in about six days. This shows the kind of buds selected in all the tomato experiments to determine the effects of premature pollination.

Fig. 11.—A bud similar to No. 10, which has been decapitated to permit of a premature pollination of the pistil.

Fig. 12.—A blossom bud similar to No. 10, which has had its stamens entirely removed.

Figs. 13, 14, and 15.—Cotton flowers, showing method of emasculation. The flowers were gathered one day before they would normally have opened. Flower 14 has had the upper portion of corolla cut away ready for emasculation. Flower 15 shows emasculation completed.

Fig. 16.—A cluster of Wilmot Hamburg grapes, showing difference in size between normal and seedless berries.
Plate IV.

Methods of Emasculation: Also a Grape Cluster Showing Difference in Size Between Seedless and Seeded Berries.
BERSEEM:

THE GREAT FORAGE AND SOILING CROP OF THE NILE VALLEY.

BY

DAVID G. FAIRCHILD,
AGRICULTURAL EXPLORER FOR SEED AND PLANT INTRODUCTION.

Issued August 30, 1902.

WASHINGTON:
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LETTER OF TRANSMITTAL.

U. S. DEPARTMENT OF AGRICULTURE,
BUREAU OF PLANT INDUSTRY,
OFFICE OF THE CHIEF,
WASHINGTON, D. C., MAY 20, 1902.

Sir: I have the honor to transmit herewith a paper on Berseem: The Great Forage and Soilng Crop of the Nile Valley, and respectfully recommend that it be published as No. 23 of the series of bulletins of this Bureau.

The first important introduction of Berseem into America, and the first explanation of its value as a winter forage crop, resulted from Mr. Barbour Lathrop's second expedition in search of valuable seeds and plants, in cooperation with this Department. The promising character of the first introduction, which was made in 1899, led to a further investigation of the plant in 1901.

The accompanying paper was prepared by Mr. David G. Fairchild, agricultural explorer, Seed and Plant Introduction, and was submitted by the Assistant in charge of Seed and Plant Introduction.

Respectfully,

B. T. GALLOWAY,
Chief of Bureau.

Hon. James Wilson,
Secretary of Agriculture.
PREFACE.

One of the most important duties of an agricultural explorer is the observation of methods of agriculture practiced in other countries, that show promise of having value if transferred to parts of the United States. Mr. David G. Fairchild has made some careful observations upon Egyptian agriculture with reference to its adaptability to parts of the irrigated Southwest, the accompanying article on berseem being one of the results of this study. It is not to be expected that every agricultural practice followed in Egypt can be bodily transferred to the United States, but it seems probable that at least for certain conditions this great Egyptian forage crop may prove of extreme value.

Ernst A. Bessey,
Assistant in Charge of Seed and Plant Introduction.
Office of Seed and Plant Introduction,
February 6, 1902.
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BERSEEM: THE GREAT FORAGE AND SOILING CROP OF THE NILE VALLEY.

INTRODUCTION.

There are few countries in the world to-day where agriculture pays better than it does in Egypt. The methods of plowing and seeding have scarcely changed at all since the days of the ancient Egyptians, and yet without a single manufacturing industry worthy the name the valley of the Nile is entering upon an era of growth and prosperity which seems most remarkable even to an inhabitant of the Western Hemisphere.

While her great money-making crop is cotton, in the production and shipment of which she has much to teach her competitors, the foundation of her continued prosperity rests upon a leguminous fodder and soiling crop, about which the outside world has concerned itself very little.

Berseem, Alexandrian clover, or Egyptian clover (Pl. I), as it is variously called, is a species of Trifolium more or less closely related to the ordinary red clover. Its name, *Trifolium alexandrinum* L., probably has nothing to do with its origin; in fact there is good reason to believe that the plant came from some other part of the Mediterranean than that about Alexandria, and was introduced into Egypt in comparatively recent times. The total absence on the monuments of any bas relief which can be identified as this plant is remarkable if the species occupied in those days the important place it does now in the agriculture of the peasants or fellahin. There are few single species of plants which play in any country a more important rôle in its agriculture than is played by this Trifolium. It is the first crop planted after reclaiming the salt lands (Pl. II, figs. 1, 2, 3); it furnishes the green fodder for all work animals in the big towns (Pl. V, fig 1); on it graze all the beef and milch cattle (Pl. III, figs. 1, 2, 3); the camels are fed upon it (Pl. VI, fig. 2); the well-kept donkeys get their portion of it, and even the poor fellah carries a bunch of it in his hand and seems to enjoy its sharp clover taste. Nothing among the most varied agricultural sights which interest the tourist in Egypt in winter can be more conspicuous than the culture, harvest, and marketing of this essentially green-fodder crop. Every coachman has a bunch of
berseem or a bag full of it under his feet with which he feeds his horse at the cab stand; every drayman has on top of his load a few handfuls for his bullocks or horses, and the donkey boys carry a bag of the freshly cut clover for their much-abused beasts. In the early morning all the avenues leading to Cairo are lined with long files of camels and donkeys; half hidden under loads of this green forage. (Pl. IV, figs. 1, 2, 3.) The fields on either side of the railway impress one as the greenest and cleanest meadows he ever saw. Scarcely a weed is in sight. (Pl. VII, fig. 1.) Planters say that the culture of berseem is very valuable for killing out many kinds of weeds. Not another fodder crop is conspicuous enough to attract one's attention as one gazes over the most beautiful agricultural checkerboard in the world. It is the one great fodder crop of Lower Egypt, and about it, as it were, all the other cultures are arranged. Over 940,000 acres of it were grown as far back as 1891. This amount has been probably considerably increased.

To an American farmer clover is only one of a number of fodder crops, but to the Egyptian fellah his berseem furnishes not only his principal fodder, but his principal manure as well.

The great fertility of the Nile silt and its manurial value has been so much written about that we have gotten accustomed to considering Egyptian agriculture as the tillage of a perpetually renewed alluvium. It will surprise some, especially farmers in the Mississippi Valley, to learn that this Nile soil is so lacking in nitrogen that in most places two good crops of Indian corn can not be raised in successive years off the same field, and the culture of sugar cane is considered much too exhausting for many Egyptian soils. This condition of affairs is not to be wondered at, considering that most of the manure has for centuries been collected by the "manure girls" and dried into cakes for fuel and only the liquid elements returned to the land, mixed with dry earth with which the stalls are strewn. This bad practice, carried on as it has been for thousands of years, would have, according to our present ideas, quite exhausted the fertility of the soil notwithstanding the yearly deposits of silt had it not been for the culture of leguminous crops. The action of soil bacteria is as yet too little understood to demand recognition in the above statement, although it is highly probable that bacteria play a most important part in the matter. The writer never saw a region where the opportunities for soil studies seemed so promising. According to Wilcox, in his Egyptian Irrigation of 1899, no important soil analyses of Nile silt have been made since 1875, and, so far as I know, no bacteriological examination has ever been made of it.

The ancient Egyptians doubtless cultivated several leguminous crops, although the museums of Egyptology do not exhibit their seeds because the plants seem in no way to have been connected with their
GENERAL USES.

Berseem is not only an annual clover, but it is a winter clover for warm countries where irrigation is practiced. Where the conditions of mild winter and abundant water supply for irrigation exist it can scarcely fail to prove a most profitable introduction, for it starts into growth with remarkable rapidity, outgrows most kinds of weeds, and yields one of the most palatable and nutritious green fodders known. Anyone having once seen it in Egypt can not fail to be impressed with its great value. It resembles quite closely when young our common alfalfa, but its flowering heads, although white, are in form like a loose-headed variety of red clover. (Pl. I and Pl. VI, fig 1.) The hollow stems are exceedingly succulent; in fact the whole plant is in every way more delicate than either clover or alfalfa, and it is eaten not only by domestic animals, but even by the fellahin.«

The root system of the berseem is not a large one, but remarkable for its abundant and succulent tubercules. (Pl. VIII, figs. 1 and 2; Pl.

---

«The writer is aware that the fenugreek, which resembles berseem somewhat, is a common green food of the peasants.
IX, figs. 1 and 2.) Being an annual and grown in general on irrigated land, it has not the faculty of going far in search of water, hence is not suited to cultivation on dry, arid soils, even though possessing a deep underlying layer of moister soil. The distinct differences between berseem and lucern or alfalfa must be insisted upon if the crop is to be made a success. (Compare roots of alfalfa and berseem, Pl. X.)

In Egypt, where both plants are grown—the alfalfa, however, only experimentally—the distinctions are very evident. The berseem is an annual and never grown more than nine months, while alfalfa is a perennial, which gets its full growth only in the second year. Berseem is planted in the autumn as late as October and cut in the late winter or early spring, from December to June, while alfalfa is planted in the spring (March to May), and cuttings are made in the summer and winter, or from April to December. The former is a short-lived winter-fodder plant for soils on which other crops are grown in the summer, while the latter is a perennial summer-fodder crop for rotations extending over several years or for permanent meadows.

Doubtless much of the continued fertility of the Nile soils may be attributed to the culture of this single crop, and nothing can be more striking than the dependence placed in it not only by the fellahin, but by the keenest modern cultivators in Egypt. It seems to be a sort of cure-all for the land, and no such thing as clover sickness from its culture is known. Until the Khedivial Agricultural Society endeavored to introduce artificial manures last year, nothing but the stable manure was employed, dependence being placed in the nitrogen stored in the soil by these tubercules. Mr. Wilcox, who is an authority on irrigation matters in Egypt, said he had seen land steadily improve in fertility under a culture of half-year cotton and half-year berseem without the addition of any manures or fertilizers whatever. In his book on irrigation, p. 219, he remarks that—

Berseem eats down salts if they are present in small quantities and enriches the soil with nitrates. * * * Many think that while cotton in summer is followed by clover (berseem) in winter, and cereals in winter are rigidly excluded, the rotation of cotton and clover can be carried on unlimitedly without any appreciable deterioration of the soil.

The cotton is planted in March and harvested in October and is followed by berseem, which is planted in October and plowed under in March.

Mr. Lang Anderson, manager of the Aboukir Land Company, who is reclaiming in the Nile delta over 30,000 acres of alkali land, says he is dependent upon berseem to bring up his soil, after the salt has been washed out of it, to a state of fertility suitable for cotton growing. The writer visited these remarkable reclaiming basins and saw

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\(^a\) W. Wilcox, author of "Egyptian Irrigation," which has already gone through a second edition. Now managing director of the Daira Sanieh Company in Cairo.
land on which cattle and horses were tethered and grazing in a luxuriant growth of berseem which two years before was as barren of vegetation as a bathing beach. (Pl. II, fig. 3.) The amount of nitrogen stored in the soil by the roots of this plant must have been considerable, for cotton was grown on it the third or fourth year.

Nothing could be more striking than the contrast between the roots of some alfalfa which I examined at several places in Egypt and those of this Egyptian clover. (Pl. X.) In the former the roots of both young and old plants were conspicuous for their freedom from tubercles, only an occasional almost microscopic one being observable, while the latter were often little less than a mass of these nitrogen-bearing bodies. (Pl. VIII, figs. 1 and 2; Pl. IX, figs. 1 and 2.) It is probable that the bacterium of the alfalfa nodule has not been introduced into Egypt and that it is distinct from the germ of the berseem tubercle. Possibly former trials with berseem in America have not succeeded well for a similar reason. It is expected that experiments which have been already started will solve this problem.

Too much stress can hardly be laid upon the necessity of a thorough study of the soiling value of this Egyptian clover, for its application to irrigated orchard lands in California and Texas may prove of the greatest importance. The Colorado Desert region, with its abundance of water, mild climate, rich soil, and other conditions for irrigation, seems an ideal place for the trial of this Egyptian culture, and if the rotation of crops can be adapted to its employment it should prove a great success. If Egyptian cotton can be made to succeed in this region, as is now hoped, this soiling crop will be of great value for a winter culture.

In the dry, irrigated regions of northern Africa, in Tunis and Algiers, this plant has already begun to attract the serious attention of the French experimenters. Mr. Gagey, of the Tunis Agricultural College, has tried it and is very enthusiastic over its quick growth and large production of green fodder. He was planning to secure seed for planting on a large scale. During the year in which the berseem was grown at the college in Tunis the thermometer sunk to nearly 2° below freezing, but the plant was not injured in the least. In the remarkable trial gardens of Dr. Trabut at Roniha, in Algiers, the fields of berseem were among his most promising experiments, and a temperature of 9° below freezing (23° F.) did not injure them.

VARIETIES.

There are three distinct varieties of berseem known in Egypt and their characters must be understood if one wishes to make a success of their introduction.

---

"Boissier gives Trifolium alexandrinum var. phleoides Boiss. as a variety occurring in Kilsali, near Smyrna, but says nothing as to whether it is in cultivation or not."
Muscowi (Pl. I), which is the variety commonly grown in the delta, where perennial irrigation is practiced and an abundance of water is always obtainable, is by far the most important of the three. It grows not uncommonly to a height of 5 feet and over (see Pl. IX, fig. 3), being the rankest grower of the three. It is broadcasted by the fellah or Egyptian peasant directly on the mud which is produced by flooding the land and allowing it to dry slightly. As much as a bushel of seed is sown per acre, but in the crude method of broadcasting a large amount of seed is wasted and a regular clover-seed sower could be used to advantage. In Egypt the seed is worth less than 5 cents a pound, or about the value of crimson clover, which it very closely resembles. Fully 10 per cent of Egyptian seed is, however, valueless, and it is, like all seeds in these warm climates, subject to weevils. The seed is raked in slightly to cover it and often in three days in Egypt the young plants are above ground. According to Mr. Lang Anderson as much as 10 per cent of the seed sometimes fails to germinate. The subsequent watering and attention depend somewhat on the condition of the land, but after each cutting a thorough irrigation is given, not immediately, but leaving sufficient time to elapse for the cut stubble to dry up and cure, otherwise the water will rot the newly cut stems and will often kill the plants. The sowing season varies from the 1st of September until the middle of January, according to location. If sown early in the autumn four cuttings can be secured, while only three are obtained when planted later; for although the plant may make but little growth above ground if sown in the cool autumn, it establishes itself and starts into a more vigorous growth in the early spring. A most important point in the culture of this crop is that it is injured by intense heat. Near Cairo, in early May, where the temperature had not gone above 92°, the berseem had begun to show signs of dying out, and by the 1st of June, the writer was informed, it would have almost entirely disappeared. A variety called Kadrawi is said to have a longer vegetative period, giving one more cutting than usual, but the writer has been unable to verify the statement. The Muscowi berseem, if planted in the early autumn, will give four cuttings. The first and second cuts will yield about 8 tons of green forage each, and the third and fourth only 6 tons apiece. When seed for next season's culture is required it is the practice to let the plants go to seed in June after the fourth cutting; otherwise often a fifth though inferior cutting is made. The yield of seed is much heavier than that of clover. When planted early the first cut may be taken in fifty days, but if the weather shortly after planting is cold, seventy days are required. The writer saw a field of late berseem planted January 5 which had been cut March 11, at which time it was 18 inches high. A second cutting was made April 7, and a third April 30, after which the roots were plowed under.
In some experiments carried on at the Algerian Experiment Station of Rouïba by Dr. Trabut, the seed was sown much earlier in the season and the yield was estimated as much higher. Sown on the 26th of July, the field was cut on the 12th of September, when it yielded at the rate of 28 metric tons to the hectare, equivalent to 14 tons per acre, while the second cutting of 13 tons, and the third of 13 tons, made the total of 42 tons of green fodder for three cuttings, as compared with 28 tons, the usual Egyptian yield for four cuttings. The better care given to the experimental plats and possibly a richer soil would account for the difference in yield in the two countries.

The profitableness of the crop as grown in Egypt depends largely upon the proximity of a market for the green fodder. Egypt is not a beef-producing country: from 10,000 to 15,000 head of cattle were imported annually up to a few years ago. There are few large herds of cattle, and the dairy interests are in their infancy. Near Cairo, at Benisuf, the berseem fields are let for grazing or cutting purposes (Pl. XI, figs. 1 and 2) for £8 a feddan, which would be equivalent to about £38 an acre. At Gizeh £10, or about £48 an acre, are paid for the four cuttings, while even as high as £10 an acre per cutting is sometimes paid for especially luxuriant fields of berseem. It was learned that there was government land on which the rents amounted to only £40 an acre, upon which the berseem alone had sold for £42.50, leaving the summer crop to pay for management and the profits.

In Egypt there is a tradition that berseem can not be profitably planted in spring or before the 1st of October, because of the hot, dry weather between these dates: some of the more venturesome English experimenters, however, declare this tradition to be founded on superstition rather than fact, and recommend planting it as late as the last of April. In Algiers, Dr. Trabut has planted it in midsummer (the 26th of July) with good results.

The temperature records of Egypt for the months of June, July, and October (of an average season, 1895) are appended for purposes of comparison with the arid regions of this country, and from them it is evident that if the traditions regarding the deleterious effects of the hot season in Egypt were true it would be impossible that the crop would succeed if started in the hot summer of the Colorado Desert, for example. However, a few experimental plantings will probably be of more value than any study of temperature charts.

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<th>Month</th>
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<th>Relative humidity</th>
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<tr>
<td></td>
<td>Mean.</td>
<td>Maximum</td>
</tr>
<tr>
<td>June</td>
<td>+78</td>
<td>+103</td>
</tr>
<tr>
<td>July</td>
<td>+82</td>
<td>+104</td>
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<tr>
<td>October</td>
<td>+70</td>
<td>+90</td>
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A comparison of the chemical analyses of green berseem and lucern has been made in Egypt, and it is given here to show how much more succulent the former is, containing 86.11 per cent of water, while lucern contains only 74.35 per cent. Berseem is poorer in nitrogen and starch, but also has less fiber in it than lucern. It is unfortunate that no analyses of the dry berseem are at hand, for the comparison of the green fodder alone does not give a fair idea of its food value.

Comparison of chemical analyses of green berseem and lucern, in Egypt.

<table>
<thead>
<tr>
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<th>Lucern.</th>
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<tr>
<td>Albuminoids</td>
<td>2.29</td>
<td>4.35</td>
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<tr>
<td>Fats</td>
<td>.74</td>
<td>1.06</td>
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<tr>
<td>Starch, etc</td>
<td>5.78</td>
<td>9.62</td>
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<tr>
<td>Fiber</td>
<td>3.41</td>
<td>8.41</td>
</tr>
<tr>
<td>Ash</td>
<td>1.67</td>
<td>2.21</td>
</tr>
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_Fachl_ berseem (Pl. XII, fig. 1) is a variety used in Egypt on land which is irrigated by the basin system—i.e., overflowed for forty days in the autumn months from August until November, depending on the latitude and Nile overflow.

The seed is broadcasted at the rate of a bushel per acre on the Nile mud, which has been deposited from the meter or so depth of water which has stood over the land. No later irrigation is given it, and as a consequence it only gives one cutting. This cutting, however, yields 9 tons of green fodder per acre, and having more substance in it than the Muscowi, it makes a heavier hay. It is said to be fed extensively to donkeys. In order to get seed for planting it is often the practice to sow this variety mixed with wheat or barley and reap both together, separating the berseem seed from the grain only after the threshing has been done. This variety is therefore a short-lived form and will prove of value on such lands as can be given only a single but heavy irrigation in the autumn.

The flood plains of the Colorado Desert region may some day be supplied with that remarkable system of basin irrigation (Pl. VII, figs. 2 and 3) which, although gradually disappearing from many parts of Egypt, is still acknowledged by experts like Mr. Wilcox to be the most wonderful of any, preserving the deposits of rich silt, which, by the perennial method, are largely lost. Such irrigation basins will be preeminently suited to the cultivation of this variety of berseem, and it may find a use as well on land under perennial irrigation where only one cutting is desired.

_Saida_ is the name of a variety of berseem which, although yielding less than Muscowi, is relatively more nutritious. It possesses a com-
paratively long tap root (see Pl. XII, fig. 2) which enables it to thrive with much less water than is required for Muscowi, and it is, in fact, considered a kind of dry land berseem. It is sown in the basins but requires subsequent irrigation, as it yields two cuttings. Being a cheaper seed than that of the Muscowi, it is often sold in place of the latter. In habit it is lower and has a peculiar glaucous appearance, enabling one to distinguish it from the Muscowi. Its root system is abundantly supplied with tubereles and is eminently fitted to sustain the plant during prolonged droughts. It was observed growing luxuriously upon stiff Nile silt which was so baked and dried out that large cracks had formed in it to a considerable depth. On an average 6 tons only of green fodder is produced by the first cutting and 4 to 5 by the second or last. It is not sown to any extent in the Delta, but is common above Cairo. Experiments with this variety should be made on soils likely to suffer from drought, and even on land not under irrigation in regions depending on the natural rainfall, such as southern Texas, and Louisiana and Florida.

**USE AS A GREEN FODDER.**

The peculiar value of this crop lies in its use as a green fodder, and throughout lower Egypt there is scarcely an animal, either in the city or on the farms, which is not put on berseem for at least a month in the spring. Most marvelous fattening and conditioning properties are ascribed to it. Naturally the first effect upon an animal which has been fed all winter on chopped straw and barley is a purgative one (many cultivators mix a small amount of seed of fenugreek (*Trigonella,fenumgrecom*) with their berseem seed on sowing to increase the conditioning effect of the fodder) and weak animals are sometimes injured by the practice of tethering them all day long in the berseem fields, but, if strong enough to stand it, the scouring effect puts them in good condition and they are sent back to the stables in town in excellent flesh. It is a curious sight, that of a country with every beast of burden undergoing a sort of cure. In general, animals are not worked very steadily while on this green diet, as it is not sufficiently strong, and barley is often given work horses as an addition to the green fodder.

The small expense connected with the raising of this Egyptian clover and its effect in keeping the weeds in check are points decidedly in its favor. This latter property is more a matter of the frequent cuttings, which prevent weeds from seeding, than any effect of crowding out on the part of the clover. Although weeds grow with the usual astonishing rapidity in Egypt, in general there are fewer weeds than in any other agricultural region ever visited by the writer. Whether the berseem is responsible and how far for this clean culture will be hard to determine.
As a food for milk cows (Pl. III, figs. 2 and 3) one can imagine no sweeter or more delicate one, and from the samples of butter tasted on Mr. Zervudachi’s place at Kafr. Dewar, it must be a most excellent milk producer. The large amount of water contained in the green food, however, may influence unfavorably the quality of the milk, making it poor in fats, and complaints in this regard were heard, but certainly for fine flavor the butter tasted was equal to the finest Finnish or Danish butter put on the London market.

BERSEEM AS A HAY CROP.

It would be a great mistake to underestimate the value of Egyptian clover as a hay crop. Great quantities of the cut clover are cured into hay or what the Egyptians call “drees” (Pl. VI, fig. 3) and stored for summer feeding, when a scarcity of green fodder makes the dried hay very acceptable.

Four to 5 tons of this freshly cut plant yield 1 ton of “drees,” a curious brittle hay, snapping between one’s fingers like pipestems, and apparently with scarcely any substance to it.

In comparison with alfalfa the freshly cut berseem has 89.61 per cent of water instead of 74.35 per cent, and only 3.41 per cent of fiber in place of 8.41 per cent. The percentage of albuminoids is correspondingly poor, being only 2.29 per cent as compared with 4.35 per cent. But notwithstanding the 15 per cent larger shrinkage, the value of the hay is sufficient to induce such men as Mr. Beyerlé of the Egyptian Crédit Foncier to grow it in fields large enough for American mowing machines (Pl. XI, fig. 3; Pl. XIII and XIV) and sulky rakes to operate in and by means of portable tramways to transport it to his barns. (Pl. V, figs 2 and 3; Pl. XIV.) No baled drees was seen, and baling does not appear to be commonly done in Egypt. Owners of properties some distance from the markets find it does not pay to grow berseem on all of their land not occupied, but, instead, let many acres go fallow.

The yield of hay per acre would vary according to the variety and cutting. Muscowi would yield for the first and second cutting 1½ tons per acre each and for the third and fourth about 1¼ tons apiece, making for the four cuttings of the season 6½ tons of dried hay per acre, which is 2½ tons in excess of the maximum yield given for red clover in America, which is cut only twice. a

CONCLUSION.

In conclusion, the object of this bulletin is to call attention to a remarkable crop which, in Egypt, is of the very greatest importance

a Owing to lack of accurate data it was hard to ascertain the yield of drees per acre in Egypt. None could be found who had actually measured it. The figures given are those furnished by Mr. Bonaparte, of the School of Agriculture at Gizeh.
both as regards the value of its green and dried fodder and its fertilizing effect upon the soil, and if possible to introduce its culture into such regions of the United States as shall be suited to its profitable cultivation. A considerable quantity of seed has been secured through the kind assistance of Mr. George P. Foaden, of the Khédevial Agricultural Society of Cairo, for distribution by the Section of Seed and Plant Introduction, and experiments to test it are now under way. Previous experiments with the culture of berseem were based upon an insufficient knowledge of its peculiarities as a winter crop and their failure was practically assured from the start.

It is designed to have the plant tested as a half-year rotation for cotton in Texas, and in connection with the culture of the newly imported Egyptian cotton now being grown experimentally in Arizona and southern California. It is hoped also that it will find a place for itself as a winter sowing and fodder crop for orchards and vineyards in such regions as Arizona and California, where winter irrigation, which has been shown to be so beneficial by Professor McClatchie, is practiced. For spring forage, berseem may prove of value for the Northwest if planted after all danger of frost is over and harvested before the excessive heat of summer comes on, and the humid climate of Washington and Oregon may admit of its use in rotation with wheat, where now many thousands of acres lie fallow throughout the winter. Until careful tests have been made it will be impossible to say to which of these purposes it will prove best adapted.

DESCRIPTION OF PLATES.

PLATE I.

Plant of Muscowi berseem in full flower. Natural size. From a photograph taken by Mr. C. S. Scofield of a plant in the trial gardens of Dr. Trabut at Rouiba, near Algiers.

PLATE II.

Reclamation of salt lands by the aid of berseem. Fig. 1. Salt land of Aboukir estate near the seacoast of the Nile Delta before any attempts at reclaiming have been made. Fig. 2. Aboukir estate; fresh-water canal at right of picture; on the left, drain for salty water after it has been used for washing salt lands. Fig. 3. Horse feeding in field of berseem on salt lands of Aboukir the second year after the washing and reclaiming work has been begun.

PLATE III.

Fig. 1. Water buffaloes feeding in a berseem field at Kafr. Dewar on the estate of Mr. Em. Zervulachi. Fig. 2. Cattle tethered in a berseem field near Cairo. Fig. 3. Cattle in barn, feeding on fresh berseem, at Mr. Beyerlé's estate at Bordein, Egypt.

PLATE IV.

Fig. 1. Camels loaded with fresh berseem starting for Alexandria. From photograph taken by Mr. Brand, of Aboukir estate. Fig. 2. Early morning on the road from the Pyramids. Camels loaded with fresh berseem. Fig. 3. A donkey load of fresh berseem.
PLATE V.

Fig. 1. Taking green berseem to market. A donkey cart load of berseem which has just been watered to make it weigh more. Fig. 2. Making berseem hay or "drees." Tram wagon load of "drees," showing method of handling on the large estate of Mr. Beyerlé at Bordein. Fig. 3. Tram train of "drees" ready for the barns, Mr. Beyerlé's estate at Bordein.

PLATE VI.

Fig. 1. A field of berseem in full flower on Mr. Beyerlé's estate at Bordein. Fig. 2. Camel grazing in field of berseem, Abonkir estate. Fig. 3. A windrow of berseem hay or "drees."

PLATE VII.

Fig. 1. A field of berseem before flowering. Roadside near Alexandria. Fig. 2. The irrigation basins of Bedraschine, showing embankment dividing two large basins. Ruined native town in background. Fig. 3. Flood gates barring the entrance to the irrigation basins shown in Fig. 2.

PLATE VIII.

Fig. 1. Roots of Muscowi berseem, showing numerous root tubercles on the main and lateral roots. Slightly enlarged. Fig. 2. Roots of Muscowi berseem from a patch which had been cut but once. Natural size.

PLATE IX.

Fig. 1. Young plant of Muscowi berseem shortly after the first cutting, showing the base of the dead stem and the new living lateral shoots. Greatly reduced. Fig. 2. Roots of the plant shown in Fig. 1, showing the numerous tubercles. Natural size. Fig. 3. A single plant of Muscowi berseem from Mr. Beyerlé's estate at Bordein on April 14, 1901.

PLATE X.

Root of ordinary alfalfa on left and of Muscowi berseem on right, showing the great difference in habit of the two plants, and also the greater number of root tubercles on the berseem. Natural size.

PLATE XI.

Fig. 1. Cutting berseem by hand sickle and loading on donkey cart for the market. Fig. 2. Cutting berseem with a scythe; photographed by Mr. Brand, of the Aboukir estate. Fig. 3. Cutting berseem with an American mowing machine on the estate of Mr. Beyerlé, Bordein, Egypt.

PLATE XII.

Fig. 1. Plant of Facih berseem gone to seed, showing the dry heads and shriveled leaves. Gizeh irrigation basin near the Great Pyramids. Photograph taken May 1, 1901. Fig. 2. Plant of Saida berseem in full bloom, showing the long taproot. From the Gizeh irrigation basin near the Great Pyramids. Photograph taken May 1, 1901.

PLATE XIII.

American mowing machine and rake in a field of berseem on the estate of Mr. Beyerlé at Bordein, Egypt.

PLATE XIV.

Loading trams with berseem hay on estate of Mr. Beyerlé at Bordein, Egypt.
Muscowi Berseem.
RECLAIMING SALT LANDS WITH THE ASSISTANCE OF BERSEEM.
FIG. 1.—CATTLE GRAZING IN FIELD OF BERSEEM.

FIG. 2.—CATTLE GRAZING IN FIELD OF BERSEEM.

FIG. 3.—BERSEEM USED AS A GREEN FODDER CROP.

BERSEEM USED AS A PASTURE AND GREEN FODDER CROP.
Fig. 1.—Camels Carrying Green Berseem to Market.

Fig. 2.—Line of Animals Loaded with Green Berseem.

Fig. 3.—Donkeys Transporting Green Berseem. Bringing Green Berseem to Market.
Fig. 1.—Taking Green Berseem to Market.

Fig. 2.—Train Wagonload of "Drees."

Fig. 3.—Taking Berseem Hay or "Drees" to the Barn.
Fig. 1.—Berseem in Full Flower.

Fig. 2.—Camels Grazing in Field of Berseem.

Fig. 3.—A Windrow of Berseem Hay or "Drees."
FIG. 1.—FIELD OF BERSEEM BEFORE FLOWERING.

FIG. 2.—EMBANKMENT DIVIDING TWO IRRIGATION BASINS.

FIG. 3.—FLOOD GATE FOR IRRIGATION BASINS SHOWN IN FIG. 2.
Fig. 1.—Roots of Muscowi Berseem, Showing Tubercles on Main and Lateral Roots. Slightly Enlarged.

Fig. 2.—Roots of Muscowi Berseem Taken after First Cutting. Natural Size.
PLATE X.

ROOTS OF ORDINARY ALFALFA (ON LEFT) AND MUSCOWI BERSEEM (ON RIGHT).
Plate XI.

Fig. 1.—Cutting Berseem with Hand Sickle and Loading a Cart for Market.

Fig. 2.—Cutting Berseem with Scythe.

Fig. 3.—Cutting Berseem with American Mowing Machine.
FIG. 1.—PLANT OF FACHL BERSEEM ALREADY GONE TO SEED, MAY 1, 1901.

FIG. 2.—PLANT OF SAIDA BERSEEM IN FLOWER, MAY 1, 1901. REDUCED TO TWO-SEVENTHS NATURAL SIZE.
AMERICAN MOWING MACHINE AND RAKE IN A FIELD OF BERSEEM ON THE ESTATE OF MR. BEVERLE AT BORDEN, EGYPT.
LOADING TRAINS WITH BERESEM HAY ON ESTATE OF MR. BEVERELE AT BOROEIN, EGYPT.
THE MANUFACTURE AND PRESERVATION OF UNFERMENTED GRAPE MUST.

BY

GEORGE C. HUSMANN.
Expert in Charge of Viticultural Investigations,
pomological investigations.

Issued November 6, 1902.
BUREAU OF PLANT INDUSTRY.

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LETTER OF TRANSMITTAL.

U. S. DEPARTMENT OF AGRICULTURE.
BUREAU OF PLANT INDUSTRY.
OFFICE OF THE CHIEF.
WASHINGTON, D. C., JULY 7, 1902.

SIR: I have the honor to transmit herewith a paper entitled "The Manufacture and Preservation of Unfermented Grape Must," and respectfully recommend that it be published as Bulletin No. 24 of the Bureau series. The paper was prepared by Mr. George C. Huxmann, Expert in Charge of Viticultural Investigations, and was submitted by the Pomologist.

Respectfully,

B. T. GALLOWAY,
Chief of Bureau.

Hon. James Wilson,
Secretary of Agriculture.
PREFACE.

This bulletin gives the results of recent investigations undertaken by Mr. George C. Husmann, Expert in Charge of Viticultural Investigations, of this office. The manufacture and preservation of unfermented grape must is a subject that is attracting much attention at present and is of vital interest to both manufacturers and consumers.

Mr. Husmann has made a careful investigation of the industry in both its economical and commercial aspects, and the bulletin is designed to aid both manufacturer and consumer in preparing and utilizing a product of the grape that is of most important economic value.

G. B. Brackett,
Pomologist.

Office of the Pomologist,
Washington, D. C., June 24, 1902.
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THE MANUFACTURE AND PRESERVATION OF UNFERMENTED GRAPE MUST.

INTRODUCTION.

The use of unfermented grape juice is of very ancient origin, being undoubtedly as old as the art of wine making. The industry of manufacturing unfermented grape must on an extensive scale for a general market is, however, as yet in its infancy, as is exemplified by the diversity of the apparatus used in the various factories. Each manufacturer seems to have had a different conception and to have constructed his machinery according to his own ideas.

It is the purpose of this publication to describe the most economical and successful methods of manufacturing must and to discuss its uses and effects on the system, together with the outlook for the commercial success of the industry.

HISTORICAL NOTES.

Galenus, the Greek physician and writer, says (A. D. 131):

A good many Asiatic wines were stored in bottles, which were hung in the corner of the fireplaces, where, by evaporation, they became old and dry. This process was called fumarium.

The Greeks had two kinds of wine—the protoplol, or first juice of the grape before pressing, and the denterion, or pressed juice. The Romans called them vinum primarium and vinum secondarium. Some of them drank the juice before fermentation had started, and called it mustum; after the must had been through a heating process (called reduction nowadays), they called it frutum; and when after long heating it had been reduced to one-half or one-third its original volume, they called it sapa. This was used by the Romans on their bread, and was the equivalent of what we now call sirup.

In Europe physicians often send their patients to the wine-growing districts during vintage time to take daily rations of unfermented must as it comes from the crusher. This, however, restricts its use to only one season of the year and to the immediate vicinity of wine districts or to individuals strong enough to undertake a journey.
OF late years extended efforts have been made to keep the must unfermented and put it up in such shape that it can be used anywhere and at all times of the year.

Until recently the use of must was almost exclusively restricted to medicinal purposes. Unrestricted use has been delayed on account of a lack of special knowledge underlying the principles of the process of manufacture and of skill in their application, resulting in many failures, thus making the production of a good article uncertain and very expensive, and inducing some unscrupulous persons to use injurious preservatives to cheapen the cost of manufacture. It is well known that pure must is healthful and nutritious, but with the addition of chemical preservatives it becomes injurious in proportion to the amount and kind of preservative used.

COMPOSITION OF THE GRAPE.

The grape contains 15 to 35 per cent of sugar (Balling's scale), about 2 to 3 per cent of nitrogenous substances, and some tartaric and malic acids. The skin contains tannin, cream of tartar, and coloring matter. The seeds contain tannin, amylaceous matters, and fat. The stems contain tannin, divers acids, and mucilaginous matter. The comparative composition of the different parts of the fruit determines the value of must made from any grape.

CAUSES OF FERMENTATION.

It is well known that grapes and other fruits when ripe have the invisible spores of various fungi, yeast (ferments), and bacteria adhering to them. When dry these are inert, but after the grapes are crushed and they are surrounded by the must they become active and begin to multiply. If the must is warm, the changes take place rapidly; if, on the other hand, it is cool, the change is slower. But in either case, if left alone, the organisms increase until the must ferments. The most favorable temperature for fermentation is between 65° and 88° F. Cold checks, but does not kill, the ferment. This fermentation, now commonly called the elliptic yeast, changes the sugar in the grape to alcohol and carbonic acid gas, and is the leading factor in converting must into wine; hence it will be readily seen that to keep unfermented must sweet, fermentation must be prevented, and to be salable the product must be clear, bright, and attractive.

METHODS OF PREVENTING FERMENTATION

Fermentation can be prevented in either of two ways:

(1) By chemical methods, which consist in the addition of germ poisons or antiseptics, which either kill the germs or prevent their growth. Of these, the principal ones used are salicylic, sulphurous, boracic, and benzoic acids, formalin, fluorides, and saccharin. As these sub-
stances are generally regarded as adulterants and injurious, they should not be used.

(2) Mechanical means are sometimes employed. The germs are either removed by some mechanical means, such as a filtering or a centrifugal apparatus, or they are destroyed by heat, electricity, etc. Of these, heat has so far been the most practical.

When a liquid is heated to a sufficiently high temperature all organisms in it are killed. The degree of heat required, however, differs not only with the particular variety of organisms, but also with the liquid in which they are held. Time is also a factor. An organism may not be killed if heated to a high temperature and quickly cooled. If, however, the temperature is kept at the same high degree for some time, it will be killed. It must also be borne in mind that fungi, including yeasts, exist in the growing and the resting states, the latter being much more resistant than the former. A characteristic of the fungi and their spores is their great resistance to heat when dry. In this state they can be heated to 212° F. without being killed. The spores of the common mold are even more resistant. This should be well considered in sterilizing the bottles and corks, which should be steamed to 240° F. for at least fifteen minutes.

Practical tests so far made indicate that must can be safely sterilized at from 165° to 176° F. At this temperature the flavor is hardly changed, while at a temperature much above 200° F. it is. This is an important point, as the success of an enterprise of this character depends entirely upon the flavor and quality of the product.

Such a vast difference exists in the methods pursued in California and in the Eastern States that a description of each is here given.

PROCESS USED IN CALIFORNIA.

This method, as described in Bulletin No. 130 of the California Experiment Station, is in substance as follows: Only clean and perfectly sound grapes, preferably those having a high natural acidity, picked and handled when cool, should be used. This fruit should not be too ripe or the must will be too sweet and be difficult to clarify. The grapes are pressed immediately and the juice is run into clean, sterilized puncheons or other receptacles. If the must is 59° F. or under, it may be left to settle for twenty-four hours or more. This rids the juice of most of the floating solid matter and facilitates subsequent filtering. It is then passed through a continuous pasteurizer (see fig. 1) and heated to 175° F., and should come out not warmer than 171° F. when it is run directly by means of a block-tin pipe into fresh vessels. For this purpose sterilized puncheons or other casks may be used, although casks or vats of metal, lined with enamel, would be better.

The greatest care must be taken to avoid contamination of the must
as it flows from the pasteurizer. The ends of the block-tin pipe should be plunged into boiling water in changing from one package to another, and should not touch the hands or any exposed surface. The package should be closed with a sterilized bung as soon as full. After the must has settled some days, or even weeks, it is ready for filtering. This filtration is best accomplished by means of a filter so constructed that the must passes upward through the filtering medium under pressure. Such a filter is seen in fig. 2. This filter consists essentially of two shallow bowls clamped together, mouth to mouth, with the filtering medium between them. The unfiltered must enters the lower bowl through the pipe on the right of the figure, passes through the filtering medium into the upper bowl, and makes its exit, when clear, through the faucet a little to the left of the middle of the figure. The small faucet at the bottom of the lower bowl is for the purpose of cleaning the filter. Occasionally when filtration becomes slow, this faucet is opened for a few minutes. This allows the sediment accumulated at the bottom to escape and at the same time the entering must takes a rotary motion in the lower bowl, thus clearing off the surface of the filtering medium, so that when the clearing faucet is closed filtration proceeds as before. On a large scale a filter press such as is used in large wineries and in beet-sugar factories might be conveniently used.

The must should be bottled as it flows from the filter, corked immediately, and sterilized as soon as possible, preferably within twenty-four hours. On account of recontamination during filtering, a final sterilization must be made after the bottles are corked. This is accomplished by means of a bottle sterilizer.
A simple and efficient form of sterilizer is shown in fig. 3. It consists of a wooden trough, provided with a wooden grating placed about 2 inches from the bottom. The filled bottles are placed in wire baskets which rest upon the grating. The trough should contain enough water to submerge the bottles and be kept at 185 °F. by means of a steam coil beneath the grating. It requires fifteen minutes for the must at the bottom to acquire that temperature. For packages of other sizes it is necessary to make a test with a bottle of must in which a thermometer has been placed, in order to determine how long it takes for the entire contents of the bottle to reach the required temperature. Sterilization in bottles should be conducted at a temperature at least 90° lower than that reached in the continuous pasteurizer. If the final heating is higher than the first, it may cause a precipitation of solid matter, which will make the must in the bottles cloudy.

During the sterilization in bottles the corks are liable to be expelled by the pressure developed. To prevent this they may be tied down with strong twine, but it is a great saving of time and labor to use some such contrivance as illustrated in fig. 3. Must so sterilized will keep unchanged for years, or until the bottles are opened.

No matter how carefully all previous work may be done, there is still danger of mold germs getting into the liquid through the corks, especially if a poor quality of corks be used. This can be prevented by dipping the necks of the bottles into heated paraffin before putting on the caps or by sealing over the corks with sealing wax.

The quality and character of the grape must will vary greatly with
the quality of the grapes used, and a pleasing effect may be had by the blending or mixing of the must of two or more varieties of grapes. The color of the must will always be white or yellowish, with the exception of that from such varieties as the Bouschets, which have a red juice. Red must can be obtained by a modification of the process described. If the must is allowed to pass through the continuous pasteurizer and flow out hot into a vat containing the skins of red grapes, almost any desired depth of color may be obtained, depending on the variety of grapes used and the time during which the hot must is left on the skins. Must thus prepared differs in other respects than color from the white must, various substances, especially tannin, being extracted from the skins, making the composition more like that of red wine, but containing sugar instead of alcohol. In some instances such an article will be preferred for medicinal use.

METHODS USED IN THE EASTERN STATES.

The methods used in the larger plants of the Eastern States, principally in the Chautauqua district on Lake Erie, are as follows:

The grapes are run through a combined crusher and stemmer in the upper story of the building, passing through wooden chutes to three aluminum kettles directly underneath. (See Frontispiece.) These kettles have double bottoms, so that steam can be used for heating without coming in contact with the contents. They also have in them revolving cylinders which keep the crushed grapes thoroughly stirred while they are being heated to 140° F. This heating and stirring aids in getting more color out of the skins, the relative amount of juice obtained per ton of grapes is larger, and the must has more of the ingredients and taste of red wine, without containing any alcohol. These kettles are filled in rotation, namely: As soon as No. 1 is full, steam is turned on to heat it while No. 2 is being filled. By the time No. 2 is full No. 1 is hot. Steam is then turned on No. 2 while No. 3 is being filled, and No. 1 is emptied and ready to be filled again.

Fig. 3.—Cork clamp and pasteurizer for must in bottles. DB, Double bottom. ST, Steam pipe. W, Water bath. T, Thermometer. (Bottle shows method of adjusting a cork holder of sheet metal.)
METHODS USED IN THE EASTERN STATES.

Underneath the kettles are the presses, which are of the hydraulic type. Into these the heated contents of the kettles are emptied and pressed. They are on wheels, and are run backward and forward for filling and emptying in regular rotation. From the presses the juice runs through pipes to aluminum kettles underneath, similar to those in which the crushed grapes are heated, except that they contain no revolving cylinders. (See fig. 4.) In these kettles the juice is heated to 165° F., skimmed, and run through a pasteurizer underneath at a temperature no lower than 175° F. and no higher than 200° F. From the pasteurizer the must is filled directly into freshly sterilized 5-gallon carboys, securely corked, and stored in the vaults until the juice has settled and cleared, after which the clear juice is carefully siphoned off, filtered, filled into bottles, and securely corked, undergoing a final pasteurizing in the bottles, as explained in describing the California method.

By the method just described a dark-colored liquid is made, usually called grape juice. Nine-tenths of the eastern musts placed on the market are of this kind. Should it be desired to make a lighter-colored smooth article, the process should be modified by omitting the heating and stirring before pressing, the crushed grapes being pressed at once.

Attention should be called to the fact that the leading defects so far found with unfermented juice placed on the market are that much of it is not clear, a condition which very much detracts from its otherwise attractive appearance, and is due to two causes already alluded
to—either the final sterilization in bottles has been at a higher temperature than the preceding one, or the juice has been improperly filtered or has not been filtered at all.

In other cases the juices have been sterilized at such high temperature that they have a disagreeable, scorched taste. It should be remembered that when an attempt is made to sterilize at a temperature above 195 F., one is treading on dangerous ground. Another serious mistake has been made in placing grape juice on the market in too large bottles, so that much of it becomes spoiled before it is used.

Grape must properly made and bottled will keep indefinitely if it is not exposed to the atmosphere or mold germs; but when a bottle is once opened it should, like canned goods, be used as soon as possible to keep it from spoiling.

HOME MANUFACTURE.

Friends who are fortunate enough to have a small patch, perhaps only an arbor, of grape vines often tell us: "We have so many grapes we do not know what to do with them." The surplus may be used to make unfermented grape juice. The following recipe will enable anyone to make it:

Use only clean, sound, well-ripened grapes. If an ordinary cider mill is at hand, it may be used for crushing and pressing, or the grapes may be crushed and pressed with the hands. If a light-colored juice is desired, put the crushed grapes in a cleanly washed cloth flour sack and tie up. Then either hang up securely and twist it, or let two persons take hold, one on each end of the sack, and twist, when the greater part of the juice will be expressed. Then gradually heat the juice in a double boiler or a large stone jar in a pan of hot water at a temperature of 180 to 200—never above 200 F. It is best to use a thermometer, but if there be none at hand, heat the juice until it steams, but do not allow it to boil; put it in a glass or enameled vessel to settle for twenty-four hours; carefully drain the juice from the sediment, and run it through several thicknesses of clean flannel, if no other filter be available. After this, fill into clean bottles. Do not fill entirely, but leave room for the liquid to expand when again heated. Fit a thin board over the bottom of an ordinary wash boiler, set the filled bottles (ordinary glass fruit jars are just as good) in it, fill in with water around the bottles to about an inch from the top of them, and gradually heat until it is about to simmer. Then take the bottles out and cork or seal immediately. It is a good idea to take the further precaution of sealing the corks over with sealing wax, to prevent mold germs from entering through the corks. Should it be desired to make a red juice, heat the crushed grapes to not above 200 F., strain through a clean cloth, set away to cool and settle, and proceed the same as with light-colored juice. Many people do not
even go to the trouble of letting the juice settle after straining it, but
reheat and seal it up immediately, simply setting the vessels away in
a cool place in an upright position, where they will be undisturbed
and the juice allowed to settle, and when wanted for use the clear juice
is simply taken off the sediment. Any person familiar with the
process of canning fruit can also preserve grape juice, for the prin-
ciples involved are identical.

Must is a valuable product, and many pleasures and comforts may
be derived from its use. It contains a large part of the valuable ingre-
dients of both fresh and canned grapes, and can be used in many more
ways and for many more purposes.

USES OF UNFERMENTED MUST.

The uses of unfermented must are many. It is used in sickness,
convalescence, and good health; as a preventive, as well as a cure. By
the young, by persons in the prime of life, and by those in old age
it is used at all seasons of the year, whether that season be warm or
cold, wet or dry. It is used in churches for sacramental purposes; at
soda fountains as a cool and refreshing drink; in homes, at hotels, and
at restaurants as a food, as a beverage, as a desert, and in many other
ways. When people become accustomed to it they rarely give it up;
hence the manufacture of grape juice will probably increase enor-
mously as the years go by.

Dr. Miradow Minas, at Jurjew (Dorpat), experimented on himself
with pasteurized must during fifty-three days, dividing the time into
thirteen periods. He took the following daily rations of food: Water,
2,100 cubic centimeters; meat, 3,000 grams; tea, 9 grams; meat extract,
5 grams; light bread, 500 grams; sugar, 85.38 grams. During the first
two and the last two periods he took no must. In the third period he
took 300 cubic centimeters daily; in the fourth, 600 cubic centimeters,
and thus gradually increased the portion until 1,250 cubic centimeters
in the seventh period, which lasted five days, were taken. After this
he gradually decreased the portion until 250 cubic centimeters were
used in the eleventh period.

The conclusions reached were:

Through the rational addition of pasteurized must to a satisfactory mixed diet the
cleavage of protein in the body is diminished. The power to protect protein is due
to the grape sugar present, and is dependent not alone upon the quantity of grape
juice taken, but also upon the kind and amount of protein consumed. The richer
the food in easily digested protein the greater the power of the grape juice to protect
protein. With an abundant diet the more or less long continued use of pasteur-
ized must tends to induce a gain in body weight. The material gained may consist
of nitrogenous substance or fatty tissue. When 300 to 750 c. c. of pasteurized grape
juice is consumed daily the resorption of nitrogenous material is increased. When
larger quantities are consumed (1,000 tol, 250 c. c.) the resorption of nitrogen dimin-
ishes somewhat, but in all cases it is better than on the same diet without the addition
of pasteurized grape juice. The consumption of 300 to 500 c. c. of unfermented grape

7795—No. 24—02——2
must daily diminishes intestinal fermentation. Larger quantities are either without effect on the intensity of intestinal fermentation or by diminishing the resorption of nitrogen increase the amount of ether sulphates excreted in the urine.

It should be said in considering the results obtained by Minas, that practically the same favorable results attributed to the use of grape juice have been found to follow the consumption of cane sugar. It therefore seems not unlikely that the value of grape juice as a food depends chiefly on the sugars present, though it should be remembered that the agreeable flavor undoubtedly increases the appetite and very probably increases the flow of digestive juices. Furthermore, grape juice offers the sugars in a reasonably dilute as well as a palatable form.

A FEW GOOD RECIPES.

GRAPE NECTAR.

Take the juice of two lemons and one orange, one pint of grape juice, one small cup of sugar, and a pint of water. Serve ice cold. If served from punch bowl, sliced lemon and orange add to appearance.

AN INVALID DRINK.

Put in the bottom of a wineglass two tablespoonfuls of grape juice; add to this the beaten white of one egg and a little chopped ice; sprinkle sugar over top and serve. This is often served in sanitariums.

GRAPE PUNCH.

Boil together one pound of sugar and half pint of water until it spins a thread; take from the fire and when cool add the juice of six lemons and a quart of grape juice. Stand aside overnight. Serve with plain water, apollinaris, or soda water.

GRAPE SHERBET.

For eight persons, mix one pint of grape must, juice of lemon, and one heaping teaspoonful of gelatin, dissolved in boiling water; freeze quickly; add beaten white of one egg just before finish.

GRAPE ICE CREAM.

One quart of must, one quart of cream, one pound of sugar, and the juice of one lemon.

SYLLABUB.

One quart of fresh cream, whites of four eggs, one glass of grape must, two small cups of powdered sugar; whip half the sugar with the cream, the balance with the eggs; mix well; add grape juice and pour over sweetened strawberries and pineapple or oranges and bananas. Serve cold.
ANALYSES—PRICES AND STATISTICS.

BOHEMIAN CREAM.

One pint thick cream, one pint grape-juice jelly; stir together; put in cups and set on ice. Serve with lady fingers.

Besides the recipes just given, many more are enumerated by the manufacturers, such as grape ice, grape lemonade, grape water ice, grape juice and egg, baked bananas, snow pudding, grape gelatin, junket and grape jelly, tutti frutti jelly, grape float, grape jelly, grape juice plain, grape soda water, and scores of others.

ANALYSES OF GRAPE MUST.

The analyses of a California must, as published in Bulletin No. 130 of the California Experiment Station, and of Concord grape must analyzed by Mr. L. S. Munson, of the Bureau of Chemistry, U. S. Department of Agriculture, are appended herewith, and may be of interest:

<table>
<thead>
<tr>
<th></th>
<th>Concord</th>
<th>California</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid contents</td>
<td>20.37</td>
<td>20.60</td>
</tr>
<tr>
<td>Alcohol</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Total acids</td>
<td>.663</td>
<td>.63</td>
</tr>
<tr>
<td>Volatile acid</td>
<td>.023</td>
<td>.07</td>
</tr>
<tr>
<td>Grape sugar</td>
<td>18.54</td>
<td>19.15</td>
</tr>
<tr>
<td>Free tartaric acid</td>
<td>.025</td>
<td>.04</td>
</tr>
<tr>
<td>Ash</td>
<td>.255</td>
<td>.19</td>
</tr>
<tr>
<td>Phosphoric acid</td>
<td>.027</td>
<td>.04</td>
</tr>
<tr>
<td>Cream of tartar</td>
<td>.55</td>
<td>.69</td>
</tr>
</tbody>
</table>

The comparison between the two becomes all the more interesting from the fact that California musts are made from Vinifera, or the European grapes, whereas the commercial musts of the Eastern States are made almost exclusively from the Concord, a Labrusca, or American variety.

PRICES AND STATISTICS.

The average prices to consumers are as follows:

<table>
<thead>
<tr>
<th></th>
<th>Per case.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases of 1 dozen quart bottles</td>
<td>$4.50 to $6.00</td>
</tr>
<tr>
<td>Cases of 2 dozen pint bottles</td>
<td>4.75 to 6.25</td>
</tr>
<tr>
<td>Cases of 4 gallon bottles</td>
<td>5.00 to 6.00</td>
</tr>
</tbody>
</table>

One firm in 1901 used, in their manufacture, 8,000 gross of bottles. To fill these required 1,000 tons of grapes, 8,000 gross of corks, 1,100,000 caps, as many labels and wrappers, and 60,000 boxes. In the Chautauqua district alone about 300,000 gallons of unfermented must was made in 1901, and all those engaged in its manufacture are enlarging their plants.
THE SEEDS OF RESCUE GRASS AND CHESS.

BY

F. H. HILLMAN,
ASSISTANT, SEED LABORATORY,
BOTANICAL INVESTIGATIONS AND EXPERIMENTS.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1902.
THE SEEDS OF RESCUE GRASS AND CHESS.

By F. H. Hillman, Assistant, Seed Laboratory. Botanical Investigations and Experiments.

There have recently been received at the Seed Laboratory from different States of the South several samples of the seed of chess, or cheat (Bromus secalinus), which had been offered for sale as rescue grass (Bromus unioloides). Notwithstanding the close botanical relationship of chess to rescue grass, and the fact that the former is sometimes, like the latter, employed as a hay crop, the difference between the two is so considerable that, if the seeds of both are to be handled in the trade, they should pass under their true names.

The brome grasses belong to the genus Bromus and vary widely in their agricultural value. One of them, the awnless brome grass (Bromus inermis), also called smooth and Hungarian brome grass, is highly valued in the West as a drought-resisting forage and hay plant. Rescue grass bears a somewhat similar relation to the agriculture of the South, while the chess is less valuable than either. Some value is assigned to it in certain localities, but it has been long and widely recognized as a most troublesome weed. The frequency with which it occurs in grain fields has led to the erroneous belief, adhered to by many farmers even to the present day, that chess is a degenerated form of wheat. Chess seeds are often abundant among the seeds of the cereal grains and the larger grass seeds, and sometimes occur with red clover seed.

With the aid of specimens, or descriptions, there should be no difficulty in distinguishing the seed of rescue grass from that of chess. The differences between the seed of chess and that of its near ally, Bromus racemosus, are more difficult to detect; but from a practical standpoint this is not so important, since the two plants are very similar in habit, and it is probable that in many localities the latter would prove quite as undesirable as chess.

1 For some reason confusion has arisen in the Southern States regarding rescue grass and chess. Seed of the latter, which, though occasionally grown as a forage crop, is ordinarily a grain-field weed, has been offered for sale repeatedly under the name of the former, which is a valuable forage grass; and it has been thought desirable to issue a brief description of the two, so that both seedsmen and purchasers may be able to distinguish them. The present paper is therefore presented. It was prepared under the direction of Mr. A. J. Pieters, Botanist in charge of the Seed Laboratory.—Frederick V. Coville, Botanist.
Bromus unioloides (Willd.) H. B. K.
(B. schraderi Kunth.)

Rescue grass. Schrader's brome grass. Arctic grass.

Florets, or "seeds," 1 11 to 25 mm. (½ to 1 inch) long, strongly compressed from the sides, sharply keeled along the back, lanceolate as viewed from the side, the apex tapering and usually tipped by a short awn, at the base of which the glume is slightly notched; margins of the glume membranous-edged and usually not infolded except at the base; veins 4 or 5 on each side of the midnerve, or keel, evident as narrow ridges; palea two-thirds to three-fourths the length of the glume, which wholly incloses it; grain folded lengthwise and tightly clasping the infolded center of the palea. The florets are light or yellowish brown or straw-colored, often greenish and sometimes purplish. The surface varies from smooth to very finely rough-hairy, the latter condition being particularly evident on the veins and pedicel. When spread thinly on a level surface, the seeds lie on one of the flattened sides. (Fig. 1.)

Bromus secalinus L.


Florets about 7 mm. (½ to 1 inch) long, exclusive of the awn, which varies from 1 to 3 mm. in length, not compressed, cylindrical or somewhat spindle-shaped, obtuse at the apex; glume notched at the apex above the insertion of the awn; margins more or less infolded below the middle, narrowly or scarcely membranous-edged above the middle, usually not at all flaring at the apex; veins three on each side of the midnerve, very indistinct; palea equal to the glume, deeply grooved conformably with the grain, the keels hispid-ciliate and partially or wholly exposed; grain equal to the glume and palea, often exposed at the apex of the floret, deeply grooved, reddish brown, sometimes occurring free from the glume and palea. The florets are light or dark brown and mostly smooth, and sometimes have a slight diffused luster under the lens. (Fig. 2.)

The more evident characters by which rescue grass seed and chess seed may be distinguished upon comparison are as follows:

Rescue grass seeds being strongly compressed lie only on one side

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1The seeds of these grasses in a commercial sense consist of the grain inclosed in the chaff—i. e., glume and palea.
when resting on a level surface and thus appear lance-shaped or broadly awl-shaped, tapering uniformly to a sharp, short-awned point. In contrast, the chess seeds are from little more than one-fourth to one-half as long, more robust, not evidently flattened, nearly cylindrical, grooved along one side, abruptly pointed, the apex with a very short or somewhat longer awn, or awnless. When resting on a level surface they may lie slightly at one side of the midvein of the back, exposing to view the grooved face and a part of one side, or they may lie on the grooved face, showing the back. They more rarely rest directly on the back. Furthermore, the general color of a sample of chess is much darker brown than one of rescue grass seed.

**Bromus racemosus** L.

**Upright Chess.**

Florets about 9 mm. (1/3 inch) long, exclusive of the slender awn, which varies from 4 to 9 mm. in length, similar to those of *Bromus secalinus* in general form. The glume is broader than in *B. secalinus* and usually more arched at the margins; edges sometimes membranous, especially at the apex, which is notched above the insertion of the awn and often flaring; veins sometimes distinct; palea shorter than the glume, broadly hollowed or grooved, its keels more or less exposed and hispid-ciliate; grain shorter than the palea or at least covered by it, more broadly grooved than in *Bromus secalinus*. The florets are smooth or finely roughened and straw-colored or light brown. (Fig. 3.)

These seeds are as easily distinguished from rescue grass seeds as are those of chess. They are most readily distinguished from chess seeds by the broader glume, longer awn, and shorter palea and grain.
The following statement of the relative values of rescue grass and chess is contributed by Mr. Carleton R. Ball, Assistant Agrostologist of the Department of Agriculture:

Rescue grass was introduced into the South some fifty years ago and has since been widely cultivated. Its chief value is for winter and early spring grazing. It is very hardy, and makes a luxuriant and rapid growth throughout the winter, under favorable conditions. Although it is an annual plant, it is said to become a short-lived perennial under close grazing, which prevents the production of seed. In ordinary practice the grass is allowed to reseed itself each season. Where grazed, stock should be taken off long enough to allow seed to ripen in the early summer. If it is cut for hay in March the aftermath will usually reseed the ground. A summer crop may be grown on the same ground if it be taken off early enough to allow the young plants to begin their growth in the fall. Rescue grass is best adapted to rich, loamy soils. On light, poor soils it is probably inferior to rye or oats for pasturage or hay.

Chess is becoming more and more common as a weed in southern wheat fields, in some parts of the country, particularly in the Northwest, it has considerable value as a hay crop. A similar value has sometimes been claimed for it in the Southern States, but the general opinion is quite the opposite. It often appears abundantly where grain crops have been killed by unfavorable conditions. There are, however, other catch crops with fewer weedy tendencies and greater forage value which may be employed in such cases. In feeding value, as indicated by chemical analyses, chess ranks lower than most grasses, including rescue grass. This has been proved to be true of it even in the Northwest, where it is so largely used for hay.
MISCELLANEOUS PAPERS.

I. THE SEEDS OF RESCUE GRASS AND CHESS.
   By F. H. Hillman, Assistant, Seed Laboratory.

II. SARAGOLLA WHEAT.
   By David G. Fairchild, Agricultural Explorer.

III. PLANT INTRODUCTION NOTES FROM SOUTH AFRICA.
   By David G. Fairchild, Agricultural Explorer.

IV. CONGRESSIONAL SEED AND PLANT DISTRIBUTION CIRCULARS, 1902–1903.

BOTANICAL INVESTIGATIONS AND EXPERIMENTS
AND
SEED AND PLANT INTRODUCTION AND DISTRIBUTION.

Issued July 18, 1903.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1903
BULLETINS OF THE BUREAU OF PLANT INDUSTRY.

The Bureau of Plant Industry, which was organized July 1, 1901, includes Vegetable Pathological and Physiological Investigations, Botanical Investigations and Experiments, Grass and Forage Plant Investigations, Pomological Investigations, and Experimental Gardens and Grounds, all of which were formerly separate Divisions, and also Seed and Plant Introduction and Distribution, the Arlington Experimental Farm, Tea Culture Investigations, and Domestic Sugar Investigations.

Beginning with the date of organization of the Bureau, the several series of bulletins of the various Divisions were discontinued, and all are now published as one series of the Bureau. A list of the Bulletins issued in the present series follows.

Attention is directed to the fact that "the serial, scientific, and technical publications of the United States Department of Agriculture are not for general distribution. All copies not required for official use are by law turned over to the Superintendent of Documents, who is empowered to sell them at cost." All applications for such publications should, therefore, be made to the Superintendent of Documents, Union Building, Washington, D. C.

No. 1. The Relation of Lime and Magnesia to Plant Growth. I. Liming of Soils from a Physiological Standpoint. II. Experimental Study of the Relation of Lime and Magnesia to Plant Growth. 1901. Price, 10 cents.


No. 4. Range Improvement in Arizona. (Cooperative Experiments with the Arizona Experiment Station.) 1902. Price, 10 cents.

No. 5. Seeds and Plants Imported Through the Section of Seed and Plant Introduction for Distribution in Cooperation with the Agricultural Experiment Stations, Inventory No. 9, Numbers 4351-5500. 1902. Price, 10 cents.


No. 20. Manufacture of Semolina and Macaroni. 1902. Price, 15 cents


[Continued on p. 3 of cover.]
U. S. DEPARTMENT OF AGRICULTURE.
BUREAU OF PLANT INDUSTRY—BULLETIN No. 25.
B. T. GALLOWAY, Chief of Bureau.

MISCELLANEOUS PAPERS.

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By F. H. HILLMAN, Assistant, Seed Laboratory.

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Frederick V. Coville, Botanist.

SEED AND PLANT INTRODUCTION AND DISTRIBUTION.

A. J. Pieters, Botanist in Charge.
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*(B. schraderi* Kunth.)*

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**Bromus secalinus** L.

**Chess.** Cheat. Willard's Brome Grass.

Florets about 7 mm. (¼ to ½ inch) long, exclusive of the awn, which varies from 1 to 3 mm. in length, not compressed, cylindrical or somewhat spindle-shaped, obtuse at the apex; glume notched at the apex above the insertion of the awn; margins more or less infolded below the middle, narrowly or scarcely membranous-edged above the middle, usually not at all flaring at the apex; veins 3 on each side of the midnerve, very indistinct; palea equal to the glume, deeply grooved conformably with the grain, the keels hispid-ciliate and partially or wholly

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The following statement of the relative values of rescue grass and chess is contributed by Mr. Carleton R. Ball, Assistant Agrostologist of the Department of Agriculture:

Rescue grass was introduced into the South some fifty years ago and has since been widely cultivated. Its chief value is for winter and early spring grazing. It is very hardy, and makes a luxuriant and rapid growth throughout the winter under favorable conditions. Although it is an annual plant, it is said to become a short-lived perennial under close grazing, which prevents the production of seed. In ordinary practice the grass is allowed to reseed itself each season. Where grazed, stock should be taken off long enough to allow seed to ripen in the early summer. If it is cut for hay in March, the aftermath will usually reseed the ground. A summer crop may be grown on the same ground if it be taken off early enough to allow the young plants to begin their growth in the fall. Rescue grass is best adapted to rich, loamy soils. On light, poor soils it is probably inferior to rye or oats for pasturage or hay.

Chess is becoming more and more common as a weed in southern wheat fields. In some parts of the country, particularly in the Northwest, it has considerable value as a hay crop. A similar value has sometimes been claimed for it in the Southern States, but the general opinion is quite the opposite. It often appears abundantly where grain crops have been killed by unfavorable conditions. There are, however, other catch crops with fewer weedy tendencies and greater forage value which may be employed in such cases. In feeding value, as indicated by chemical analyses, chess ranks lower than most grasses, including rescue grass. This has been proved to be true of it even in the Northwest, where it is so largely used for hay.
II.—SARAGOLLA WHEAT.

By David G. Fairchild, Agricultural Explorer.

Italy is the land of macaroni, and the best of this remarkable food product in the world is to be had in Naples. There seems to be an agreeable flavor about Neapolitan macaroni which is characteristic of it and which one does not find in the French or Spanish, or even in the north Italian made product. Macaroni a la Napolitona, with its sauce made from the plum-like tomatoes that one sees hung up to dry everywhere on the walls of the narrow streets of Naples, must be tasted within sight of Vesuvius before one can judge this national Italian dish.

In searching for a reason for this superiority of the Neapolitan macaroni, the writer's attention was called to the fact that an especially fine-flavored variety is made from a native wheat called Saragolla, and that this variety is made only in small quantities. Paradoxical as it may seem to the American who is ready to pay any price for the best food products, the very finest quality of Italian macaroni is not often exported to America. This is a statement which the writer feels warranted in making after interviewing some of the largest exporters of macaroni, as well as the famous producers of Gragnano and Torre Annunziata. The reason for this anomalous condition of the trade lies in the fact that the very finest kind of macaroni keeps only a few months, while the commonly exported article remains good for a year.

In the days before the macaroni trade had assumed the proportions that it now occupies in the commerce of Italy it was supposed that only the hard wheats of Apulia and Sicily could be used in its manufacture, but as the demand for this foodstuff increased the hard wheats of other countries were imported. Among these wheats those from southern Russia, the so-called Taganrog varieties, proved best suited to the demands of the manufacturer. They are now imported in large quantities every year, and the majority of the macaroni is said to be made from these imported wheats. Nevertheless the manufacturers still consider the durum wheat of the province of Apulia to have a flavor superior to the imported varieties, and they place the so-called Saragolla wheat at the head of all macaroni wheats so far as the production of a fine-flavored product is concerned.
The market price of the Saragolla wheat ranges from 1.25 to 1.75 lire per quintal higher than that charged for the best Taganrog sorts, even after a duty of 8 lire per quintal has been paid; and the reason for this higher price is not so much in the better flavor of the Italian wheat as in the greater yield of semola per given weight of grain. The semola makers get proportionately more salable product out of the Saragolla wheats than they do out of those from Taganrog or other sources of import.

It is from these south Italian wheats that the most delicate macaroni of Naples is made, and the connoisseur who wants to live well in southern Italy insists on having his macaroni made from the hard wheats of Apulia. It makes little difference to him that the more delicate variety does not keep so well and more quickly falls a prey to the attacks of insects. What he wants is the fine flavor.

Like the export Munich beer, or the canned Danish butter, macaroni designed for sale in America, it is said, must be especially prepared, and the tougher gluten of the Taganrog wheat renders the macaroni that is made from it better suited for the export trade. Mixtures of the imported and the Saragolla wheat are also often made, it is said.

The region south of Foggia near the Adriatic coast of southern Italy, where this best Italian macaroni wheat is grown, is one of the driest in the country, having an annual rainfall of only 446.7 mm., or about 17.59 inches. In this respect it is but little superior to some of the Russian wheat regions, which have, according to Carleton, about 15 inches.

Whether or not the generally acknowledged superiority of Italian macaroni, even that made from Taganrog wheat, is due to the water used in its manufacture is a question which would probably require much study to answer. It is difficult to understand how any bacteria present in the water used to make the paste can influence the flavor, for it is employed while boiling hot. There is a possibility, however, that in the cellaring process, or the preliminary drying in the open air, the freshly made macaroni may be affected by the bacteria with which the air of the moist cellars and exposed drying places must be filled.

Although perhaps superfluous to the American manufacturer of macaroni, a description of the process of making it as followed in Gragnano and Torre Annunziata may have some interest as being that pursued by some of the most famous factories in the world.

To travelers in Italy these towns are pointed out as nestling at the base of Vesuvius and forming scarcely more than suburbs to the big city of Naples. They are dependent upon the manufacture of the pastas, as the various types of macaroni are called, and hand-worked mills stand side by side with those run by steam; all squeezing out long strings of yellow paste, which are cut and hung up on poles to
dry. The housetops, courtyards, narrow streets, and hillsides are covered with thousands of reed poles bending under the weight of yellow macaroni, and scattered over the ground on mats lie different sorts of short-shaped pastas.

The process of manufacture seems exceedingly simple, but there may, for all that, be secrets of the trade. As described in general by the manager of a large mill in Torre Annunziata the mode followed by the steam factories is as follows:

The durum wheat is ground into semola and sieved to remove the starchy part of the grains and leave the clear, light amber, or glutinous part. Three or four grades of quality are made, and these depend on the size of the sieve meshes.

The semola is put into a special iron mixer, shaped like an old-fashioned artillery mortar, except that it is square instead of cylindrical, and furnished in the bottom with special screw-shaped fans with which to stir the paste or dough. Boiling water is added to the semola and the dough is mixed for about seven minutes. The mass is then put on a flat, circular kneading board and kneaded by two sharp-edged parallel beams, which rise and fall as the table turns and press into the dough as they descend. A few minutes of kneading are sufficient and the homogeneous dough is then put into the cylinder and the piston descends upon the mass, forcing it in strings slowly through the perforated plate at the bottom. Fifteen minutes are required to convert the gallons of dough into thousands of feet of yellow macaroni. The yellow color is produced by the use of saffron, of which powder a very small quantity is put into each batch of dough.

As soon as the strings of fresh paste which issue continually from the die are of the proper length they are cut and thrown over a reed pole and carried into the sunlight, if the weather is fair, or into sheltered terraces, protected by curtains from the rain, if the weather is unfavorable. On bright days the strings of macaroni are exposed to the sunlight only two hours. They must be dried out only slightly before being cellared for the night in dungeon-like underground vaults similar to the Bavarian beer cellars.

For twelve hours or more the poles of macaroni are kept in these damp places, until the dough has become moist and pliable again and the strings have lost the brittleness that the exposure to the sunlight has given them. From the cellars the poles are carried to shaded storehouses, open on all sides to the air but not lighted from above. Here, in great masses of millions of strings, they hang for several days—from eight to twenty being required, depending upon the dryness of the atmosphere. According to the statements of the manager of a factory this process of drying is necessary to give to the brittle paste a horn-like toughness and fit it to withstand the rough handling to which it will be subjected without breaking into small pieces.
In all this simple process the one point at which bacteria might have a chance to play a rôle is in the first drying, cellaring, and subsequent slow drying in the shade. The theory that the water is responsible for the flavor must rest, it seems to the writer, on other than bacterial grounds, for from the appearance of the tank which supplied the hot water the inference is easy that the water is chalybeate, for the tank was incrusted with lime.

If, aside from the superiority of the macaroni of Gragnano, which is made from Taganrog wheat, a specially fine flavor is produced by the use of Saragolla grain, the growers of durum wheats in America deserve to have their attention called to this variety and be given an opportunity to test it on a reasonably large scale. The thin-skinned nature of the sort and its consequent greater semola-producing properties may not be maintained in all places in America, but regions may be found where these valuable qualities as well as the flavor are retained, and the wheat may prove, as it evidently does in Apulia, a profitable crop.

Naples, November 9, 1902.
INTRODUCTION.

From the standpoint of an agricultural explorer South Africa is a land of newly introduced plants. Compared with old civilized countries like Egypt and Japan, it is poor in cultivated species that are suitable for introduction into America. Its native flora is rich, but the number of economic plants is small and the most important of these have been brought into Africa in comparatively recent times. Only one who has been bewildered by the hosts of cultivated native plants of the Malay Archipelago can fully realize the dearth of food plants of South Africa. The explanation is simple. The Kafirs and Hottentots were, like our American Indians, races of hunters, and lived mostly on the immense herds of game which roamed over the vast areas of grass land on the South African veldt. As these herds of antelope and other game diminished in numbers or disappeared the natives became stock raisers and counted their wealth by the number of cattle they owned. The cultivation of the soil, which in such lands as Java or Japan was the chief occupation of the people, played a small rôle among the blacks of Cape Colony, and in consequence few wild plants were brought into cultivation, and the staple food plants of other races, when introduced late in the history of the country, were accepted by the Kafirs and grown in a careless, slovenly manner. The mealies of the country are the maize plants from America. Cassava is the West Indian manihot, Kafir corn is the "Dura" of the Arabs.

Several South African wild plants have already found their way into cultivation as valuable ornamentals, but, as Mr. Fairchild has pointed out in the present Bulletin, the South African flora is poor in economic species. There are some, however, that may prove valuable additions to the forage resources of our Southwest, and the grapes and the pineapples described will certainly be worth a careful trial.

The plants and seeds sent through the kindness of Mr. Lathrop have been distributed in such a manner that we shall be able to watch the growth of these plants in the United States.—A. J. Pieters, Botanist in Charge of Seed and Plant Introduction and Distribution, Washington, D. C., May 8, 1903.
and rice and potatoes were practically unknown among their cultivated plants.

It is no wonder that a country in which the natives have neglected their indigenous fruits and grains, and in whose footsteps the early white settlers followed, should prove a land poor in cultivated plants that are worthy of introduction into the New World.

A few things have, however, been called to the writer’s attention during a stay of some weeks in the country, and these have seemed worthy of writing about for the information of American cultivators.

**SOME CAPE SEEDLING GRAPE VARIETIES.**

It were strange if in so old and isolated a vine region as South Africa seedling varieties of the grape had not originated.

Mr. Eustace Pillans, at present in charge of the Government Wine Farm at Constantia, has called the writer’s attention to three varieties which are either known to be Cape seedlings or are of doubtful Cape origin, and the department of agriculture of the colony has, with that liberality which characterizes it, offered to send in July next a quantity of cuttings of each to America.

**THE RED HANEPOOT GRAPE.**

The Red Hanepoot, which ranks as one of the best export table grapes from South Africa, and which is called by the late Mr. De Waal, vine expert of the Cape government, the Red Muscat of Alexandria, is described as a variety with large, loose bunches, a large oval berry, which is dark red when ripe and has a sweet and musky flavor. It requires a lime and clay subsoil, and its fruit ripens in the middle of the grape season.

The origin of the Red Hanepoot, I am told, is not known, but it is believed to be a seedling of the White Muscat, called at the Cape White Hanepoot, and Mr. Bioletti, wine expert at the Elsenburg Agricultural School, who was formerly connected with the California Experiment Station, assures me that it is probably of Cape origin, and so far as he knows is not grown anywhere in California. Its good shipping qualities and its excellence as a table grape will, Mr. Bioletti thinks, give it a place beside the Flame Tokay, from which it differs in its decided musky flavor. Its excellent eating qualities Mr. Lathrop and the writer had an opportunity of testing, and there can be no doubt of its desirability for Californian vineyards. Like the other Muscat varieties, it is difficult to graft successfully upon resistant American stocks, and at the Cape it has succeeded best upon a seedling variety of *Vitis rupestris* called "Le Roux," which is likewise of South African origin.
Vitis rupestris metallica.  

_Vitis rupestris metallica_ is the name given by the late Mr. De Waal to a resistant stock grown from American seed on the Government Wine Farm at Constantia. This is quite distinct, Mr. Bioletti says, from a French variety bearing the same name, and is another of the Cape productions which is worthy of the attention of California vineyardists. It was a chance seedling, like the Riparia Gloire de Montpellier stock so universally used, according to De Waal, in the Medoc vine region of France. In the Agricultural Journal for December, 1901, Mr. De Waal published the following statement in reference to the origin of this interesting variety, which is, according to Mr. Pillans, taking the lead all over the colony as a grafting stock for wine grapes:

**RUPESTRIS METALLICA.**

This variety is derived from one seedling stock selected at Groot Constantia from amongst thousands. It was picked out in the year 1894, and new stocks were multiplied as fast as possible by the single-bud or one-eye system of propagation. In 1896 a mother plantation of 3,500 vines was laid out. The combined plantations have this year (1901) given a return of 687,000 cuttings, exclusive of several cartloads of thin ends. As many other mother plantations of this variety have, during the past few years, been laid out in the Constantia and other districts, the old mother stock, selected in 1894, must this year have given rise to an output of several millions of cuttings. The Rupestris Metallica is a strong grower and will thrive well in any loose soil, loam, gravel, or sand, and also in dry, open, heavy soils; it can besides stand a fair amount of wet in loose soils. It forms an excellent graft bearer for all varieties of European vines, except the Hanepoot, and, possibly also, other members of the Muscat family. A large percentage of Hanepoot grafts will die back on it even after a very successful start, and as a stock for Muscat Hambourg its suitability is also doubted. It appears to answer fairly well as a graft bearer for Muscadel, but sufficient experience on this point has not yet been gained to recommend it unreservedly as a stock for that variety.

The latest verdict regarding this Metallica stock from Mr. C. Mayer, who has not been an enthusiastic believer in it, is that it is suitable for dry, light sandy soils, but not for heavy ones. It is remarkable for the ease with which the cuttings root and can be grafted upon. The proportion of failures among grafts upon this stock is said to be remarkably small, and when millions of grafts are concerned this item is an important one.

The vigorous nature of the Metallica is claimed by Mr. Pillans to impart to the graft a very remarkable productiveness, and certainly when compared at Groot Constantia with the same varieties grafted on other American stalks of French origin, the load of fruit on the metallica vines this season bore out Mr. Pillans's belief. Considered from the standpoint, then, of a quick-rooting, easy-grafting, vigorous stock, which produces good bearing vines, the _Vitis rupestris metallica_ is well worth an extensive trial in California.
The Muscat varieties of table grapes, which are among the best, do not generally thrive well when grafted on American phylloxera-resistant stocks, and vineyardists in California are, according to Mr. Bioletti, looking for a better variety of stock than those already in use.

In Cape Colony, two of the best table grapes, the White and Red Hanepoot sorts, are of the Muscat type, and in replanting the vineyards with resistant stocks, the ordinary Riparia and Rupestris varieties have proven uncongenial to these Muscat kinds.

In March, 1899, the Cape department of agriculture appointed a commission to investigate the causes of this failure of the Hanepoot grafts on American vines.

In their printed report members of this commission call attention to the Le Roux, a seedling variety of American parentage which originated in the Cape and which has proved a successful stock for the Hanepoot variety of Muscat grape, of which there are six-year-old plants growing in the colony.

This Le Roux grape is named after Mr. Le Roux, of Drakenstein, upon whose place the seedling was raised and first propagated. Such a stock which, although not yet thoroughly tested, promises to be well suited for Muscat varieties, deserves the attention of our vine growers.

FRUIT-BEARING HEDGE PLANTS.

The finest hedges in Natal are the evergreen amatungulas, which are made from the white-flowered, red-fruited Carissa grandiflora, a native of the colony. It is rare to find a fruit-bearing hedge, and of all those which the writer has seen the amatungulas are the most desirable. The genus Carissa contains a number of thorny, evergreen shrubs which bear pretty white flowers and edible red fruit.

On the markets in Durban the long, brilliant red fruit of the amatungulas is commonly sold; in fact, during January and February it is one of the commonest fruits to be seen in the stalls. Though variable in size and shape, it has generally an elongated form, with a distinct point, and the diameter of a good-sized Damson plum. The thin, red skin covers a pink flesh with a milky juice, which in flavor is sweet but lacks character, although much praised by European residents for use in making fruit salads.

To make an amatungula hedge, Mr. I. Medley Wood, the curator of the Durban botanic gardens, informs me, is a very simple matter. The seeds are sown in a seed bed, and when the young plants are 6 inches high they are transplanted to the place chosen for the hedge and set a foot apart, alternately in parallel rows, distant from one another a foot or more. As the plants grow they are trimmed into the desired hedge form, and the oftener they are trimmed the thicker
they interweave their tough, thorny branches, making an impenetrable barrier for stock of all kinds. When in flower the white, jasmine-like blossoms show off strikingly against the dark background of foliage; and the red fruit which follows is quite as pretty. It is an interesting sight to see the children hunting up and down the hedges about the city houses for the ripe amatungulas, with which they fill their aprons.

A nearly related species of Carissa (C. arduina DC.) is one of the prettiest shrubs in the municipal gardens in Cape Town. Its symmetrical form and dark-green leaves and branches make it well worth a place on the lawn of any subtropical park, while its pendant red fruits, which look like large barberries, make a showy contrast to the dark background. These fruits, like the amatungulas, are filled with a milky-juiced flesh, and are not unpleasing to the taste, although they have no sprightliness of flavor.

Whether or not the genus has in it sufficient material from which, by breeding, a new superlative fruit plant can be produced, which at the same time will make good hedges, is a question for experiment.

**RHODES GRASS.**

At Groot Schur, Mr. Cecil Rhodes's estate, near Cape Town, there are several large grass fields of a species of chloris (C. virgata Sw.) grown from seed which Mr. Rhodes had collected in the eastern provinces of Cape Colony some years ago. Although, according to Professor MacOwan, the plant occurs commonly in the subtropical zone in other continents, from the fact that it was first brought into culture in South Africa by so noted a man as Mr. Rhodes it has been given the name of Rhodes grass.

Like other species of the same genus, this one sends out long, creeping stems, which lie flat on the ground, and from these the finger-like inflorescences arise. These stems lying on the ground are tough and hard and are likely to be of little food value, but the mass of leaves which is produced above them on good soil attains, it is said, a foot or more in height and has excellent feeding properties.

It does not seem likely that this species will prove more resistant to drought than many other grasses, for on the slopes of Table Mountain a patch was pointed out which was evidently not a success, and the only explanation for the failure was that the ground there was too dry. However, the planters to whom the steward of the estate has distributed seed have found the grass a valuable fodder plant, and there is such a local demand for the seed that a single sack was all that could be secured for trial in America. This quantity was given after application to the Chartered South African Company and to the steward of Groot Schur.
THE KAFIR PLUM AS A SHADE TREE.

Professor MacOwan, whose writings on South African plants are so well known, showed the writer a row of Kafir plum trees which, by his advice, were planted in the grounds of the Parliament building at Cape Town. He pointed out that, owing to the situation of the adjoining houses, they were subjected to the most violent cross winds, and that ordinary trees which had been tried there were unable to keep their shape. A "southeaster" which came up before leaving Cape Town permitted the writer to see how these trees were whipped and beaten about with the winds from Table Mountain. It is truly remarkable how well they bear the rough treatment.

The evergreen foliage of this interesting tree is dense and dark, and casts a deep shade, which in sunny climates is always a desirable character. Its gray trunk and upright branches produce a graceful vase form, while its bright red plum-like fruits show off in pretty contrast against the dark background of leaves.

These plums are nearly all seed, only a thin layer of subacid pulp lying between the stone and the thin red skin, and though they are of sufficient sweetness to be attractive to children, they would find no use in our American households.

The species is a tender one and could only succeed in the frostless regions of the country, but its characters as a shade or avenue tree should win for it a place among the ornamentals of the subtropical zone.

According to the conservator of forests of Cape Colony, Mr. D. E. Hutchins, the Kafir plum is a large timber tree of the eastern provinces and produces a useful wood that is almost indistinguishable from mahogany, and which, like the latter, requires careful seasoning.

THE ROOI-BLOEM, A NEW CORN PARASITE.

Plant introduction concerns itself with calling to public notice plants which should not be introduced as well as those that are eligible for cultivation.

Professor MacOwan handed the writer the letters which are here reproduced, and which call attention in a forcible way to a parasite of the Indian corn plant which might prove a great pest if once introduced into our corn belt.

The plant has caused damage among the mealies (Indian corn) in Natal, and the Government entomologist, Mr. Fuller, has published in his reports notices of its ravages. While it appears to cause the most injury in poorly cultivated ground, and, in the opinion of Mr. Fuller, requires only clean culture to get rid of it, it is no doubt a pest that American corn growers should beware of introducing. The danger of its introduction seems quite remote, since no grain is imported from South Africa to America, but still it would be well to guard against any chance of its being introduced.
Trust For inclose government enough have i. am R. shall be eastern to is and clas.s it it the best. for hut lent rotting in intestinal parasitism. My Secretary immediately get the information in question. Sir: I am sending you per same post a box containing a weed forwarded to me for identification. As we are at present without a botanist, I trust you will kindly help me in the matter. * * * For your fuller information I inclose the letter which accompanied the specimen.

I have the honor to be, sir, your obedient servant,

Professor MacOWAN, Cape Town.

[Inclusion]

SANDRACH, AMSTERDAM P. O., February 15, 1903.

Sir: I am sending you by this post a box containing a weed which is very prevalent on this farm. The Dutch call it "Rooi-bloem." When it appears among mealies it immediately kills the mealies. I have a field of over 40 acres which had a first-class crop of mealies three weeks ago; since then this "Rooi-bloem" has appeared, and I am doubtful if I shall get five bags off the whole field. The Dutch say there is no cure for it, and nothing can be done to eradicate it; but I can not find out whether anything has been tried. Will you be good enough to inquire if any known cure exists? It is said that "Rooi-bloem" only affects mealies. I have been trying to get oats for sowing in April, but can not get any "Africander" oats.

Yours, faithfully,

G. S. Leslie.

SECRETARY LAND BOARD, PRETORIA.

CAPE GOVERNMENT HERBARIUM,
Cape Town, February 28, 1903.

My dear Sir: I am in receipt of your letter of the 24th instant respecting a weed doing mischief in mealie crops, and of the sample belonging thereto.

The plant is a semiparasite, Striga coccinea Bth., and is not infrequent on our eastern frontier. Its habits resemble those of Rhinanthus crista-galli L., the "yellow rattle," and Melampyrum pratense L., in that it is able to live easily on its own roots like other normal plants, but also to attach itself to those of more succulent neighbors and draw surreptitiously upon their food material. It will work when it must, but prefers the easier life of a predatory parasitism.

As to extirpation of this showy interloper, advise your correspondent to give up for the present the culture of cereals upon the acreage infested with Striga, so that the parasite shall find no host to receive it, and perseveringly plow and cross plow, following with the harrow to get the weeds into heaps for drying and burning. A crop of totally different character, such as lucerne, for instance, would be best. But if local conditions do not allow of this, a double cropping with rape, to be grown on till fit for stock food, fed off, and then turned in to make way for the second crop suggests itself. The object is to give no chance to the Striga to renew its parasitism. The seed of the Striga is small and tenacious of life, hence the repeated working of the soil is important. Also it would be well to use kraal manure in place of stable dung. It is astonishing what a number of weed seeds pass through the intestinal tract of the horse, and since we very rarely keep his contribution to the fertility of the farm long enough to insure their being killed out by a proper rotting down, we innocently sow a crop of weeds along with the manure. This is the secret of the spread of "zuuring" far and wide.
Will you hereafter let me know what is decided on and what the results amount to? I will consult our recently arrived agricultural assistant, and will let you know sharp whether he has anything different to recommend.

Remaining, my dear sir, yours, faithfully,

R. A. Davis, Esq., Pretoria.

P. MacOWAN.

THE NATAL PINEAPPLE.

The common pineapple of Natal, which is served everywhere in the colony on private and hotel tables, is one of the most satisfactory varieties of this fruit in the world.

Mr. Lathrop, who has traveled for many years in pineapple-growing countries, found the Natal pine one of the most delicious and in certain respects the most satisfactory of any which he had ever eaten.

This variety is a small one, the fruit often not being over 6 inches long, but this is one of its desirable characters. It is just large enough to serve as an individual fruit at a dinner table, and the result is that in Natal one is given a whole pineapple and prepares it himself, instead of a slice from a fruit that has been prepared in the kitchen and in which fermentation has already set in.

The form of this fruit is in all ways satisfactory. It has a small cluster of leaves at the apex, just large enough to serve as a good handle when you are preparing it for eating. The seed cavities are small and do not enter a great distance into the fruit. The skin is thin and easily cut off with a sharp knife. The flesh, which has a golden-yellow color when ripe, is so crisp and brittle that you can break it away from the slender core with a fork almost as easily as you could tear an apple to pieces. Many pines having a deliciously flavored flesh are so tough and full of fiber that it is only with difficulty that portions can be separated from the core for eating. This character of tender, fiberless flesh is possessed by the Natal pine to a very marked degree, and especially recommends it to people whose delicate digestion prohibits their eating the ordinary sorts, which contain more or less fibrous matter.

As regards flavor this variety leaves little to be desired. It has the characteristic pineapple taste, is deliciously sweet, and compares in these characters very favorably with the best hothouse pines. It may not be quite so juicy as the latter, but this character can scarcely be considered an objection to it.

No pine that has come to our attention has so little core to it as this Natal sort. Some fruits have scarcely any core, the pencil-thick center part itself being tender enough to eat, and as a rule the core spindle which one discards in eating is not over a half inch in diameter.

According to those with whom the writer talked the origin of this Natal pine is not known, though it has been in cultivation many years in the colony. Some time ago the Government, under the impression
that foreign varieties were better than their own, introduced suckers of the Ceylon and other larger fruited sorts for trial. These introductions have produced no effect upon the cultivation of this native sort, I am informed, and the "common pine" is still the great market variety of South Africa.

This Natal variety is so remarkable that suckers for introduction into America would have been secured had not many of the fruits seen in the markets and on the hotel tables been affected with what appears to be a disease; and although the contagious character of this malady or even its determination as of fungus or bacterial origin could not be decided, it was deemed best to take no chances of introducing it into our pineapple plantations.

The fruits affected by this disease have generally soft spots on them near the base, which, when cut into, are found to reach some distance into the flesh. The small cavities characteristic of the outer part of the pine are in these affected areas of a peculiar white color. This appearance resembles somewhat that produced by a felt of very fine fungous mycelium, but with a high-power hand lens no mycelial filaments could be detected. The same white color is also often produced in fruit flesh by the drying out of the juicy cells, and I am inclined to think that empty air-filled cells are the cause of the snowy-white appearance in this case. The flesh about the diseased areas is soft and juicy, but in none of the fruits examined was there any dark discoloration such as characterizes the pineapple disease described from Queensland and which is reported to be caused by the conidial, Fusarium-like form of some Ascomycete. This Natal malady does not agree with the description of the Queensland disease, and, if it proves to be a fungous disease at all, will probably be found to be caused by some new species of fungus.

A pine which is probably identical with this Natal variety is grown extensively in the eastern provinces of Cape Colony. It is there cultivated on the hillsides at a considerable altitude and not on the level plains, and it is grown in such quantities that the markets everywhere are overstocked with it. Pineapples are the cheapest fruit in South Africa.

Some of these eastern province pineapples were sent for by the Cape department of agriculture in order that we might compare them with the Natal variety. These, although not quite so luscious as those eaten in Natal, were evidently the same sort, and the very slight inferiority in flavor might be easily explained by the fact that the eastern-province fruits were picked before becoming quite ripe in order to ship well, while the Natal ones came more directly from the fields.

Through the department of agriculture a number of suckers of this eastern-province pineapple were ordered after it was ascertained that
the disease which affected the Natal fruits was unknown there. These were to be sent from perfectly healthy plantations and are unquestionably safe for introduction; but in order to make doubly sure of not introducing any pernicious pests, the introduced suckers will be grown apart from the commercial plantations and carefully watched.

According to Mr. Malley, the Assistant Cape Entomologist, there are, in the eastern provinces, plantations in which pines do not grow well and some situations where pineapple growing has had to be abandoned. Whether any specific disease is the cause of this or not is a disputed question. A careful examination on his part failed to reveal any cause, and it seems most likely that unsuitable physical conditions will account for the failure of the fruit in these situations.
IV. CONGRESSIONAL SEED AND PLANT DISTRIBUTION CIRCULARS, 1902-1903. * 

[Circular sent to Senators, Members, and Delegates in Congress.] 

PLAN OF DISTRIBUTION AND ALLOTMENTS OF CONGRESSIONAL SEEDS AND PLANTS, 1902-1903. 

Some changes in the plan of conducting the Congressional distribution of seeds, plants, bulbs, etc., during the fiscal year 1902-1903 have been approved by the Honorable Secretary of Agriculture, and in order to aid you in preparing addressed franks your attention is respectfully called to the changes set forth below. 

![Map showing the districts into which the United States has been divided for seed distribution purposes.](image) 

**Division of the country.**—With a view of handling the seed to better advantage the country has been divided into six districts, and varieties of seeds and plants particularly adapted to each district will 

*This publication consists of a number of circulars prepared by different members of the scientific force of the Bureau of Plant Industry and one prepared by the Chief of the Bureau of Soils. These circulars were originally printed to accompany the seeds sent out through the Congressional distribution and consist of descriptions of varieties and directions for their culture. Many of these contain matter that should form part of the permanent records of the Department, and they have therefore been collected for publication in this form.—A. J. Pieters, Botanist in Charge of Seed and Plant Introduction and Distribution, Washington, D. C., May 12, 1903.*
be distributed therein. The accompanying small map shows the manner in which the divisions have been made.

Vegetable seeds.—There will be, as usual, a distribution of miscellaneous vegetable seeds, and in addition it is planned to furnish a limited number of packages of novelties—that is, seeds of varieties either new or little known and of peculiar merit for distribution in each locality. The miscellaneous vegetable seeds will be put up as usual, 5 packets in a package, and each Senator, Member, and Delegate in Congress will have 12,000 such packages to his credit. There will be 500 packages containing the novelties, each package containing 5 packets. The novelties will be accompanied by a circular describing the varieties in full and giving directions for culture and use. There will also be a franked postal card for each collection of the novelties, so that the recipient may, if he desires, signify his willingness to make a report to the Department on the seeds received.

Flower seeds.—The number of packages of flower seeds allotted to each Senator, Member, and Delegate in Congress has been increased to 500, and arrangements have been made whereby members having city constituents may exchange vegetable seeds for flower seeds, if they so desire. Details of this arrangement will be furnished later. A special collection of flower seeds will be prepared for those having strictly city constituents, the varieties chosen being suitable for window boxes, lots, and small dooryards.

Cotton and tobacco.—The plan adopted last year of putting up special collections of cotton and tobacco best adapted to the districts into which they are sent will be continued. This work has proved very satisfactory, as through it many valuable varieties have been distributed.

Grass seed and forage crops.—Plans for the distribution of these seeds have not yet been fully matured, and a later announcement will therefore be sent out as soon as complete arrangements are perfected.

Plants, trees, and grapevines.—The distribution of plants, trees, and grapevines will be similar to that of last year, excepting that the number of trees will be increased to 100 for each Senator, Member, and Delegate. Full information as to the character of the trees, plants, etc., will be forwarded later.

Bulbs.—These will be ready for distribution early in November, and they should be distributed promptly in order to secure the best results. Due notice will be forwarded when the bulbs are received.

Loose packets of vegetable seed.—In order to enable Senators, Members, and Delegates to quickly meet small miscellaneous demands for vegetable seed, loose packets of the assortments put up for general distribution will be sent to committee rooms, or elsewhere in Washington, upon receipt of proper orders. Envelopes for forwarding these packets through the mails will also be furnished. This plan will make it practicable to send out packages containing more than five
packets, if it is desired to do so. In no case, however, can the Department put up such packets, as the large number of packages to be distributed makes it necessary to use uniform numbers.

_Franks._—The present session of Congress authorized the Public Printer to furnish the Secretary of Agriculture with the franks of Senators and Members necessary for sending out the seeds. Arrangements have therefore been made for securing franks with the facsimile signatures of Senators and Members, together with their respective States, printed thereon. These franks will be furnished at once, in sufficient quantity for vegetable and flower seeds, upon request made to the Secretary of Agriculture. With this arrangement there will be no necessity for using document slips, and all of those made for the seed work will be of uniform size and style.

_Southern distribution._—It is planned to make the distribution in sections 1 and 2 at an earlier date than heretofore, and to this end arrangements have been made to begin the work in September. In order to do this, members from these sections are earnestly requested to turn in their addressed slips as early as possible.

The following statement shows the amounts of seeds, bulbs, plants, and trees, so far as the allotments have been made, for the fiscal year 1902-3.

Each Senator, Member, and Delegate will receive:
- Vegetable seed, 12,000 packages, 5 papers each.
- Novelties, vegetable seed, 500 packages, 5 papers each.
- Flower seed, 500 packages, 5 papers each.
- Tobacco seed, 110 packages, 5 papers each, to districts growing tobacco.
- Cotton seed, 70 packages, 1 peck each, to districts growing cotton.
- Lawn grass seed, 30 packages.
- Forage crop seed, allotment not yet made.
- Sorghum seed, allotment not yet made.
- Sugar-beet seed, allotment not yet made.
- Bulbs, 10 boxes, 35 bulbs each; or 20 boxes, 17 bulbs each.
- Grapevines, 8 packages, 5 vines each.
- Strawberry plants, 10 packages, 15 plants each.
- Trees, 20 packages, 5 trees each.

_Note._—One frank will be required for each package given above, and if more than one package is to be sent to one individual it will be necessary to have an addressed frank for each package. The smallest mail sacks used hold approximately 100 packages of vegetable or flower seed, and if it is desired to send less than this number to any one individual it will be necessary, in order to meet the post-office requirements, to have an addressed frank for each package. Over 100 packages, however, may be sent under one addressed frank, provided blank facsimile slips, to the number of packages desired.
accompany the address. In other words, if it is desired to send 200 packages of seed to one individual, one addressed frank and 199 blank franks, with the name of the Senator, Member, or Delegate printed thereon, will answer.

In sending addressed slips to the Department, please, in every case, plainly mark each lot with the name of the seeds or plants the slips are to cover, otherwise the Department will be unable to tell what is wanted.

Respectfully submitted.

B. T. GALLOWAY,
Chief of Bureau.

Approved:
JAMES WILSON, Secretary.

WASHINGTON, D. C., May 28, 1902.

[PARTIAL TEXT OMITTED]

DISTRIBUTION OF NOVELTIES AND SPECIALTIES.

SECTION 1.

The varieties included in this special distribution are either new or are not as well known as they should be. The seeds are sent out this year, accompanied by full descriptions of the varieties, in the hope that those who receive them will report the results of their trial to the Department. In making the report, please use the blanks accompanying this circular and return them in the inclosed franked envelope, which requires no postage.

CORN.

Trucker's Favorite.

A variety of field white dent corn, introduced in 1899 by T. W. Wood & Sons, which is recommended by them for table use. It has found some favor as a substitute for sweet corn, but the quality is poor and decidedly inferior to varieties of sweet corn, though much better than the ordinary varieties of field corn. It possesses the advantage over sweet corn in that it can be planted earlier, is hardier, and can be grown successfully sometimes where sweet corn does not grow well. In these respects it resembles the Early Adams or Burlington field corn, which is used so largely as sweet corn, but differs from it principally in being larger eared and later. It is second early in season and follows immediately after Early Adams. The habit of the plant is the same as field corn, and the ears are 14-rowed and handsome. More especially adapted for large truckers than for home gardeners to whom quality is more of a consideration than hardiness.

Seed furnished by T. W. Wood & Sons, Richmond, Va.
BEET.

-Crimson Globe.

An entirely distinct variety introduced in 1900 by Peter Henderson & Co.

Different from other kinds principally in its deep dark crimson color, and valuable on this account as well as for earliness, beautiful globe shape, and perfectly smooth roots, which are entirely free from root hairs, rootlets, and markings. The taproot is also very fine and slender and the top very smooth, with small crown. The roots are, however, very small, but, the leaves being also small and very erect in habit, the plants can be grown very close together and large crops obtained. The leaves are dark green in color. The flesh is a deep crimson and beautifully zoned with dark crimson and a lighter shade; the quality is very sweet and tender, never coarse nor woody. The season is about the same as Detroit Dark Red.

Seed furnished by T. W. Wood & Sons, Richmond, Va.

LETTUCE.

Wood's Cabbage.

This appears to be a strain of the well-known Hubbard's Market and was named and introduced in 1884 by T. W. Wood & Sons, of Richmond, Va. This is not at all a new variety or even a distinct sort, but is deserving of attention as an especially pure and even stock of Hubbard's Market, from which it was probably developed.

The plant is medium early, medium large, thick-leaved, very solid and compact, strictly cabbage-heading in habit, and medium dark solid green in color. It is a good all-round variety, answering splendidly for both forcing under glass and growing outdoors either in early spring or midsummer. The quality is very fine, being tender and sweet and of a slightly buttery flavor. The plants are hardy and slow to go to seed.

Seed furnished by T. W. Wood & Sons, Richmond, Va.

SQUASH.

Wood's Earliest Prolific.

Originated with market gardeners in Hanover County, Va., and introduced by T. W. Wood & Sons in 1897. It is similar in all respects to the well-known White Bush Scallop, but is said by the originators to be a week to ten days earlier and with scallops not quite so decided and more evenly rounded on the edge.

This variety is a type of the summer squash seen everywhere very early in our markets, and known as cymling in some places and patty-pan in others. The plants are strictly bush in habit and the fruits
flattish and round in shape, with center enlarged and margins flattened and scalloped. In color the fruits are a creamy white, the surface is very smooth, and the rind is exceedingly hard when the fruit is dead ripe. This is the earliest squash obtainable, and though of good quality it is not equal to the winter varieties which are not obtainable till much later in the season.

Seed furnished by T. W. Wood & Sons, Richmond, Va.

**TOMATO.**

**Sparks's Earliana.**

Originated by George C. Sparks, of Philadelphia, and introduced in 1900 by Johnson & Stokes of the same city.

This variety is unquestionably an improvement in extra early tomatoes. While it is just as early as Atlantic Prize and similar sorts, which have formerly held the lead for smooth early tomatoes, it is an improvement on them in smoothness and size, qualities which are generally gained at the expense of earliness. The fruits are the same bright red color and flattened globe shape as Atlantic Prize, but they are a little larger in size and a considerably larger per cent of them are smooth and salable in the best markets.

The vines have fine foliage, are very open in habit, productive, and require but a short time to mature the season's crop.

Seed furnished by T. W. Wood & Sons, Richmond, Va.

A. J. Pieters, Botanist in Charge.

B. T. Galloway, Chief of Bureau.

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[Circular sent to recipients of seeds of novelties and specialties included in Section 2 of the scheme of distribution.]

**SECTION 2.**

The varieties included in this special distribution are either new or are not as well known as they should be. The seeds are sent out this year, accompanied by full descriptions of the varieties, in the hope that those who receive them will report the results of their trial to the Department. In making the report, please use the blanks accompanying this circular and return them in the inclosed franked envelope, which requires no postage.

**BEAN.**

**Jones's Stringless Wax.**

Originated by A. N. Jones, of Leroy, N. Y., and introduced by American seedsmen in 1898. It is the result of crossing the Yosemite Wax with a white-seeded cross of the Ivory Pod Wax, and combines the superlative quality and fleshy, absolutely stringless pods of the former with the great productiveness and hardiness of the latter. The
"shy" bearing and ill-shaped pods of the Yosemite are eliminated, while the seeds being white makes it especially valuable to market gardeners who wish to use it as a shell bean, in case the marketing of string beans proves unprofitable. The pods are very beautiful, of a waxy white color, cylindrical in shape, and of medium size. The plants are very early, very dwarf in habit, and run remarkably even and pure. This variety is similar to the recently introduced Golden Crown Stringless, and also to the old and well-known Challenge Black Wax, from which it differs principally in color of seed and larger vine.

Seed furnished by D. M. Ferry & Co., Detroit, Mich.

**ONION.**

**Southern Grown Yellow Globe Danvers.**

This seed is said by the grower to be specially adapted for the Southern States, and to make better bulbs when planted in the South than seed grown in California even or other sections of the country.

The variety is the old and well-known yellow sort, grown so much more extensively than any other and seen everywhere in our markets. It is deeper in shape than the Yellow Danvers or Flat Danvers, but otherwise is the same. The bulbs are a flat globe shape, of medium size, intermediate in season, medium yellow in color, and of a mild flavor. The variety is hardy, productive, a good keeper, and a good general purpose sort.

Seed furnished by T. W. Wood & Sons, Richmond, Va.

**MUSKMELON.**

**Rocky Ford.**

This variety is a strain of the old and well-known Netted Gem, and has been recently developed and grown in immense quantities at Rocky Ford, Colo., whence it has been shipped extensively to all the eastern and northern markets. The variety has been made extremely popular by the Rocky Ford growers, as much on account of the careful shipping they have practiced as for the fine melons they have been able to produce in their ideal melon-growing country. The development of the variety is obscure and disputed. It was first introduced by seedsmen in 1899.

The melon is very early and productive, and the fruit is oval shaped, shallow ribbed, densely netted, small in size, and mottled green and yellow in color. The flesh is green, of the very best quality, and, though not as rich as some others, is not surpassed in sweetness by any, while it is uniformly good and more universally liked than any other.

This seed was carefully selected by D. V. Burrill, of Rocky Ford, Colo., from melons of uniform size that were ideal in every particular.
MISCELLANEOUS PAPERS.

TOMATO.

Quarter Century.

Originated in Monmouth County, N. J., in 1896 by Dr. William Van Fleet, and introduced in 1900 in trial packets by W. Atlee Burpee & Co. In the following year it was named Quarter Century. It appeared as a sport in the third generation from a cross between Lorillard, a bright scarlet fruit of the ordinary type of foliage, and Dwarf Champion, a purplish-red fruit of dwarf habit.

The variety is unquestionably, as claimed by the introducer, a valuable one, and larger in vine, more productive, and larger fruited than Dwarf Champion, which is the recognized standard dwarf variety. It differs also in being a bright scarlet instead of purplish red. The fruits are medium large, very deep or nearly round in shape, perfectly smooth, and of high quality. It is most like Dwarf Aristocrat and Dwarf Stone, but much larger fruited than the former and not quite so deep scarlet in color as the latter. It is claimed to be more dwarf, compact, and erect in habit than any other bush variety. It can be planted as close as $2\frac{1}{2}$ feet apart each way.

Seed furnished by T. W. Wood & Sons, Richmond, Va.

RADISH.

White Icicle.

Originated by a German grower several years previous to its introduction into this country in 1899 by J. M. Thorburn & Co.

This variety is a decided acquisition to our list of radishes. It is a long, pure white sort, especially superior to other kinds in its good size and length, combined with earliness and strikingly beautiful color, which is of a rich glossy white, entirely free from purple or yellow tints, and very much the same clear white at the top as at the bottom. The stocks run very even in both color and shape, and in the latter respect are very beautiful and different from other long sorts in retaining their fullness to the bottom. The roots are of the very highest quality and rich, tender, and sweet. The plants remain fit for use fairly long before shooting to seed.

Seed furnished by T. W. Wood & Sons, Richmond, Va.

A. J. Pieters, Botanist in Charge.

B. T. Galloway, Chief of Bureau.

[ Circular sent to recipients of seeds of novelties and specialties included in Section 3 of the scheme of distribution. ]

SECTION 3.

The varieties included in this special distribution are either new or are not as well known as they should be. The seeds are sent out this year, accompanied by full descriptions of the varieties, in the hope
that those who receive them will report the results of their trial to the Department. In making the report, please use the blanks accompanying this circular and return them in the inclosed franked envelope, which requires no postage.

MUSTARD.

Ostrich Plume.

Originated in Augusta, Ga., and introduced in 1897 by the N. L. Willet Drug Company of the same city.

It is claimed by the introducer to be the most beautiful and perfect mustard in cultivation, and as pretty as an ornamental plant. It is described as a large plant, often weighing as much as 5 or 6 pounds, and with tender plumes, very long and finely crimped.

Seed furnished by F. Barteldes & Co., Lawrence, Kans.

BEANS.

Wood's Earliest Hardest.

Introduced by T. W. Wood & Sons in 1893, and said by them to resemble the well-known Early Mohawk.

The claims for this variety made by the introducers are extreme earliness and hardiness, great productiveness, and fine quality. It is said to excel in these qualities any variety in cultivation; to be able to stand a light frost without injury, and to stand early planting better than any other variety; also on account of its productiveness to be suitable for a main crop or for late planting. The pods are extremely tender and make good snaps, and the dry beans are suitable for winter use as shell beans. The pods are described as very large, long, and flat, and the seeds as white in color.

Seed furnished by T. W. Wood & Sons, Richmond, Va.

LETTUCE.

All Seasons.

A very desirable variety introduced in 1897 by J. C. Vaughan, of Chicago, Ill., but it seems never to have gained any general recognition. Excepting that the seed is black instead of white, it might very generally pass as identical with the well-known Deacon, but it differs from that variety in a number of particulars, the most important of which are its slightly larger size, later season, and rounder head. Where Deacon is liked this variety should be tried, for under some conditions it grows better than the Deacon, though generally it is not so sure a header.

All Seasons is a large, thick-headed, rather soft, but strictly cabbage-heading variety, light green in color, and medium late in season. The quality is very fine, of a soft texture and buttery flavor, and
though it can hardly be said to be strictly delicate in flavor, it is absolutely free from coarseness or bitterness.

Seed furnished by Vaughan's Seed Store, Chicago, Ill.

**MUSKMELON.**

**Rocky Ford.**

This variety is a strain of the old and well-known Netted Gem, and has been recently developed and grown in immense quantities at Rocky Ford, Colo., whence it has been shipped extensively to all the eastern and northern markets. The variety has been made extremely popular by the Rocky Ford growers as much on account of the careful shipping they have practiced as for the fine melons they have been able to produce in their ideal melon-growing country. The development of the variety is obscure and disputed. It was first introduced by seedsmen in 1899.

The melon is very early and productive, and the fruit oval shaped, shallow ribbed, densely netted, small in size, and mottled green and yellow in color. The flesh is green, of the very best quality, and, though not as rich as some others, is not surpassed in sweetness by any, while it is uniformly good and more universally liked than any other.

This seed was carefully selected by D. V. Burrill, of Rocky Ford, Colo., from melons of uniform size that were ideal in every particular.

**WATERMELON.**

**Eden.**

Originated by Mr. C. H. Mathis, of South Carolina, a large Southern melon grower, and introduced in 1900 by T. W. Wood & Sons. It is said by the introducers to be a cross of the Kolb's Gem and Rattlesnake. It very closely resembles the former, but is superior to it in its larger size, brighter striping, and more symmetrical shape. It also resembles the well-known Dixie and recently introduced Iceberg, but differs from them as well as from Kolb's Gem in the color of seeds, which are white instead of mottled grayish-black, as in these varieties. In what further respects, if any, it differs from Iceberg our trials have not yet fully demonstrated, but it is unquestionably shorter in shape than Dixie. The fruits are of mammoth size, short oval in shape, and brilliantly striped light and dark green. The variety is especially valuable as a shipper, but for home use other varieties of better quality are recommended. The quality is fair, but compared to the finer-grained sorts, such as Peerless and Round Light, it is coarse, stringy, and lacks in sweetness and richness.

Seed furnished by T. S. Williams, Columbia, S. C.

A. J. Pieters, Botanist in Charge.

Approved:

B. T. Galloway, Chief of Bureau.
SEED AND PLANT DISTRIBUTION.

[Circular sent to recipients of seeds of novelties and specialties included in Section 4 of the scheme of distribution.]

SECTION 4.

The varieties included in this special distribution are either new or are not as well known as they should be. The seeds are sent out this year, accompanied by full descriptions of the varieties, in the hope that those who receive them will report the results of their trial to the Department. In making the report, please use the blanks accompanying this circular and return them in the inclosed franked envelope, which requires no postage.

CORN.

Cosmopolitan.


This is an extra early variety, of good quality and fair-sized ear. It is not quite so early as Cory, First of All, and other first extra early varieties, but is of better quality and the ears are larger. The kernels are wrinkled, very large, broad, flat, and short. Though not in the least flinty, the seed germinates very well, and can be sown earlier than the later and more wrinkled varieties. The ears are 10 and 12 rowed, very well filled, about the same diameter from end to end, and very handsome.


LETTUCE.

Iceberg.

Originated in Italy, and first introduced into this country in 1894 by W. Atlee Burpee & Co. Marblehead Mammoth, which was introduced the following year, is sometimes thought to be the same. Undoubtedly stalks of the two are often interchanged, but the true Marblehead Mammoth is more crumpled in leaf and less heading in habit than Iceberg.

The variety is a very large, late, extremely hard, strictly cabbage-heading sort, light green in color. The leaf is very crumpled, slightly tinged with red, and very early at the margin. In quality it is very tender, crisp, and sweet, but not as delicate in flavor as some of the smaller and less coarse-growing sorts. It is not suitable for forcing, but does well outdoors and stands the heat well. The well-known Hansen and New York varieties are very much like it in all respects except color.


MUSKMELON.

Defender.

This desirable new variety is a result of continued selection of Paul Rose with the especial view of developing fine quality, thick meat, and 27609—No. 25—03—3
thin rind. It was first introduced in 1901 by D. M. Ferry & Co., by whom it was originated. The fruits resemble Paul Rose more than any other, and being considerably larger and more densely netted than that popular variety, it makes a valuable addition to our list of varieties.

The fruits are strikingly beautiful in appearance, and especially distinguished by regular oval shape, even shallow ribbing, thick netting, and rich mottled color. The flesh is of a deep red color, very sweet, rich, and melting, without the coarseness and stringiness of some of the large-growing, green-fleshed sorts. Being firm and solid, the fruits are well adapted for shipping. They are of medium size, and the plants are productive and early.

Seed furnished by D. M. Ferry & Co., Detroit, Mich.

RADISH.

White Icicle.

Originated by a German grower several years previous to its introduction into this country in 1899 by J. M. Thorburn & Co.

This variety is a decided acquisition to our list of radishes. It is a long, pure white sort, especially superior to other kinds in its good size and length, combined with earliness and strikingly beautiful color, which is of a rich glossy white, entirely free from purple or yellow tints, and very much the same clear white at the top as at the bottom. The stocks run very even in both color and shape, and in the latter respect are very beautiful and different from other long sorts in retaining their fullness to the bottom. The roots are of the highest quality, and rich, tender, and sweet. The plants are rather slow to shoot to seed and the roots are fit for use a fairly long time.


ONION.

Extra Early Brown Spanish.

This variety has been grown and selected for the past few years by C. C. Morse & Co., seed growers, Santa Clara, Cal., and is introduced for the first time this year. The accompanying description was furnished by the growers:

'This onion has been grown for many years in Australia, where it is used for a very early market variety. It is extremely early, and can be had in market at least four weeks before Early Yellow Cracker, Yellow Danvers, Australian Brown, Early Red Globe, or Extra Early Red Flat. It is a half-globe variety, and averages about 2½ inches in diameter. Its color is brown, much the same but a little lighter than Australian Brown. It is mild and sweet, and, while not a good onion for storage, keeps much better than the Bermudas or any of the early white onions. It ripens down evenly, and seldom has any scallions or
stiff necks. With us in California it was ready for market August 1—at least one month before the early varieties mentioned above—and now, October 13, it is still in very good condition for market."

Seed furnished by C. C. Morse & Co., Santa Clara, Cal.

A. J. Pieters, Botanist in Charge.

Approved:
B. T. Galloway, Chief of Bureau.

[Circular sent to recipients of seeds of novelties and specialties included in Section 4a of the scheme of distribution.]

SECTION 4a.

The varieties included in this special distribution are either new or are not as well known as they should be. The seeds are sent out this year, accompanied by full descriptions of the varieties, in the hope that those who receive them will report the results of their trial to the Department. In making the report please use the blanks accompanying this circular and return them in the inclosed franked envelope, which requires no postage.

CORN.

Metropolitan.

Introduced in 1898 by Peter Henderson & Co. as a variety combining earliness and good quality to a greater degree than any other. It is claimed to be not only sweet, but to possess also the richness of the later sorts. It is specially recommended to market gardeners as a shipper, and especially to those gardeners who supply the more critical trade. The plant is hardy, dwarf in habit, and extra early in season. The ears are medium sized, 10 to 12 rowed, well filled, and very handsome, with the broad, thick, shallow kernels of the extra early sorts.

LETTUCE.

Crisp as Ice.

Introduced by the Livingston Seed Company in 1895. Plant is intermediate in season, of medium size, dark-green color, very completely, sometimes almost wholly, washed with dark brown, but the inside leaves are well blanched to a light, bright green. The plant makes a firm and well-defined, somewhat ovate-shaped, cabbage head. The leaves, although very thick, are easily broken, and this, together with its unusually dark, somewhat dull brown color, make it both unfit for and unattractive as a general market garden sort. But for home use or where quality is important this variety is one of the very best. It is extremely tender and crisp and of an unusually delicate and sweet flavor, at the same time also slightly buttery.

Seed furnished by C. C. Morse & Co., Santa Clara, Cal.
MUSKMELON.

Defender.

This desirable new variety is a result of continued selection of Paul Rose with the especial view of developing fine quality, thick meat, and thin rind. It was first introduced in 1901 by D. M. Ferry & Co., by whom it was originated. The fruits resemble Paul Rose more than any other, and, being considerably larger and more densely netted than that popular variety, it makes a valuable addition to our list of varieties.

The fruits are strikingly beautiful in appearance, and especially distinguished by regular oval shape, even shallow ribbing, thick netting, and rich, mottled color. The flesh is of a deep red color, very sweet, rich, and melting, without the coarseness and stringiness of some of the large-growing, green-fleshed sorts. Being firm and solid, the fruits are well adapted for shipping. They are of medium size, and the plants are productive and early.

Seed furnished by D. M. Ferry & Co., Detroit, Mich.

BEET.

Crimson Globe.

An entirely distinct variety introduced in 1900 by Peter Henderson & Co.

Different from other kinds principally in its deep dark crimson color, and valuable on this account as well as for earliness, beautiful globe shape, and perfectly smooth roots, which are entirely free from root hairs, rootlets, and markings. The taproot is also very fine and slender and the top very smooth, with small crown. The roots are, however, very small, but the leaves being also small and very erect in habit the plants can be grown very close together and large crops obtained. The leaves are dark green in color. The flesh is a deep crimson and beautifully zoned with dark crimson and a lighter shade; the quality is very sweet and tender, never coarse nor woody. The season is about the same as Detroit Dark Red.


ONION.

Extra Early Brown Spanish.

This variety has been grown and selected for the past few years by C. C. Morse & Co., seed growers, Santa Clara, Cal., and is introduced for the first time this year. The accompanying description was furnished by the growers:

"This onion has been grown for many years in Australia, where it is used for a very early market variety. It is extremely early, and
can be had in market at least four weeks before Early Yellow Cracker, Yellow Danvers, Australian Brown, Early Red Globe, or Extra Early Red Flat. It is a half-globe variety, and averages about 2½ inches in diameter. Its color is brown, much the same but a little lighter than Australian Brown. It is mild and sweet, and while not a good onion for storage, keeps much better than the Bermudas or any of the early white onions. It ripens down evenly, and seldom has any scallions or stiff necks. With us in California it was ready for market August 1, at least one month before the early varieties mentioned above, and now, October 13, it is still in very good condition for market."

Seed furnished by C. C. Morse & Co., Santa Clara, Cal.

A. J. Pieters, Botanist in Charge.

Approved:

B. T. Galloway, Chief of Bureau.

[Circular sent to recipients of seeds of novelties and specialties included in section 5 of the scheme of distribution.]

SECTION 5.

The varieties included in this special distribution are either new or are not as well known as they should be. The seeds are sent out this year, accompanied by full descriptions of the varieties, in the hope that those who receive them will report the results of their trial to the Department. In making the report, please use the blanks accompanying this circular and return them in the inclosed franked envelope, which requires no postage.

MUSKMELON.

Rocky Ford.

This variety is a strain of the old and well-known Netted Gem, and has been recently developed and grown in immense quantities at Rocky Ford, Colo., whence it has been shipped extensively to all the eastern and northern markets. The variety has been made extremely popular by the Rocky Ford growers as much on account of the careful shipping they have practiced as for the fine melons they have been able to produce in their ideal melon-growing country. The development of the variety is obscure and disputed. It was first introduced by seedsmen in 1899.

The melon is very early and productive, and the fruits are oval shaped, shallow ribbed, densely netted, small in size, and mottled green and yellow in color. The flesh is green, of the very best quality, and, though not as rich as some others, is not surpassed in sweetness by any, while it is uniformly good and more universally liked than any other.

This seed was carefully selected by D. V. Burrill, of Rocky Ford, Colo., from melons of uniform size that were ideal in every particular.
BEAN.

Thorburn's Prolific Market.

A foreign type of bean obtained by J. M. Thorburn & Co. from Vienna, Austria, and first introduced by them in 1894.

It is claimed by the introducers to be an enormously productive variety, bearing its pods in thick clusters of 35 to 40 pods to a plant, and exceedingly vigorous, healthy, and remarkably rust proof. The pods are light green in color, very long and perfectly round in shape, solid fleshed, and of a very soft and marrowy texture. The vines are very large and erect in habit; the leaves, very dark; seeds, black; season, late. It is claimed by the originators that for productiveness, solidity of flesh, and roundness of pod it excels any variety now in cultivation.


TOMATO.

Success.

Originated in 1897 by M. M. Miesse, a market gardener and tomato specialist of Lancaster, Ohio. Introduced in 1900 by Wm. Henry Maule under the name of "Maule's 1900," and in the following year called "Success."

This is an excellent, very large, smooth, deep scarlet variety, similar to many other recently introduced varieties, such as Noble, Century, and Marvel, but said to be superior to them in productiveness, smoothness of fruit, and to be more free from any hard or green core. The variety does undoubtedly combine these qualities to a very large degree, and, as claimed, is of excellent quality and a splendid sort for either the canner, trucker, or private gardener. The foliage is of the common large-leaved kind, and the vines are strong and vigorous. The season is second early. The fruits are a deep flat globe shape, or as nearly globular in form as it is possible to obtain a large tomato.

Seed furnished by M. M. Miesse & Son, Lancaster, Ohio.

RADISH.

Glass.

A variety introduced by F. Barteldes & Co. and Northrup, King & Co., as claimed, about ten years ago, the former obtaining his seed from a Denver (Colo.) market gardener and the latter from Cincinnati market gardeners. The variety is considered by many to be identical with the Cincinnati Market and Long Scarlet Short Top varieties, but a few claim that it is not quite so long and that it possesses to a degree greater than Long Scarlet Short Top the peculiar transparency which gives rise to its name.
SEED AND PLANT DISTRIBUTION.

The roots are very long and tapering, exceedingly smooth, free from root hairs, of a brilliant scarlet color, making it altogether the most handsome and showy of the long red varieties. The variety is medium early in season and remains fit for use fairly long before shooting to seed. The flesh is mild and tender. As the tops are very small, the roots can be planted close together.

Seed furnished by Northrup, King & Co., Minneapolis, Minn.

SQUASH.

Golden Bronze.

This variety is the result of an accidental cross between the Bay State and Boston Marrow found by Mr. Aaron Low, of Hingham, Mass., in 1896. After being improved by Mr. Low this variety was sold to James J. H. Gregory & Son, who introduced it in 1899 as "No. 7," and in the following year named it "Golden Bronze." The variety is of the same general pointed oval shape as the Boston Marrow, viz., very sloping at stem end and almost blunt at blossom end. The surface is also wrinkled as in Boston Marrow, but in color is a dark grayish green, turning to a greenish bronze on the upper surface when fully ripe. The flesh is a bright golden yellow, fine grained, and of excellent quality. The variety is early, productive, hardy, and a good keeper.

Seed furnished by T. W. Wood & Sons, Richmond, Va.

Approved:

A. J. Pieters, Botanist in Charge.
B. T. Galloway, Chief of Bureau.

[Circular sent to recipients of seeds of novelties and specialities included in Section 5a of the scheme of distribution.]

SECTION 5a.

The varieties included in this special distribution are either new or are not as well known as they should be. The seeds are sent out this year, accompanied by full descriptions of the varieties, in the hope that those who receive them will report the results of their trial to the Department. In making the report please use the blanks accompanying this circular and return them in the inclosed franked envelope, which requires no postage.

BEAN.

Thorburn's Prolific Market.

A foreign type of bean obtained by J. M. Thorburn & Co. from Vienna, Austria and first introduced by them in 1894. It is claimed by the introducers to be an enormously productive variety, bearing its pods in thick clusters of 35 to 40 pods to a plant,
and to be also exceedingly vigorous, healthy, and remarkably rust proof. The pods are light green in color, very long, and perfectly round, solid fleshed, and of a very soft and narrow texture. The vines are very large and erect in habit, the leaves very dark, the seeds black, and season late. It is claimed by the originators that for productiveness, solidity of flesh, and roundness of pod it excels any variety now in cultivation.


**TOMATO.**

**SUCCESS.**

Originated in 1897 by M. M. Miesse, a market gardener and tomato specialist of Lancaster, Ohio. Introduced in 1900 by William Henry Maule under the name of “Maule’s 1900” and in the following year called “Success.”

This is an excellent, very large, smooth, deep scarlet variety, similar to many other recently introduced varieties, such as Noble, Century, and Marvel, but said to be superior to them in productiveness and smoothness of fruit and to be more free from any hard or green core. The variety does undoubtedly combine these qualities to a very large degree and, as claimed, is of excellent quality and a splendid sort for either the canner, trucker, or private gardener. The foliage is of the common large-leaved kind, and the vines are strong and vigorous. The season is second early. The fruits are a deep flat globe shape, or as nearly globular in form as it is possible to obtain a large tomato.

Seed furnished by M. M. Miesse & Son, Lancaster, Ohio.

**MUSKMELON.**

**Rocky Ford.**

This variety is a strain of the old and well-known Netted Gem, and has recently been developed and grown in immense quantities at Rocky Ford, Colo., whence it has been shipped extensively to all the eastern and northern markets. The variety has been made extremely popular by the Rocky Ford growers as much on account of the careful shipping they have practiced as for the fine melons they have been able to produce in their ideal melon-growing country. The development of the variety is obscure and disputed. It was first introduced by seedsmen in 1899.

The melon is very early and productive and the fruits oval shaped, shallow ribbed, densely netted, small in size, and mottled green and yellow in color. The flesh is green, of the very best quality, and, though not as rich as some others, is not surpassed in sweetness by any, while it is uniformly good and more universally liked than any other.

This seed was carefully selected by D. V. Burrill, of Rocky Ford, Colo., from melons of uniform size that were ideal in every particular.
A variety introduced by F. Barteldes & Co. and Northrup, King & Co., as claimed, about ten years ago, the former obtaining his seed from a Denver (Colo.) market gardener and the latter from Cincinnati market gardeners. The variety is considered by many to be identical with the Cincinnati Market and Long Scarlet Short Top varieties, but a few claim that it is not quite so long and that it possesses to a greater degree than the Long Scarlet Short Top the peculiar transparency which gives rise to its name.

The roots are very long and tapering, exceedingly smooth, free from root hairs, of a brilliant scarlet color, making it altogether the most handsome and showy of the long red varieties. The variety is medium early in season and remains fit for use fairly long before shooting to seed. The flesh is mild and tender. As the tops are very small, the roots can be planted close together.

Seed furnished by Northrup, King & Co., Minneapolis, Minn.

SQUASH.

Golden Hubbard.

A sport of the well-known Hubbard, introduced in 1896 by Storrs & Harrison Co. An exceedingly valuable introduction and entirely distinct. It is considered by many to be the best fall and winter variety yet introduced and has now become a standard sort. The variety is similar to the Hubbard, except in color, which is a deep orange yellow, with a slight greenish tinge at the extreme blossom end, and although somewhat smaller in size it is more productive than its parent. The variety is of large size, pointed oval in shape, extremely warty, and a good keeper. The flesh is fine grained, very dry, rich, sweet, and in color a deep orange extending clear to the rind, without the objectionable greenish tinge found in the Hubbard.


A. J. Pieters, Botanist in Charge.

Approved:

B. T. Galloway, Chief of Bureau.

[Circular sent to recipients of seeds of novelties and specialties included in Section 6 of the scheme of distribution.]

SECTION 6.

The varieties included in this special distribution are either new or are not as well known as they should be. The seeds are sent out this year, accompanied by full descriptions of the varieties, in the hope that those who receive them will report the results of their trial to the
Department. In making the report, please use the blanks accompanying this circular and return them in the inclosed franked envelope, which requires no postage.

PEA.

**Thomas Laxton.**

Originated by Messrs. Thomas Laxton & Co., of Bedfordshire, England, and first catalogued by American seedsmen in 1901. Said to be a cross between a seedling of Gradus and a seedling from the extra early varieties.

This is another of the new and very desirable varieties of the large-seeded, large-podded, extra early class of peas which have followed upon the introduction of the Gradus in 1897. It is very much like that variety, but is said to be slightly earlier and hardier. The pods, however, are shorter and not so large and handsome, while in color they are darker, and in shape square instead of pointed at the end. The quality is very good, but not equal to Gradus, and partakes more of the flavor of the ordinary extra early varieties. Its great value lies in its large showy pods, combined with extreme earliness and fair hardiness of plant.

Seed furnished by Northrup, King & Co., Minneapolis, Minn.

BEET.

**Ruby Dulcet.**

A very popular beet in England. First introduced in this country in 1899 by Johnson & Stokes.

An especially valuable introduction, and very distinct from other globe-shaped beets in its greater depth. The color is a deep red, the shape a deep globe, very full at the top and holding its size well to the bottom, while the surface is very smooth and entirely free from root hairs, rootlets, or markings. The leaves are medium dark red in color and being very small and erect in habit, the variety is therefore suitable for close planting. The season is early, or about the same as Detroit Dark Red. The flesh is very dark and zoned with deep red and a lighter shade; the quality is fine grained, sweet, and tender.

Seed furnished by Johnson & Stokes, Philadelphia, Pa.

TOMATO.

**Thorburn's Earliest.**

Originated by J. M. Thorburn & Co., and introduced by them in 1902. This variety was obtained by selection of a number of English
greenhouse sorts grown for several seasons out of doors in the vicinity of New York.

It is claimed by the introducers to be the earliest tomato grown and to be five days earlier than the Atlantic Prize, which is the most generally grown extra early sort. This variety is undoubtedly a splendid introduction and extremely early, but of small size. Compared to Atlantic Prize, it is considerably smaller in size but much superior to it in being smoother, less corrugated and scarred, and more of a globe shape. It is similar to Conference and to Bright and Early, but considerably earlier than either, and much larger than the latter. The plants have the fine leaf and habit of growth of the extra early varieties. The fruits are bright scarlet, flat globe shape, and perfectly smooth. Specially recommended for forcing, but a splendid outdoor sort also.


LETUCE.

Half Century.

A very old variety of foreign origin, seldom catalogued by American seedsmen. John Lewis Childs, of Floral Park, N. Y., it seems, was the first American seedsman to catalogue it, or at least the first to claim for it any special superiority.

The plant is very dark green in color, of a peculiarly loose, flabby, half-heading habit. It is difficult to make it head well under any conditions, and on account of its behavior in this respect, as well as its weak growth and decidedly inferior appearance, it will never be a general favorite. Its value lies solely in its extra fine quality, for it is exceedingly brittle and tender and of unsurpassed sweetness. The quality is of that delicacy which is free from the buttery quality of some kinds, and the hard crispness, the coarseness, and the strong, slightly bitter quality of some other kinds. The leaves, which are exceedingly brittle but thick, are easily broken. The variety will not stand the least transportation, and is suitable for the home garden only.

Seeds furnished by Vaughan's Seed Store, Chicago, III.

MUSKMELON.

Rocky Ford.

This variety is a strain of the old and well-known Netted Gem, and has been recently developed and grown in immense quantities at Rocky Ford, Colo., whence it has been shipped extensively to all the eastern and northern markets. The variety has been made extremely popular by the Rocky Ford growers as much on account of the careful shipping they have practiced as for the fine melons they have been able to
produce in their ideal melon-growing country. The development of the variety is obscure and disputed. It was first introduced by seedsmen in 1899.

The melon is very early and productive, and the fruits small and oval shaped, shallow ribbed, densely netted, mottled green and yellow. The flesh is green, of the very best quality, and, though not as rich as some others, is not surpassed by any, while it is uniformly good and more universally liked than any other.

This seed was carefully selected by D. V. Burrill, of Rocky Ford, Colo., from melons of uniform size that were ideal in every particular.

A. J. Pieters, Botanist in Charge.

Approved:
B. T. Galloway, Chief of Bureau

[Circular sent to recipients of seeds of novelties and specialties included in Section 6a of the scheme of distribution.]

SECTION 6a.

The varieties included in this special distribution are either new or are not as well known as they should be. The seeds are sent out this year, accompanied by full descriptions of the varieties, in the hope that those who receive them will report the results of their trial to the Department. In making the report please use the blanks accompanying this circular and return them in the inclosed franked envelope, which requires no postage.

PEA.

Prolific Early Market.

Originated by N. B. Keeney & Sons, and first introduced by A. W. Livingston & Sons and William Henry Maule in 1901. The variety is descended from a plant found by Mr. Keeney in Extra Early about twelve years ago.

This valuable acquisition to the extra early varieties resembles Alaska, and like it and other extra-early, smooth-seeded sorts is of poor quality but hardy, which latter characteristic enables it to be planted much earlier and ripened pods obtained far in advance of the less hardy but better quality peas. The pods are very much larger and contain more peas, and the plant is considerably more productive than other extra-early varieties, is a great improvement over them in many respects and only three or four days later. The vine is tall and slender like Extra Early, but considerably larger. The pods are of medium size, light green in color, round, straight, and attractive.

Seed furnished by A. W. Livingston & Sons, Columbus, Ohio.
SEED AND PLANT DISTRIBUTION.

BEET.

Ruby Delct.

A very popular beet in England. First introduced in this country in 1899 by Johnson & Stokes.

An especially valuable introduction, and very distinct from other globe-shaped beets in its greater depth. The color is a deep red, the shape a deep globe, very full at the top and holding its size well to the bottom, while the surface is very smooth and entirely free from root hairs, rootlets, or markings. The leaves are medium dark red in color, and being very small and erect in habit, the variety is therefore suitable for close planting. The season is early, or about the same as Detroit Dark Red. The flesh is very dark and zoned with deep red and a lighter shade; the quality is fine grained, sweet, and tender.

Seed furnished by Johnson & Stokes, Philadelphia, Pa.

TOMATO.

Thorburn's Earliest.

Originated by J. M. Thorburn & Co., and introduced by them in 1902. This variety was obtained by selection of a number of English greenhouse sorts grown for several seasons out of doors in the vicinity of New York.

It is claimed by the introducers to be the earliest tomato grown and to be five days earlier than the Atlantic Prize, which is the most generally grown extra-early sort. This variety is undoubtedly a splendid introduction and extremely early, but of small size. Compared to Atlantic Prize it is considerably smaller in size, but much superior to it in being smoother, less corrugated and scarred, and more of a globe shape. It is similar to Conference and to Bright and Early, but considerably earlier than either, and much larger than the latter. The plants have the fine leaf and habit of growth of the extra-early varieties. The fruits are bright scarlet, flat globe shape, and perfectly smooth. Specially recommended for forcing, but a splendid outdoor sort also.


LETTUCE.

Half Century.

A very old variety of foreign origin, seldom catalogued by American seedsmen. John Lewis Childs, of Floral Park, N. Y., it seems, was the first American seedsmen to catalogue it, or at least the first to claim for it any special superiority.
The plant is very dark green in color, of a peculiarly loose, flabby, half-heading habit. It is difficult to make it head well under any conditions, and on account of its behavior in this respect, as well as its weak growth and decidedly inferior appearance, it will never be a general favorite. Its value lies solely in its extra fine quality; for it is exceedingly brittle and tender, and of unsurpassed sweetness. The quality is of that delicacy which is free from the buttery quality of some kinds, and the hard crispness, the coarseness, and the strong, slightly bitter quality of some other kinds. The leaves, which are exceedingly brittle but thick, are easily broken. The variety will not stand the least transportation, and is suitable for the home garden only.

Seed furnished by Vaughan's Seed Store, Chicago, Ill.

MUSKMELON.

Rocky Ford.

This variety is a strain of the old and well-known Netted Gem, and has been recently developed and grown in immense quantities at Rocky Ford, Colo., whence it has been shipped extensively to all the eastern and northern markets. The variety has been made extremely popular by the Rocky Ford growers as much on account of the careful shipping they have practiced as for the fine melons they have been able to produce in their ideal melon-growing country. The development of the variety is obscure and disputed. It was first introduced by seedsmen in 1899.

The melon is very early and productive, and the fruits small and oval shaped, shallow ribbed, densely netted, mottled green and yellow. The flesh is green, of the very best quality, and, though not as rich as some others, is not surpassed by any, while it is uniformly good and more universally liked than any other.

This seed was carefully selected by B. V. Burrill, of Rocky Ford, Colo., from melons of uniform size that were ideal in every particular.

A. J. Pieters, Botanist in Charge.

Approved:

B. T. Galloway, Chief of Bureau.
The bulbs sent herewith are of three kinds, viz., (1) hyacinth, (2) tulip, and (3) narcissus.

To obtain the best results, plant the bulbs as soon as received, in soil well loosened to a depth of at least 10 inches, setting them as follows: The hyacinth bulbs 7 inches apart and 4 inches deep, the tulip bulbs 5 inches apart and 4 inches deep, and the narcissus bulbs about 10 inches apart and 5 inches deep. If the hyacinths or tulips are to be grown in pots or window boxes, use rich, well-drained soil; place the pots or boxes in a dark room or cellar for a month or more after planting, or until the roots are formed, and then bring them into the light. Keep the soil in these pots or boxes well watered, but avoid overwetting, otherwise the bulbs may rot.

The Bureau of Plant Industry has in progress investigations in the improvement of cotton, and as a foundation for such work it is necessary to determine the varieties best suited to each section of the cotton belt. The distribution of cotton seed is thus arranged with the view of furnishing growers with seed of new varieties to test in comparison
with the varieties they already grow. This will enable them to make comparisons and select varieties best suited to their climatic and soil conditions. Information regarding the success of varieties in different sections is as yet too meager to enable a judgment to be formed as to which will succeed best in a certain locality. In the distribution of cotton seed it is proposed to select, so far as possible, new and little-known varieties which have proved valuable in certain localities, and distribute the seed in such a way as to insure their being generally tested throughout the cotton States. It is intended at the end of the season to follow up each package with a circular in order to obtain information in regard to the success in various sections of the varieties distributed. Growers receiving the seed are urged to cooperate with the Department of Agriculture by making a careful test of the seed which is sent with this circular. In another part of the circular will be found descriptions of the varieties distributed and a statement of the points on which information is desired.

In the distribution the present season several special features have been introduced. The studies of the cotton industry which the Department has been prosecuting strongly indicate that the growing of long-staple cottons is destined to become much more general in the near future and should be encouraged. Seeds of Griffin and Allen Improved, two of the best long-staple Upland cottons, have thus been procured for distribution. A second special feature of the distribution the present season is the Rivers Sea Island cotton, a variety resistant to the serious malady known as wilt or black-root. This cotton has been produced as a result of breeding experiments conducted in conjunction with the Department of Agriculture. A special circular is sent out with the seed of this variety, and it is therefore not described herein. This seed will be distributed in the Sea Island sections of Georgia and Florida. Seabrook Sea Island cotton will also be sent to the same region.

The varieties of ordinary short-staple Upland cotton selected for distribution this year are Parker, Jones Improved, Excelsior, and King. The last-named variety has been procured particularly for distribution in the boll- weevil districts of Texas, because it is probably the earliest of all known varieties, and early ripening sorts have been found to escape damage by boll weevil to a large extent.

The varieties are to be distributed to the different Congressional districts as follows:

**Alabama:**
First, Third, Fifth, and Eighth districts: Jones and Allen.
Second, Sixth, Seventh, and Ninth districts: Excelsior and Griffin.
Fourth district: Parker and Excelsior.

**Arkansas:**
First, Second, Third, and Sixth districts: Parker and Allen.
Fourth and Fifth districts: Jones and Griffin.

**Florida,** First and Second districts: Seabrook and Rivers.
Mature unopened cotton bolls—Parker, Jones improved, Moore, Excelsior, King, and Seabrook Sea Island (natural size).
GEORGIA:
First, Second, and Eleventh districts: Seabrook and Rivers.
Fourth, Sixth, Seventh, and Ninth districts: Excelsior and Allen.
Third and Fifth districts: Parker and Jones.
Eighth and Tenth districts: Parker and Griffin.

LOUISIANA:
Third and Fourth districts: Excelsior and Allen.
Fifth and Sixth districts: Parker and Griffin.

MISSISSIPPI:
Second and Sixth districts: Jones and Griffin.
First, Third, Fifth, and Seventh districts: Parker and Allen.
Fourth district: Excelsior and Griffin.

NORTH CAROLINA:
First, Third, Fourth, and Eighth districts: Parker and Excelsior.
Second, Fifth, Sixth, and Seventh districts: Excelsior and Jones.

SOUTH CAROLINA:
First district: Parker and Griffin.
Third, Fourth, Fifth, and Sixth districts: Excelsior and Griffin.
Second and Seventh districts: Parker and Allen.

TENNESSEE:
Third and Fourth districts: Parker and Excelsior.
Fifth and Eighth districts: Jones and Griffin.
Sixth, Seventh, Ninth, and Tenth districts: Parker and Griffin.

TEXAS:
First, Second, and Thirteenth districts: Excelsior and King.
Third, Fourth, Eighth, and Tenth districts: Parker and King.
Fifth and Sixth districts: King and Allen.
Seventh and Ninth districts: King and Griffin.
Eleventh and Twelfth districts: Jones and King.

OKLAHOMA: Excelsior and Allen.

DESCRIPTION OF VARIETIES DISTRIBUTED.

SHORT-STAPLE UPLAND VARIETIES.

JONES IMPROVED.

This is a big-boll Upland cotton (Pl. I), said to have been introduced into America from Algiers by Wyche brothers about the year 1857. The history of the introduction, as given by Mr. J. F. Jones, who has been instrumental in bringing the variety into prominence, is as follows:

About 1853 two brothers of a family by the name of Wyche emigrated from Germany, one coming to the United States and the other going to Algiers, on the Mediterranean coast, to work for a French colony engaged there in growing cotton. About 1857 the Algerian brother sent a small package of cotton seed to his brother in the United States. Before the brother in this country had time to fully test the merit of the variety he died. The war between the States came on shortly afterwards, when neglect and lack of conveniences resulted in almost destroying any trace of the variety. In fox hunting over the Wyche plantation I discovered places here and there where there was a wonderful growth of this particular variety. By permission I went into the fields and selected some of the seed, having to assist me a Methodist minister by the name of Warren Beggarly, who later sold some of the seed of the variety to the Government. Beggarly died shortly afterwards and left the
work to me, and since 1877 I have been proprietor of the variety and have had charge of its distribution. From the records you will see that I have furnished seed of this variety to the Government since about 1884, and to our State agricultural farms since about 1877. I have preserved the variety and kept it pure.

Mr. Jones claims that this was the first big-boll, white-seeded cotton grown in this country, and that other big-boll types have been derived from it. Culpepper, a big-boll variety distributed last year, is said to be a hybrid of the Wyche (Jones Improved) and Dixon varieties. It has probably entered into the parentage of many of our best big-boll types.

The variety is recommended as deep-rooting, drought-resistant, and as withstanding adverse conditions with little injury. It is a large, robust, vigorous plant, producing heavily under ordinary conditions. It continues to grow late in the season and forms a good top crop when the conditions are favorable.

Plant vigorous and prolific, with wide spreading branches from near the base; upper branches usually short. Bolls large, 1 1/2 to 2 inches long, ovate, blunt pointed, 5-locked, opening well. Seeds 6 to 10 to the lock, medium large, weighing from 0.13 to 0.14 gram, covered with grayish fuzz, well covered with lint. Lint good for Upland, 1 to 1 1/4 inches in length, strong. Per cent of lint 31 to 32 under ordinary conditions. Season medium late.

The seed of this variety distributed was grown by James F. Jones, at Hogansville, Ga., in the season of 1902.

PARKER.

Parker cotton (Pl. 1) was originated by John M. Parker, sr., in Bolivar County, Miss., about 1868. It was produced by careful selection, and ever since its production has been grown on the extensive Parker plantations in preference to all other varieties. Mr. John M. Parker, jr., the present owner of the plantations, informs the writer that care has been exercised for years in selecting the seed and preserving the variety in a high state of productivity.

In a variety test at Columbia, S. C., in the season of 1902, this variety gave very excellent results. The plants were from 3 1/2 to 4 feet high, vigorous, and well fruited. In season it was one of the earliest of about fifty ordinary sorts. The lint is very good for an ordinary Upland variety, being strong, hard, silky, and above the ordinary in length, averaging on Mr. Parker's plantation from 1 1/2 to 1 3/4 inches long. Mr. Parker recommends the variety as hardy, vigorous, prolific, and easy to pick.

Plant of Peterkin type, having an erect central stem, with numerous lateral limbs. Bolls medium size, round or ovate, blunt-pointed, 5-locked, opening well. Seeds 7 to 9 per lock, medium size, gray, tufted, well covered. Lint long, 1 1/4 to 1 3/8 inches, white, strong. Per cent of lint, 31 to 33. Season medium early.

The seed distributed by the Department of Agriculture was grown by John M. Parker, jr., on the plantation on which the variety originated, at Maxime, Bolivar County, Miss.
SEED AND PLANT DISTRIBUTION.

EXCELSIOR.

Excelsior is a variety of Upland short-staple cotton (Pl. 1) which has become popular in certain parts of South Carolina, and was awarded a gold medal at the Charleston Exposition. The variety was produced in 1896 by taking seed from a sport of unknown parentage which exhibited desirable qualities. Since this time the seed has been selected with care to insure its coming true to type and to increase its production. Mr. Moore informs us that every year selections have been made from an experimental breeding patch, culling out inferior stalks and selecting seed from nothing but the best. Under this rigorous selection the plants, it is claimed, have increased in productivity and have become uniform in type, showing now little tendency to sport or revert to a poorer type.

This variety Mr. Moore recommends as being very prolific and giving large yields. In tests at Columbia, S. C., in the season of 1902, the plants averaged about 31 feet high and were well balled.

Some doubt exists as to what name can be correctly applied to this cotton. According to Prof. S. M. Tracy, in a statement published in Bulletin 33, United States Department of Agriculture, Office of Experiment Stations, issued in 1896, Mr. C. R. Ezell, of Eatonton, Ga., originated by selection from the variety New Era, a strain to which the name Excelsior was given. Mr. Moore’s Excelsior, according to his statement, was originated in 1896, the year of Professor Tracy’s publication. Mr. Ezell’s Excelsior would therefore have the priority of name. Owing to this confusion of names we would suggest that Mr. Moore’s Excelsior be referred to as Moore Excelsior, or simply as the Moore cotton.

Plant of Peterkin type, with one main stem and spreading lower limbs, the other lateral limbs being comparatively short. Shows some tendency to develop bolls in pairs or clusters. Bolls medium small, ovate or spherical, blunt pointed, 4 to 5 locked, opening well. Seeds small, weighing 0.09 to 0.10 gram, gray, tufted, 7 to 9 per lock. Lint, good ordinary short staple about 1 inch in length. Per cent of lint 32 to 33. Season medium.

The seed of this variety distributed was grown by Mr. C. F. Moore, Bennettsville, S. C., in the season of 1902.

KING.

King, or King’s Improved as it has been called, is a very early variety of Upland cotton (Pl. I), originated by T. J. King, of Louisburg, N. C. In attempting to improve the cotton grown on his plantation, Mr. King made tests of very many varieties, but found none that exactly met the requirements as he recognized them. “I therefore determined,” he states, “to try to mix the two kinds which, between themselves, appeared to possess all the essentials desired, and
get a composite cotton that combined the good qualities of both varieties." Such a combination he claims to have secured in his King's Improved. The variety has been widely distributed and tested, and is probably as generally known as any other cotton variety. It is very distinct from any other of the well-known varieties.

King is regarded as one of the best varieties for the northern part of the cotton belt, where the season is too short for late varieties. It is the variety most generally planted late in the spring, after oats, as so-called stubble cotton, its short season enabling it to mature a good crop even in the short time then available. The earliness of the variety and its consequent bearing on the boll-weevil question is the principal reason for selecting it for distribution the present season. Observation has shown that the damage caused by the boll-weevil increases as the season advances. In the early part of the season the numbers of the weevils are few, but as the season advances they steadily increase, and become so abundant in the latter part of the season that in badly infested fields hardly a boll is permitted to reach maturity. Many of the bolls which are formed before the weevil has become abundant mature without injury, and the writer has observed many particularly early plants, which, owing to their earliness, escaped damage to a considerable degree and matured a fairly good crop. This feature suggests that one of the most important factors in the control of the boll-weevil is to utilize early-maturing varieties. King is probably the earliest fixed variety known, and as it has given excellent results in tests at the Mississippi Experiment Station, it will probably do well in Texas also. Its use in boll-weevil sections to avoid the ravages of this pest is experimental, and the outcome will be watched with great interest. It is of special importance that growers note the yield of this variety in boll-weevil sections in comparison with other sorts, and be prepared next fall to furnish the Department of Agriculture with a statement of the results obtained. To obtain the best results in sections where the boll-weevil is prevalent, the seed should be planted as early as the season will safely permit.

Plant 2 ½ to 5 feet high, rather spreading in habit, with numerous limbs gradually decreasing in length from below upward. Bolls small, nearly round, with small blunt point, 4 to 5 locked, opening well. Seeds medium size, weighing from 0.10 to 0.11 gram, covered with brownish or greenish fuzz. Lint white, strong, three-fourths to 1 inch in length. Per cent of lint usually about 33. Season very early.

The seed distributed by the Department of Agriculture was grown by the originator of the variety, Mr. T. J. King, at Louisburg, N. C., in the season of 1902.

Long-Staple Upland Varieties.

Allen Improved.

Allen Improved (Pl. II) is a variety of cotton originated in Claiborne County, Miss., in 1899, by James B. Allen. Other and similar vari-
eties were earlier introduced by Mr. Allen under the names Allen Yellow Bloom and Allen Hybrid, which have become distributed throughout the country. Allen Improved was distributed to some extent in 1900, but up to the present time has not been generally distributed. It is said by Mr. Allen to be a cross between his Yellow Bloom and Hybrid. The variety is recommended because of its productiveness and its long staple. The bolls when ripe open up wide, like ordinary Upland, letting the cotton hang out and making it easy to pick. It is said to pick easier than the Allen Hybrid and to have a stronger fiber. Mr. Allen states that it has stood the weather better for the past three years than any other variety of long staple he has ever planted, not rotting in wet weather like the Yellow Bloom. It gives an average yield per acre of about 1,500 pounds of seed cotton and from 300 to 400 pounds of lint. The crop of 1900, Mr. Allen states, sold for 17 cents per pound net; that of 1901 for 15 cents; and that of 1902, from which the seed distributed by the Department was taken, for from 16½ to 17 cents. Mr. Allen’s cotton is ginned on a saw gin.

Plant 3 to 6 feet high, compact, branching like Truitt, with two or three long basal limbs and one main central stem. Bolls of Upland type, medium size, slightly pointed, 4 to 5 locked, opening wide. Seeds medium large size, weighing 0.14 to 0.15 gram, gray tufted, 7 to 9 per lock. Lint white, fine, and silky, 1¼ to 1¾ inches long, fairly strong. Per cent of lint 27. Time of ripening midseason.

The seed distributed was grown by James B. Allen, the originator of the variety, at Port Gibson, Miss., in the season of 1902.

**Griffin.**

Griffin is a long-staple, big-boll Upland cotton (Pl. II), produced by John Griffin at Refuge plantation, near Greenville, Washington County, Miss. The first selection was made in the fall of 1867, and the seed first planted in the spring of 1868. After about ten years of selection some seeds were distributed among friends in the vicinity of Greenville, and a few bushels were sold. The variety, however, has never been generally distributed. Regarding its origin, Mr. Griffin says:

The variety resulted from a cross of the old “Green Seed” cotton with Sea Island, the cross being made to give a tendency to the Green Seed to produce a longer and finer fiber. The hybrid was from 12 to 16 feet high and very unproductive. It was recrossed five years in succession with pollen of the constantly improved Green Seed. This resulted in reducing the stalk to within a few inches of the length of that of Green Seed, in giving it a larger boll, and in making it nearly as prolific. Every successive crossing was made on stalks which least resembled the Sea Island form and most nearly approximated the Sea Island lint.

The selection of the cotton has continued without intermission from 1867 up to the present time (1902). Selection was practiced five years in succession before hybridization was employed, and continued constantly while the latter was going on. There was at first little difference between the two hybrids produced by crossing Sea Island bloom with Green Seed pollen and Green Seed bloom with Sea Island pollen.
The Sea Island was a little more vigorous and had a few more bolls. Near the end of the five years through which both were crossed with constantly improved Green Seed, the Sea Island far surpassed the Green Seed, which was puny and hard to fertilize with the same pollen which had acted well on the other. The lint of the original Green Seed averaged about 1 inch in length. It gained about one-eighth of an inch in length in five years of selection, making it about 1¼ inches when first crossed with Sea Island. The first cross gave it a length of about 1½ inches, the lint, furthermore, being much finer than that of the original Green Seed.

The character of the stalk is still like that of Green Seed, though more compact. The boll is larger, 65 weighing a pound. The lint pulled from the seed by the fingers averages about 2 inches in length, and is very fine. Ginned on a saw gin, it generally averages from 1¾ to 1½ inches in length. The Griffin cotton is earlier than the Green Seed.

Griffin cotton is without question one of the very best long-staple Upland sorts that has ever been produced. It has been grown for two successive years in tests conducted by the Department of Agriculture at Columbia, S. C., and has given excellent results and attracted considerable attention. Its length of staple here averaged about 1¼ to 1½ inches. Unfortunately the lint is not very uniform in length, and is inclined to be low in strength. In size of boll, ease of picking, and productiveness the variety is very good. A peculiar feature of Griffin cotton is its tendency to produce a few very long fibers. Frequently a group of several dozen fibers will reach a length of 2½ or 3 inches.

The average yield per acre at Mr. Griffin's plantation, on Mississippi bottom land not over 20 years old, is about 400 pounds of lint cotton. On fresh land of this sort it yields about 500 pounds of lint cotton per acre. The proportion of lint to seed cotton, Mr. Griffin states, is about 28 per cent. Professor Tracy, at the Mississippi Experiment Station, gave the per cent as 28 to 29. Professor Duggar at the Alabama Experiment Station obtained 29.2 per cent from the crop grown at Auburn, Ala. The crop produced at Columbia, S. C., the past season gave about 29 per cent.

As an indication of the market value of Griffin cotton, Mr. Griffin gives results of sales as follows: When short staple was selling at 5 cents per pound Griffin sold at 8½ cents. Last year (1901) it sold for 12 cents, against 8 cents for short staple of the same grade. In 1900, when short staple cotton was quoted at between 8 and 9 cents, Griffin sold for 15 cents. A part of the crop of the present year (1902), from which the seed distributed was taken, sold for 14 cents, the average price for short staple of the same grade being 8 cents.

Mr. Griffin states that his crop is regularly ginned on a saw gin. In the crop this year the first 7 bales averaged 1½ inches in length and the last 7 bales 1¾ inches.

Plant vigorous and prolific, with main central stem and several large spreading limbs below; foliage pale green. Bolls medium large, ovate, blunt-pointed, 4 to 5 locked, opening well. Seeds of medium size, weighing about 0.12 to 0.13 gram, gray tufted, 7 to 10 per lock. Lint white, fine, and silky, rather variable in length, ranging from 1¼ to 2 inches. Per cent of lint about 28 to 29. Season medium.
The seed distributed by the Department of Agriculture was grown by the originator of the variety, Mr. John Griffin, at Greenville, Miss., in the season of 1902.

**Sea Island Varieties.**

**Seabrook.**

This variety (Pl. 1) was originated ten or twelve years ago by E. L. Rivers, James Island, S. C. Its selection and improvement have been carried on since that time by the present owner, Mr. F. P. Seabrook, of James Island, who has given the most careful attention to the fixing of the desired qualities, the aim being the production of a prolific bearer of medium quality, with a large proportion of lint to seed. The method of selection employed by Mr. Seabrook, which is similar to that of most of the Sea Island planters, is as follows: Several of the best plants in his field are selected and marked. Each of these is picked by itself, the seed cotton weighed, and the lint weighed after ginning to determine the ginning average. The staple is examined critically as to length, fineness, strength, uniformity, and softness. Finally the best plant is selected and the others discarded. The seed from this single stalk is planted by itself, one seed in a hill, and usually produces about 500 plants. The seed from these plants is used to sow a field of about 5 acres, from which the general crop is planted the fourth year. A new plant is chosen from the select field each year, so that the process of improvement is continuous.

Plant of compact habit, prolific, and resistant to disease. Bolls of good size, long and pointed, 3-locked, opening well for Sea Island. Lint 2 inches long. Per cent of lint about 28 to 29.

The seed of this variety distributed was grown by Mr. F. P. Seabrook, James Island, S. C., in the season of 1901.

**Rivers.**

The Rivers Sea Island cotton, which is immune to the serious malady known as wilt or "black-root," was produced as a result of special breeding experiments conducted by Mr. E. L. Rivers, of James Island, S. C., in conjunction with the Department of Agriculture. It is highly recommended for cultivation in the Sea Island districts of Georgia and Florida on all soils infected with wilt. A special circular is distributed with the Rivers cotton, and this variety is referred to here simply to show the general plan of the entire cotton distribution for the season. A careful description of the variety and of the experiments leading to its production appears in Bulletin No. 27, Division of Vegetable Physiology and Pathology of the U. S. Department of Agriculture, by Mr. W. A. Orton.
METHODS OF CULTIVATION AND GINNING.

SHORT-STAPLE UPLAND VARIETIES.

The methods of cultivation which should be pursued in growing the varieties of short-staple Upland cotton distributed are the same as those used for any ordinary Upland cotton. No exact directions can be given with respect to the distance apart of the rows or the distance between the plants in the row, as the space required by each plant is determined by the richness of the soil in each case. Jones Improved, King, Excelsior, and Parker are all quite similar in size and habit of growth. Under ordinary conditions satisfactory results would be obtained with these varieties by planting the rows 4 feet apart and the plants from 18 to 24 inches apart in the row. On rich soil this distance should be somewhat increased, while on sterile land closer planting would be desirable.

LONG-STAPLE UPLAND VARIETIES.

Allen Improved and Griffin, while producing a long, fine staple, are in size and general appearance very similar to ordinary short-staple varieties such as Jones Improved and Truitt, and the same cultural methods are to be recommended as are used with the ordinary short-staple sorts. In picking, preserving, and ginning, however, more care is required if the highest market price is to be realized. Greater care should be exercised in the picking to avoid getting the fiber mixed with fragments of leaves, bolls, etc. Fiber from immature and weather-stained bolls should also be discarded. Pickers familiar with ordinary cotton methods are liable to be too careless in their endeavor to gather large quantities and increase their wages thereby. In fine grades of long-staple Upland cotton it would probably also be found desirable to spread the seed cotton on a platform in the sun for a few hours to dry before storing it.

The difficulty of properly ginning long-staple Upland cottons has been considered an impediment to their general cultivation. It is generally recognized that long-staple Sea Island sorts require to be ginned on a roller gin, as the saw gins tear and break the fiber to such an extent as to greatly reduce its value. It is also very generally supposed that the long-staple Upland cottons require to be ginned on a roller gin, and this understanding has prevented many from attempting to grow these cottons, as roller gins are ordinarily accessible only to growers in regions where Sea Island cotton is cultivated. Experience has shown, however, that long-staple Upland cottons may be ginned on ordinary saw gins if care is used in the process. Before ginning these cottons the gin saws should be sharpened square across the teeth and then dulled somewhat by use in ginning ordinary short
Mature Unopened and Opened Cotton Bolls—Griffin and Allen Improved (Natural Size).
staples. It is also important to run the gin at a lower rate of speed than in ginning ordinary short-staple cottons. If these precautions are observed the long-staple Upland cottons may be very satisfactorily ginned on any ordinary saw gin. As previously stated, Mr. Griffin and Mr. Allen have regularly had their crops ginned on ordinary saw gins, and the product has uniformly sold at from 14 to 16 cents or more per pound.

It is also important that growers of long-staple Upland cottons give special attention to the marketing of the product. The writer last season saw several bales of long-staple Upland cotton sold to a buyer at a small interior town in South Carolina for 10 cents which were certainly equal to bales of similar cotton which he saw sold in the New Orleans market the week following at 15 cents, when ordinary cotton was selling at 8½ cents. Many of the failures with long-staple Upland cotton have been due to the lack of experience on the part of the grower in the matter of marketing. Many buyers take advantage of the growers' ignorance and purchase cotton for 10 cents that is worth 15 cents and realize the difference themselves. Until buyers inform themselves on the value of long-staple cotton and pay reasonable prices, it will have to be consigned to general long-staple markets such as New Orleans, Savannah, Charleston, etc., or to some of the large New England markets.

**SEA ISLAND VARIETIES.**

The Seabrook selection of Sea Island cotton is adapted to light, sandy land of good fertility. It is planted in rows 5 feet apart, with a distance of from 18 to 20 inches between the plants in the row. Greater care must be given to the cultivation of Sea Island than is usually given to Upland cotton. The land should be thoroughly prepared and well fertilized. A suitable rotation with corn, cowpeas, peanuts, or other crops should be practiced in order to avoid the exhaustion of the soil produced by many successive cotton crops. Cultivation should be very frequent. In the Sea Islands the cotton is cultivated on an average of once a week until August. Here the cotton is grown on high beds and the soil is drawn up around the plants in cultivation. This method is not recommended for Georgia and Florida, however, where the more economical method of level culture will probably pay the best.

Particular care is necessary in picking and handling Sea Island cotton in order to obtain the highest price. Sea Island cotton requires to be picked often—every week or ten days—in order to avoid staining by the weather. All trash, bits of bolls, immature and diseased or yellow leaves must be picked out by hand. The seed cotton should be spread on a platform and exposed to the sun for several hours to dry before storing. It must be ginned on a roller gin and be packed carefully in bags without high pressure.
HOW TO GROW PURE SEED OF GOOD QUALITY.

It is a well-known fact that varieties of cotton become mixed and impure unless special care is taken to prevent crossing with other varieties. If growers receiving seed of any of the varieties sent with this circular desire to grow the same variety another year, precaution should be taken to plant the seed in an isolated patch, situated as far as possible from any other varieties. It should be at least a quarter of a mile from any other cotton and preferably in a field surrounded by a forest, particularly on the side nearest to other cotton fields. Before any seed is gathered for planting all plants which are not true to the type of the variety should be carefully weeded out.

If it is desired to keep the variety up to its full productiveness and better adapt it to local conditions, the planter may easily accomplish this by following a simple and inexpensive method of selection. Before beginning the picking, go over the patch carefully and select and mark with a white cloth the best plants: that is, those most productive, earliest in ripening, and having the largest, best formed, and most numerous bolls. Care should also be exercised to select plants that are true to the type of the variety. Before each picking send a careful man over the patch to pick the seed from the selected plants. Preserve such seed separately, gin it separately to avoid mixing, and use this to plant the crop the next year. If this simple method of selection is carried out each year, the yield will doubtless be greatly increased, and as much or more added to the crop than would result from special fertilization or cultivation, though these factors should by no means be neglected. The importance of careful seed selection is seldom fully recognized, and growers are urged to give this factor of cotton culture more careful attention.

Herbert J. Webber,
Physiologist, in Charge of Laboratory of Plant Breeding.

Approved:
A. F. Woods,
Pathologist and Physiologist.

REPORT OF RESULTS DESIRED FOR PUBLICATION.

In order to determine the comparative values of the different varieties of cotton in various parts of the United States, the growers receiving this seed are requested to give it a thorough trial in comparison with the variety or varieties that they generally grow, and be prepared in the fall of 1903 to report the results of the test to the United States Department of Agriculture. A report will then be requested covering the following points:

(1) Character of the soil.
(2) Character of the season.
(3) Total yield of seed cotton produced. (This should be determined by actually weighing the product.)
(4) Total yield of lint produced. (Determined by actual weighing.)
(5) Size of patch grown. (Determined by actual measurement.)
(6) Yield per acre, estimated from the patch grown.
(7) Is the variety to be classed as excellent, good, fair, or poor for your section?
(8) Name of the variety ordinarily grown by the planter making the test.
(9) Yield of ordinary variety this year on same soil as the variety under consideration.

It is especially requested that growers carefully note the points enumerated above, in order that they may secure the necessary data and be ready to supply accurate information when it is called for next fall. If sufficiently accurate data are furnished, a report will be compiled and issued giving the results of the various trials in all sections, and this report will be sent to all planters cooperating in the experiment. In this way it is hoped to obtain valuable and reliable information regarding the varieties best adapted to various sections of the cotton belt.

Growers receiving this seed, who are willing to cooperate with the Department of Agriculture in making the above test, are requested to fill in the accompanying franked postal card, which requires no postage, as soon as the seed is received, and return the same to the Department.

A. J. Pieters,
Botanist in Charge.

Approved:
B. T. Galloway,
Chief of Bureau.

[Rivers Sea Island cotton.]

HISTORY OF THE VARIETY.

This variety, the seeds of which are now distributed for the first time, was originated in connection with the investigations of the United States Department of Agriculture on the cotton wilt, a disease which has done great damage in the South. All other methods of treatment having failed, an effort was made to produce a resistant variety. This was based on the observation that some plants remained healthy, even in the worst infected places, and it was thought that the seed from such stalks might produce other resistant plants. This was
found to be the case, and several strains have been produced in this way by saving seed from healthy plants in the worst diseased areas. The seed of the best of these resistant strains is distributed with this circular, the seed having been grown by special arrangement expressly for the Department of Agriculture. Other selections made by the Department or under its direction are also being grown and tested, and will be used for future distribution.

The Rivers cotton was originated in cooperation with the Department of Agriculture by Mr. E. L. Rivers, James Island, S. C., who in 1899 saved the seed of a single plant which had survived the disease, while all surrounding plants had been killed. This seed Mr. Rivers planted in a single row in a badly infected area. The result is shown in the accompanying illustration. In the resistant row not a single plant died, while the adjoining rows planted with ordinary seed were almost totally destroyed.

Sufficient seed was obtained from this row to plant an acre the next year (1901). This land was also infected with the cotton wilt, but only two or three plants became affected, showing the great resistance of the new variety. In 1902, 15 acres were planted. This land was badly infected with wilt and previous crops had been nearly destroyed in portions of the field, so that the land had been abandoned for cotton. The Rivers cotton proved as resistant here as in the previous years. An occasional plant became diseased and was pulled up, but the field as a whole was perfectly healthy and produced a large crop.

These three successful trials of this variety, corroborated by numerous experiments carried on by the Department of Agriculture with
both Sea Island and Upland cotton and by the experience of several cotton planters, demonstrate that the wilt can be overcome by the use of resistant varieties, and this seed is distributed this year in Georgia and Florida to enable the farmers to test its merits and grow for themselves a stock of seed for future planting.

DESCRIPTION OF COTTON WILT.

The especial feature of this variety is its resistance to the wilt, and since some who receive the seed may not be familiar with that disease, a brief description of it is included here. For more detailed information write to the Department of Agriculture at Washington for Bulletins 17 and 27 of the Division of Vegetable Physiology and Pathology.

The Wilt Disease is also known as "Blight" and "Black-root." It is injurious to Sea Island cotton on the Sea Islands of South Carolina, and in southern Georgia and in Florida, and to Upland cotton over wide areas in several States. It is worst on sandy soils, where it persists year after year. Prominent symptoms are the wilting of the plants, which are dwarfed or killed, the brown discoloration of the inner wood of stem and root, and a tufting of the small rootlets.

The wilt is caused by a parasitic fungus in the soil, which enters the roots and grows upward through the water-carrying vessels of the stems, which it clogs. It is aggravated by continuous cropping in cotton, but can not be remedied by rest or rotation, since the fungus can live in the soil for an indefinite time after it has once obtained a foothold. It is not due to the poverty of the land nor to the use of commercial fertilizers, and can not, so far as known, be cured by adding any fertilizer or other substance to the soil.

CONTROL OF THE WILT.

The only remedy known is the use of resistant varieties. When land is badly affected by wilt and seed of resistant cotton can not be had, some other crop than cotton should be planted.

In all cases, even where the disease does not occur or where a resistant variety is available, a rotation of crops is to be recommended, such as corn with cowpeas or peanuts; second, velvet beans; third, cotton; or, first, corn with cowpeas or peanuts; second, oats followed by cowpeas; third, cotton.

DIRECTIONS FOR PLANTING.

In order to fully test the resistant qualities of the variety, this seed should, if possible, be planted on land where cotton has in previous years suffered badly from wilt (black-root). Do not plant Upland cotton near the Sea Island. Much of the "running out" of the long staple cotton in south Georgia is due to accidental hybridization with
neighboring fields of short staple cotton. Since only a small quantity of seed can be had, unusual care ought to be taken in planting to make the seed go as far as possible. The land should be well fertilized and cared for in order to produce a large crop of seed. The Rivers cotton is resistant to wilt, but not necessarily so to rust and other troubles due to poor soil. To secure the best results, therefore, plant the seed on good soil and use from 400 to 600 pounds per acre of commercial fertilizer or its equivalent in stable manure or compost.

In land of ordinary fertility plant in rows 4 feet apart, with the plants 18 inches apart in the row. In rich soil make the rows 5 feet apart, with 20 to 22 inches between the plants. The Rivers cotton is a low, compact variety, and can be planted closer than the average Georgia Sea Island cotton. To economize seed in planting, drop by hand 3 to 5 seeds in a hill, cover lightly, and thin out to one in a place.

In order to give an exact report at the end of the season, the field where this seed is planted should be measured and the yield determined by actual weighing when the crop is picked.

**PICKING.**

In picking Sea Island cotton much more care should be taken than is necessary with the Upland cotton. Pick often to avoid injury by the weather. Sun the cotton on a low arbor after picking to dry it, and sort out all trash, yellow, and immature cotton, etc., before ginning, as all these impurities injure the sale of the lint. The high prices obtained for the best grades of Sea Island cotton are due in part to the extreme care taken to remove all trash before marketing.

If your trial of this variety results satisfactorily, save all the seed carefully, as it will be difficult to get more from any source. Gin the cotton separately and clean the gins to avoid mixture with inferior varieties.

**CHARACTERS OF THE RIVERS COTTON.**

Plant resistant to wilt, vigorous, compact, pyramidal, branching near the base; limbs small, close-jointed, bearing heavily; bolls medium size, 3 to 4 lobed; seed small, black, well covered; lint 28 per cent; staple 2 inches long, cream-white, fully to extra fine. Time of maturing, early.

**CONTINUAL SELECTION NECESSARY TO MAINTAIN QUALITY.**

The qualities of resistance, bearing, etc., characteristic of this cotton, will be found to be thoroughly fixed in the seed distributed. It can not be expected that they will be maintained indefinitely, however, unless careful annual selection of seed is practiced. Though the variety is highly resistant to wilt, there will be occasional individuals reverting to the original type and becoming attacked by the disease. All such should be weeded out and destroyed.
The following method of selection is recommended for keeping up the quality of the variety:

1. To obtain seed for the main crop.—Pull up and destroy all diseased or inferior plants and all hybrid or barren stalks, saving seed only from good plants in the general field.

2. To secure an improved stock for future planting.—Select from the general field a few plants of the greatest excellence, marking them with a cloth. Leave these unpicked till the middle of the season, then compare them critically with reference to bearing, length, and quality of staple, resistance to wilt, etc., and choose from this number a single plant which combines the most desirable qualities. Save all the seed carefully and plant separate from the main crop the next year, one seed in a hill, to secure as great a yield as possible. This cotton planted by itself each time will give sufficient seed the third year to plant the whole crop. This selection should be carried out every year. The propagation from single plants insures a uniformity that can be secured in no other way.

This is the method practiced in the Sea Islands, and if it were done in Georgia and Florida there would be less trouble with the "running out" of the cotton.

W. A. Orton,
Assistant Pathologist.

Approved:
A. F. Woods,
Pathologist and Physiologist.

REPORT RESULTS.

Special attention is called to the fact that this is a new variety of great value, and that it can not be bought in the market at any price. For this reason farmers receiving this seed should plant it with care and save the seed.

It is desired to know the results of all trials of the Rivers cotton, and every farmer who receives seed is requested to return the accompanying card with his name and address, signifying his willingness to report at the end of the season. Blanks will then be sent out to be filled and returned. The Department wishes to continue the work of originating and distributing wilt-resistant varieties adapted to the requirements of the various cotton-producing sections, and the active cooperation of farmers will be of great assistance.

A. J. Pieters,
Botanist in Charge.

Approved:
B. T. Galloway,
Chief of Bureau.
MISCELLANEOUS PAPERS.

[Circular sent to recipients of seed of Sea Island Cotton No. 224.]

SEA ISLAND COTTON NO. 224.

U. S. Department of Agriculture,
Bureau of Plant Industry,
Washington, D. C., February 1, 1903.

Dear Sir: We send you herewith one peck of seed of Sea Island cotton "No. 224." This is a selection resistant to the wilt disease. It is distributed for trial under our Department number rather than as a named variety, but if it proves desirable to continue its cultivation, a name will be given to it later.

It was originated by selecting from a field badly affected by wilt two plants that had remained healthy. The seed obtained was planted on wilt-infected land the two years following, where it continued to resist the disease, although adjoining cotton was killed. These two successful trials indicate that its wilt resistance is well fixed, and it only remains to establish in this strain the desired commercial qualities, such as length and fineness of staple, uniformity, and productivity.

"No. 224" was developed from one of the coarser kinds of cotton grown on the Sea Islands, and more attention was paid to securing wilt resistance than fine quality. For this reason it is not equal to the best varieties grown on the Sea Islands, though it is of the grade of cotton for which there is most demand in the market. The price obtained for the crop of 1902 was 24 cents per pound, but the factor informed us that it was marketed "in such a bright and showy condition that it was placed on that account in a higher grade than its staple warranted." These facts are stated plainly in order that the planters who test it may not be disappointed in the results. The Department recommends it for its wilt resistance only, but believes that it is worthy of trial as a basis from which desirable strains can be developed by the methods of selection familiar to Sea Island planters. The fact that this is not a fine cotton should not be taken as an indication that quality need be sacrificed in securing resistance to wilt. Our experience leads us to believe that wilt-resistant strains can be obtained of any degree of fineness desired, depending on the quality of the plant chosen at the beginning of the selection.

The method of selection that we have found to give best results in breeding wilt-resistant varieties is essentially the same as that usually practiced for improvement of quality. It is necessary that the first selections should be made in a field known to be thoroughly infected with the wilt disease, so that every healthly plant can be assumed to be resistant. Select only those plants that show no trace of the wilt disease. Several of these most prominent resistant plants should be marked and examined critically. Eight or ten that have the finest and longest staple and are most productive should be retained, and the seed of each plant kept separate. The next year these lots of seed
PLATE III.

**Fig. 1.—Field infected by Wilt and Root-knot.**

Iron cowpea, resistant; speckled cowpea, killed.

**Fig. 2.—Roots of Iron Cowpea.**

**Fig. 3.—Root-knot on Wonderful Cowpea.**

From adjoining rows in the same field.
should be planted side by side on badly infected land and the progeny compared carefully with especial reference to power shown of transmitting the resistant quality. If the descendants of any plant show many diseased stalks, the whole selection should be discarded. It will be found that in the most resistant strains almost no susceptible plants will appear. Of the resistant strains, only the one having the best commercial qualities need be retained after the second year; but the first year it is well to start with several plants, as some often turn out to be nonresistant.

To insure the maintenance of uniformity and good quality in the resistant variety, the selections should be repeated every year. The evidence we have now shows that the resistance to wilt can be maintained in this way without difficulty. A resistant variety will run out if neglected, just as any other kind would do.

Future distributions of seeds.—The Department of Agriculture is now growing a number of wilt-resistant selections of Sea Island cotton, which it is intended to distribute among the planters as soon as a sufficient quantity is obtained. Some of these may be better than the "No. 224," but in the meantime it is hoped that the planters will continue the work of originating resistant strains for themselves, as so many are now doing.

W. A. Orton,
Assistant Pathologist.

Approved:
A. F. Woods,
Pathologist and Physiologist.

[Circular sent to recipients of seed of the Iron cowpea.]

**IRON COWPEA.**

*(A variety resistant to wilt and root-knot.)*

**HISTORY.**

The Iron cowpea is a variety especially adapted for soil renovation and forage purposes on land where other varieties fail to succeed because of the attacks of wilt, root-knot, and other soil parasites. The seed sent out in two-quart packages accompanying this circular is grown expressly for the Department of Agriculture and is distributed in the Southern States primarily to test its resistance to the diseases mentioned above, which cause the condition of land commonly known as "pea-sickness." In localities where no disease occurs it should be tested for hardiness, resistance to drought and weevils, and general value.

The origin of the Iron cowpea is uncertain. It was found in cultivation in Barnwell and Aiken counties, S. C., and its remarkable

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resistance to disease was demonstrated by experiments made by the
Department of Agriculture in 1900–2 on the farm of Mr. T. S.
Williams, Monetta, S. C., where the seed now distributed was grown.
It was tested on land infested with both wilt and root-knot in com-
parison with over forty other varieties, all of which were wholly or
partially destroyed by disease, while the Iron variety remained healthy.
A photograph of this field is shown in Plate III, fig. 1. The Speckled
cowpea on the right was treated in every respect like the Iron, but
was unable to withstand the disease. In all our trials in South Caro-
lina the Iron cowpea has remained free from nematode attacks, but at
the Florida Experiment Station it was somewhat affected. It should
be understood that under varying conditions different results may be
expected, and this variety may not everywhere prove as resistant as
in South Carolina. One object of this distribution of the Iron cowpea
is to determine its resistance to disease under varying climatic and soil
conditions and its suitability for different sections.

CHARACTERS OF THE IRON COWPEA.

The Iron cowpea is of the Clay type. The seeds are small and hard;
color buff, of varying shades. The plant is vigorous, erect, or half-
trailing; the leaves dark green, with a distinctive bluish luster; time
of maturing, medium to late. It blooms and bears continuously
through the season, but the pods do not shell out in the field as freely
as other sorts. An especially noteworthy feature is that it holds its
leaves late in the season, remaining green after other late kinds are
dead. It resists the attacks of the wilt fungus and nematode worm,
withstands drought well, and the hard seeds are very free from weevil
attacks. The seeds will live through the winter in the ground and
come up in the spring more freely than any other variety tested. It
is reported to be of fair quality as a table pea.

The Iron cowpea will be most valuable for soil improvement and
forage where other kinds fail. On healthy soils it is doubtful whether
it will replace existing standard varieties, as it is no more productive
than many others. Its long bearing season is a fault, making harvest-
ing more difficult.

DIRECTIONS FOR PLANTING.

In order to test the disease-resistant qualities of this cowpea it
should be planted on land where the ordinary varieties do not grow
well, if any such is available. For the purpose of comparison, a few
rows of another variety should be planted beside it. The methods of
planting and cultivation should be the same as for the common varie-
ties. To secure a good crop of seed, plant from May 20 to July 10,
according to the latitude, in drills 3 to 4 feet apart, at the rate of 2
pecks per acre.
DISEASES OF THE COWPEA.

The Iron cowpea is most noteworthy for its resistance to the cowpea wilt disease and root-knot. A full description of these diseases, with accounts of experiments with remedies, etc., is published in Bulletin No. 17, Bureau of Plant Industry, United States Department of Agriculture, and will be sent free on request. A brief account is given here to enable the farmer to recognize these troubles.

THE COWPEA WILT.

The wilt of the cowpea is common only on light or sandy soils, and occurs principally on land where cowpeas have been grown for several years. It appears about August in spots of varying size, which spread gradually over the field. The plants in these areas turn yellow, lose their leaves, and die. The stems have a reddish-brown tinge, and, when broken, the inside will also be found discolored. Later, these stems become covered with the light-pink spores of the fungus which causes the disease. This fungus enters the roots from the soil and, growing upward, fills the water-carrying vessels of the stem with its threads, thus shutting off the water supply and causing the death of the plant.

Remedies.—The cultivation of the Iron pea is the best means of relief, as it will grow where all other kinds fail. Rotation of crops for two years will give temporary relief, or since the disease does not attack any other crop than the cowpea, velvet beans or other legumes may be substituted.

ROOT-KNOT.

Root-knot, like the wilt, is most injurious on sandy soil, and the two diseases are often found occurring together. It is caused by a minute nematode, or eelworm, which enters the roots and produces large, irregular swellings or galls. These very injurious enlargements should not be confused with the bacterial tubercles found on all healthy cowpea roots. The latter are small and regular in form and greatly benefit the plant by enabling it to draw nitrogen from the air. The accompanying figures illustrate this distinction. A few bacterial tubercles appear on the healthy roots in Pl. III, fig. 2, while the roots in fig. 3 are deformed by root-knot.

Root-knot is also produced on several other plants by the same nematode that attacks cowpeas. Cotton, okra, peaches, and most garden vegetables are greatly injured by it. This is the most serious feature of the disease, since the cultivation of the ordinary varieties of cowpea on nematode-infected land so greatly increases the number of the parasites in the soil that succeeding cotton or other crops are much injured.
Remedies.—It is hoped that work now in progress in the Department of Agriculture will result in the breeding of varieties of cotton, peaches, etc., which will be resistant to root-knot. At present no remedy is known that will entirely free land in our Southern States from this disease. The sterilization of the soil by heat or toxic chemicals, clean fallowing, etc., have been recommended, but the best that can be done in ordinary farm practice is to adopt a rotation designed to starve out the parasites by growing a succession of immune crops, such as the Iron cowpea, beggarweed, corn, oats, or other grains, grasses, etc. A rotation like the following is suggested for cotton planters: First year, corn, with Iron cowpeas between the rows; second year, either beggarweed, velvet beans, or oats, followed by Iron cowpeas; third year, cotton. If necessary cotton might also be planted the fourth year, after which the rotation should be repeated.

W. A. Orton,
Assistant Pathologist.

REPORT RESULTS.

It is desired to know the results of all trials of the Iron cowpea, and every farmer who receives seed is requested to return the accompanying card with his name and address, signifying his willingness to report at the end of the season. Blanks will then be sent out to be filled and returned. A report will be asked for on the character of soil, whether or not infested with wilt or nematodes, manner of planting, character of season, success as a forage crop, yield as compared with other varieties, resistance to disease, etc.

A. J. Pieters.
Botanist in Charge.

Approved:
B. T. Galloway,
Chief of Bureau.

[KLEINWANZLEBEN SUGAR BEET.

Grown by E. H. Morrison, at Fairfield, Wash., from mother beets of exceptionally high sugar content and purity. The Department of Agriculture wishes to have written reports as to the quality of this seed, as sugar beet seed raising in the United States is a new industry. All requests for either beet or vegetable seed for another year from those sending such reports will be given special consideration.]
Culture.—While sugar beets can be successfully grown on a variety of soils, it is usually considered that they thrive best on a rich, sandy loam, having uniform surface and subsoil. The soil should be deep, with moderately porous subsoil, and either naturally or artificially drained. A good crop can not be grown on shallow soil having a hard, impenetrable or water-soaked subsoil. A soil that will grow a good crop of corn or potatoes is well adapted for beet culture. Well-rotted manure, phosphates, and potash may be freely used, but Chile salt-peter, if used at all, should be used sparingly. The proper preparation of the soil is a prerequisite to successful growing. The ground should be fall plowed to a depth of 9 or 10 inches, and subsoiled 5 or 6 inches more. The surface should be thoroughly pulverized by disk- ing and harrowing as soon as the frost is out of the ground. After the weeds have a good start, the ground should be again harrowed to destroy them, and finally harrowed the day before seeding. The seed should be evenly planted in rows 18 inches apart, as early in the spring as the season will permit. If a drill is used, 15 to 20 pounds of seed are required to sow one acre, while 10 to 15 pounds are sufficient if sown by hand. Cover the seed to a depth of one-half to 1½ inches, according to the condition of the soil and the season. To keep weeds from getting a foothold and the surface loose, cultivation should begin as soon as the seeds have sprouted sufficiently to show the rows and continued as long as it is possible to do so without breaking the lower leaves. Thinning should be done as soon as the plants have four well-formed leaves. This can be most easily done by bunching with a 6-inch hoe, leaving a group of plants every 6 to 10 inches. Thin to one plant to each group, using care always to leave the strongest and healthiest plant, even though the plants are at somewhat irregular distances. Give a thorough hoeing at the time of thinning.

It is difficult to give general directions for raising sugar beets, as local conditions of soil and climate often make general rules impracticable, when the individual grower must meet conditions peculiar to his particular locality.—J. E. W. Tracy.

Attention is again called to the desirability of a report on this seed. The beets raised from this seed should be hauled to the factory in a separate load from beets grown from any other seed, and a separate test for sugar content and purity should be made. If persons receiving this seed will send to the undersigned a postal card stating that they are willing to fill out a report, a blank form will be forwarded to them.

A. J. Pieters,

*Seed and Plant Introduction and Distribution.*
PLAN OF DISTRIBUTING TOBACCO SEED, AND CULTURAL DIRECTIONS FOR THE DIFFERENT TYPES OF TOBACCO DISTRIBUTED.

For several years the Bureau of Plant Industry and the Bureau of Soils have been cooperating in work looking toward the improvement of tobacco in this country. Under the direction of the Chief of the Bureau of Soils the tobacco seed for the forthcoming Congressional seed distribution was secured from carefully selected and matured plants, in accordance with directions issued by the Department to individual growers. The seed was obtained from the best localities for each variety, and a plan of distribution worked out whereby the varieties suitable for certain districts will be sent there.

The following directions for the distribution and culture of the different types of tobacco have been prepared in the office of the Chief of the Bureau of Soils:

PLAN OF DISTRIBUTING TOBACCO SEED.

The Congressional districts in which tobacco seed will be distributed and the varieties which it is believed are best adapted to these districts are as follows:

**ALABAMA:**
First district: Florida Sumatra, Florida Cuban, Connecticut Havana.

**ARKANSAS:**
Second, Fifth, and Sixth districts: Kentucky White Burley, Virginia Oronoco, Virginia White Stem.

**CALIFORNIA:**
Sixth and Seventh districts: Florida Sumatra, Florida Cuban, Connecticut Havana.

**CONNECTICUT:**
First, Second, and Fourth districts: Florida Sumatra.

**FLORIDA:**
First and Second districts: Florida Sumatra, Florida Cuban.

**GEORGIA:**
Second district: Florida Sumatra, Florida Cuban.

**ILLINOIS:**
Nineteenth, Twentieth, and Twenty-second districts: Tennessee Improved Yellow Mammoth, Tennessee Oronoco.

**INDIANA:**
First, Third, and Fourth districts: Tennessee Oronoco, Kentucky White Burley, Tennessee Improved Yellow Mammoth.

**KENTUCKY:**
First, Second, and Third districts: Tennessee Improved Yellow Mammoth, Tennessee Oronoco.
Fourth and Fifth districts: Tennessee Improved Yellow Mammoth, Tennessee Oronoco, Kentucky White Burley.
Sixth, Seventh, and Ninth districts: Kentucky White Burley.
Eighth, Tenth, and Eleventh districts: Tennessee Oronoco, Kentucky White Burley.
SEED AND PLANT DISTRIBUTION.

LOUISIANA:
Second and Third districts: Kentucky White Burley, Tennessee Improved Yellow Mammoth, Florida Cuban.

MARYLAND:
Second and Sixth districts: Ohio Zimmer Spanish, Connecticut Havana. 
Fifth district: Maryland Smoking.

MASSACHUSETTS:
First and Second districts: Florida Sumatra.

MISSOURI:
First, Second, Seventh, Eighth, Ninth, Thirteenth, Fourteenth, and Fifteenth districts: Tennessee Improved Yellow Mammoth, Tennessee Oronoco, Kentucky White Burley.

NEW YORK:

NORTH CAROLINA:

OHIO:
Sixth district: Ohio Zimmer Spanish, Florida Cuban, Kentucky White Burley.
Tenth district: Ohio Zimmer Spanish, Connecticut Havana, Kentucky White Burley.
Fifteenth, Sixteenth, and Seventeenth districts: Maryland Smoking, Ohio Zimmer Spanish.
Twentieth district: Maryland Smoking, Ohio Zimmer Spanish, Florida Cuban.

PENNSYLVANIA:

SOUTH CAROLINA:
First, Second, Third, Fourth, Fifth, Sixth, and Seventh districts: Virginia Oronoco, Virginia White Stem, Virginia Blue Pryor, North Carolina Bright Yellow.

TENNESSEE:
First, Second, and Third districts: Tennessee Improved Yellow Mammoth, Tennessee Oronoco, North Carolina Bright Yellow.
Fourth district: Tennessee Improved Yellow Mammoth, Kentucky White Burley.
Sixth district: Tennessee Improved Yellow Mammoth, Tennessee Oronoco, Kentucky White Burley.
Fifth, Seventh, Eighth, Ninth, and Tenth districts: Tennessee Improved Yellow Mammoth, Tennessee Oronoco.

TEXAS:
First, Second, Ninth, and Tenth districts: Florida Sumatra, Florida Cuban, Ohio Zimmer Spanish.

VIRGINIA:
First, Third, Fifth, Seventh, Eighth, and Ninth districts: Virginia Oronoco, Virginia Sun Cured, Virginia Blue Pryor, North Carolina Bright Yellow.
Fourth, Sixth, and Tenth districts: Virginia White Stem, Virginia Sun Cured, Virginia Blue Pryor, North Carolina Bright Yellow.
MISCELLANEOUS PAPERS.

West Virginia:
Third district: Virginia Oronoco, Virginia Sun Cured, North Carolina Bright Yellow, Kentucky White Burley.
Fourth district: Virginia White Stem, Virginia Sun Cured, North Carolina Bright Yellow, Kentucky White Burley.

Wisconsin:
First, Second, Third, Seventh, and Tenth districts: Florida Sumatra, Florida Cuban, Ohio Zimmer Spanish, Connecticut Havana.

CULTURAL DIRECTIONS FOR THE DIFFERENT TYPES OF TOBACCO.

Florida Sumatra Tobacco (Northern Districts).

A very rich spot should be selected for the seed bed of Sumatra tobacco grown in the North. In the early fall this plot should be plowed and divided into beds 6 feet wide and any desirable length, surrounded by a wall made of boards. 2 inches thick and 12 inches wide, set 2 or 3 inches in the ground. These beds should be highly fertilized with cotton-seed meal and stable manure, well spaded in to a depth of 6 or 8 inches, and the whole covered with leaves, manure, or trash to keep out the frost during the winter. About April 1 this top dressing should be taken off and the bed again spaded and the soil well pulverized, after which another application of cotton-seed meal or cotton-hull ash should be given. This should be raked in and the surface made smooth and loose, making the bed ready to receive the seed. About five days before the time of sowing the seed should be put to sprout in apple-tree punk, made soft with warm water. This should be put in a fruit jar and kept in a warm room. It will be observed that the seed will be slower in sprouting than domestic tobacco seed, and it will not sprout uniformly; that is, all the seed will not sprout at the same time. It is best to wait until nearly all the seed is sprouted before sowing. Mix the seed with bran or cotton-seed meal and sow at the rate of 2 tablespoonfuls of the seed to 100 square yards, after which a heavy roller should be drawn over the bed, thus packing the seed well into the soil, making the surface smooth and preventing the rapid drying out of the soil which would otherwise take place. If the ground is dry, it should be watered immediately after sowing the seed, and this should be continued from time to time as the soil may require. In the absence of rain after the plants are up watering should still be practiced.

There are many enemies of the seed bed in the way of insects, so a careful watch is necessary. As soon as there is any appearance of flea-beetles or horn worms, the bed should be sprayed with paris green mixed with water at the rate of 1 tablespoonful to 2 gallons of water. In order to keep down the insects, the bed should be sprayed at least three times a week. It is safer to protect these early beds with canvas stretched on frames made over and around the beds.
When the plants are drawn for transplanting, great care should be taken to get as much root as possible. Each person doing this work should be provided with a bucket of water, and as soon as the plants are drawn the roots should be washed to remove all soil that may have stuck to them. The plants are then placed in a basket, roots down, and are immediately set out. The washing of the roots is not generally practiced, but it has been found that plants live and grow better when the roots are clean. After each drawing of the plants from the bed, the soil should be watered, in order to close up the places from which the plants have been taken.

The soil selected for this tobacco should be a light gray sandy loam or sand with a sand or clay subsoil, provided the clay is not closer to the surface than 12 or 15 inches. In order to produce a light, thin wrapper, the sandy soil must be very rich and a large quantity of fertilizer is necessary. The land should be broken up in November or December, allowing the plow to cut from 4 to 6 inches deep, according to the nature of the soil and the quantity of fertilizer used. If a large quantity of fertilizer is used, such as cotton-seed meal and stable or barn manure, it should be thrown broadcast over the field and plowed in. This should be done about six weeks before the time of setting out the plants. Often a second application of fertilizer will be needed in order to give a continuous, rapid growth.

The distance between the rows should be 4 feet and between the plants 12 inches. As it is always desirable to get a uniform growth, great care should be exercised to have each plant live. If the ground is moist and showers frequent, watering the plants is unnecessary; but if the ground is dry, they should be watered immediately after setting and, if possible, each day thereafter as long as the plants may require it. After setting the plants they should not be disturbed for at least six days. If the soil becomes packed and hard, a furrow should be run on each side of the row, using a small straight plow and letting it well down. This should be followed immediately by two sweep furrows, which will put the plants on a smooth ridge. The hoe is then used, carefully stirring the soil about the plants. Thereafter cultivation should be frequent and shallow.

As the principal value of Sumatra is its wrapping leaves, great care should be exercised to preserve the soundness of the leaf. In topping the Sumatra tobacco only the bud should be taken out, and all the leaves allowed to grow. If the land is exceedingly rich it is found best not to top at all, but to allow the plant to go to bloom. It has been found by experience that Sumatra tobacco should be harvested at an early stage of ripeness, as the leaf will cure riper and be more elastic—that is, it will have more life. It is usual to take 4 or 6 leaves at each priming, thus going over the field four or five times before the whole crop is harvested.
As soon as the first leaves at the bottom of the stalk begin to ripen, harvesting is begun by plucking off or priming the first four leaves at the bottom and transporting them to the curing shed in baskets. There they are strung on strings attached to laths, from 30 to 40 leaves being allowed to a lath. The leaves are placed back to back and face to face, so as to prevent cupping or folding over each other. The laths are then hung in tiers in the barn, where they remain until the leaves are cured.

When the tobacco is primed from the stalk, it should not take more than two weeks to cure; when it is hung on the laths, three to four weeks are necessary. The manipulation of the barn or curing shed is governed entirely by the condition of the weather and the nature of the tobacco; so no fixed rules can be given. However, in a general way, it can be said that if a barn is filled with green tobacco and the weather is hot and dry, the ventilators should be tightly closed for about three days, by which time the tobacco should be quite yellow. The barn should then be opened at night and kept closed during the day. This is done to prevent rapid curing, which destroys the life of the leaf and gives uneven colors. If there are frequent showers and but little sunshine, the barn should be kept closed and fires started in small charcoal heaters distributed throughout the barn. These fires should be continued as long as it is necessary to keep the tobacco in proper condition. Where charcoal heaters are not available, wood which has as little odor and as little smoke as possible should be used. It is very important to dry out the barn without giving the tobacco any foreign odors. To obtain the best results the tobacco should become fairly moist and fairly dried out once in every twenty-four hours.

When the midribs are thoroughly cured the leaves are ready to be taken to the packing house. To get the tobacco in condition to handle, all the ventilators should be left open for one night, opening them about 6 o'clock in the evening. The next morning the tobacco should be in what is called "good case;" that is, it will have taken up sufficient moisture to become soft and pliable. The barn is then tightly closed, in order to retain the moisture, and the leaves are taken from the laths. The bottom, middle, and top leaves should be kept separate in the barn. After the tobacco has been taken down and packed it should be taken at once to the warehouse for fermentation and baling.

**Florida Sumatra Tobacco (Southern Districts).**

The land for the seed bed should be preferably fresh, rich hammock, having a light gray soil, moist but not wet. Dry, thirsty land should be avoided. In selecting the seed bed it is best to secure land sloping from north to south, protected on the north by forests and open on the south to let in the midday sun. The time for sowing the
seed is from March 1 to April 15. Plants should be ready for transplanting about sixty days after sowing.

One week before sowing the seed the bed should be thoroughly cleaned and all straw and leaves carefully raked off, after which the ground should be burned. This is done to destroy all grass and weed seeds or roots which might otherwise come up and choke the tobacco plants. The burning is done in the following manner:

After raking the surface well, skids are laid 4 feet apart, running the full length of the plat to be sown. A pile of wood is then laid across the skids, running the width of the bed. The fire is started, and as fast as the ground is thoroughly burned and covered with ashes the fire and wood are drawn along the skids, wood being continuously added. After the entire bed is burned the ground is again raked to remove the coals, letting the ashes remain. The soil is then spaded to a depth of 4 inches, all the roots and tufts being carefully taken out. If the soil needs fertilizing after the spading is completed (the seed bed should be very rich in order to give thrifty, healthy plants), such quantity of fertilizer as may be necessary is thrown broadcast over the surface. Any complete guano may be used. The bed is again raked with an iron-toothed rake to mix the fertilizer well with the soil and to have the surface smooth and loose.

The bed should be divided into "lands" about 4 feet wide, leaving narrow walks between. Each land should be measured to ascertain how many square feet it contains, and enough seed should be mixed with ashes to sow one land at a time, at the rate of 2 tablespoonfuls of the seeds to 100 square yards. This is the usual allowance for 1 acre to be planted. After the sowing is completed the bed should be rolled with a heavy roller. If the ground is dry it should be watered immediately after the sowing of the seed, and this should be continued from time to time as the soil may require. In the absence of rain, after the plants are up, watering should still be practiced.

The manner of transplanting, the kind of soil to be selected, the methods of field culture, and the manipulation of harvesting and curing are the same in both northern and southern districts.

**Florida Cuban Tobacco.**

The seed bed for this variety of tobacco should be the same as that for the Sumatra in the South, and should be cleared, burned, and prepared in the same manner. The time for sowing the seed is from January 15 to March 1, and sometimes as late as April. January and February sowings should give plants large enough for transplanting within sixty or seventy days; those of March and April within forty to sixty days. Transplanting is done in the same way as with the Sumatra, except that the plants are set 14 inches apart. The same rules as to watering and early cultivation apply.
When the plants begin to button, cultivation should stop. Early or low topping is not desirable, as it throws too much growth into the leaves, making them large and coarse. There should be from 14 to 16 leaves to the stalk after the plant is topped. At this point suckers will start at each leaf, but these must be broken off at least twice a week. The battle with the worms, which was begun in the seed bed, does not end until the tobacco is harvested. A careful watch should be maintained to keep all insects off the tobacco.

This variety should be harvested and hung in the curing shed in the same manner as the Sumatra. If it gives promise of being "wrapper"—that is, if it is light green, very sound in leaf, and of desirable size—it should be primed at an early stage of ripeness. If, however, appearances prove that it will be "filler" tobacco, it should be allowed to get thoroughly ripe.

If the soil is rich and the season propitious, a second profitable crop can be produced from the suckers in Southern localities. As soon as the original crop is topped suckers will sprout from each leaf. These, of course, should be broken off as soon as they appear, otherwise they will check the growth of the leaf. When all the leaves have been primed from the original stock, except the four or six leaves at the top, two suckers should be allowed to grow from the bottom of the stalk. These two suckers will be well started by the time the top leaves of the original stalk are ripe. The stalk should then be cut just above where the suckers sprout, and cultivation should begin at once, the soil being brought up around the old stubble. The suckers should not be allowed to have more than six leaves each. The growth of these will be rapid and they will mature quickly. When ripe the leaves should not be primed, but the stalk should be cut. It is often the case, where the seasons are favorable, that the suckers will make a very fine quality for filler purposes.

The same method of curing is used for both Cuban and Sumatra tobacco.

**Connecticut Havana Tobacco.**

The seed bed for this type should be prepared by plowing it in the fall and sowing on a good supply of cotton-seed meal or some other good fertilizer. In the spring, as soon as the frost is out of the ground, the bed should be again plowed or harrowed with a cutaway harrow and a small quantity of phosphate thrown broadcast upon it. The bed should again be harrowed and well raked. The seed should be sown about the middle of April. It is first sprouted by being put in apple-tree punk or moist sand and kept in a warm room. Plants should be ready for setting in the field within six or seven weeks from sowing. The rows should be 3 feet 4 inches apart, and the distance between the plants from 16 to 18 inches. The tobacco is topped so as
to allow from 16 to 18 leaves to the stalk. The average yield per acre is from 1,800 to 2,000 pounds.

The crop is harvested by cutting the stalks and letting them remain in the field until they wilt. Then they are hauled to the barn, where they are speared on laths, from 8 to 12 stalks being allowed to a lath. These are hung up in the barn 8 inches apart.

This tobacco is cured as follows: While the leaves are green the barn should be closed at night and during damp weather and opened during the day; but when the tobacco is half cured, the ventilation should be reversed and the barn closed during the day and opened at night and in damp weather. The tobacco should be fairly dried out and fairly moistened once every twenty-four hours. The curing is completed when the midribs of the leaves are thoroughly dried.

The soil best adapted to the Connecticut Havana variety is a light sandy loam.

**Ohio Zimmer Spanish Tobacco.**

The seed bed for this type, which is prepared in essentially the same way as that for the Connecticut Havana, should be sown from March 1 to April 15, and the plants ought to be ready for transplanting within eight or ten weeks. The rows in the field should be 3 feet apart and the plants 22 inches from each other in the drill. The tobacco should be topped when the seed bud appears, leaving about 16 leaves to the plant. The average yield is 1,000 pounds per acre.

The Zimmer Spanish tobacco is harvested and cured in the manner described for the Connecticut Havana leaf.

The soil best adapted to the Zimmer Spanish variety is sugar-tree red uplands or "Miami clay loam" of the Soil Survey.

**North Carolina Bright Yellow Tobacco.**

The seed bed for this tobacco should, if possible, be selected on a hillside sloping from west to east or from north to south, so as to get all the morning sun and be sheltered from the cold west and north winds. The soil of the seed bed should be as rich alluvial virgin soil as can be had. The bed should be well burned and all the grubs taken out. A little 2-inch bull-tongue plow should be used to break up the soil in two ways so as to tear out all the roots, which should be raked out and the bed made smooth. To 100 square yards put on 100 pounds of high-grade fertilizer and 2 barrels of well-rotted stable manure about 1 inch deep. Plow this in with the same bull-tongue plow and rake the bed carefully until the surface is level. After the sowing is completed a heavy roller should be drawn over the bed.

The seed should be sown from the first to the middle of January and not later than the first of February. This will give plants ready for transplanting by April 5. Harvesting should begin from sixty to
seventy days after transplanting. The rows should be $3\frac{1}{2}$ feet and the plants $2\frac{1}{2}$ feet apart. The average yield is 1,000 pounds per acre.

Harvesting may be done by priming the leaves or by cutting the entire stalk. In priming the tobacco the leaves are stripped from the stalk in the field as they ripen, and are strung on strings attached to laths, about 30 leaves being allowed to each lath. These are then hung in the barn to cure. If this method is practiced, from 14 to 16 leaves may be matured on each plant. If it is desired to cure the tobacco on the stalk, the first four bottom leaves should be stripped off and the tobacco topped, so as to leave from 10 to 12 leaves on the stalk. In cutting the tobacco the stalk should be split from the top down to within a few inches from the last set of leaves, and then the stalk should be cut just below these leaves. The plants are hung on the lath by opening the split, 6 to 8 plants being allowed to each lath. These are carried to the barn, where they are hung in tiers.

This tobacco is cured as follows: The barn should be heated to $100^\circ$ and allowed to remain at that temperature until the tobacco colors well. The temperature should then be gradually raised to $110^\circ$ and retained until the desired colors are obtained. At $120^\circ$ the tips of the leaves on the first tier should show signs of drying, and at $125^\circ$ all the leaves on the first and second tiers should be dry. At this point the barn should be gradually heated to $145^\circ$, a pause of several hours being made at $140^\circ$. By this time all the leaves in the barn should be dry, but in order to kill the stem the temperature should be raised $5^\circ$. Then a rapid rise should be made until $175^\circ$ is reached, at which temperature the tobacco should be thoroughly cured.

The soil best adapted to this type of tobacco is a light-gray sandy loam.

**Maryland Smoking Tobacco.**

Prepare the seed bed for this variety as for Cuban tobacco, sowing the seed from February 1 to March 20. The other operations in the production of the two types are the same up to transplanting. The Maryland smoking tobacco is transplanted from May 15 to June 1, in rows 3 feet apart, the plants being given a distance of 20 to 24 inches from each other in the drill. The plants should be topped so as to leave about 16 leaves to the stalk. The average yield is 1,000 pounds to the acre.

In harvesting this tobacco, the plants are cut and four rows are thrown together. They are then speared on sticks, from 6 to 8 plants being allowed to the stick. Care should be taken that the plants are not crowded too closely on the sticks or in the barn. The sticks are hung about 8 inches apart in the barn, and after the tobacco is half cured they can be put closer together if necessary, say about 4 inches apart. It generally takes about two months to cure this tobacco sufficiently to strip.
TENNESSEE TYPES (YELLOW PRYOR, ORONOCO, IMPROVED YELLOW MAMMOTH).

The soil best suited for the seed beds of these types is rich, friable, black virgin loam or sandy soil with a southern exposure. The time for sowing the seed is from March 1 to April 15. The preparation and management of the seed bed are the same as for Cuban tobacco. The plants should be ready for transplanting about May 10. The rows in the field should be placed 3½ feet apart each way. Ten days are necessary for the plants to establish themselves in the soil, and at the end of that time cultivation with the plow should begin; afterwards the hoe should be used. The field should be worked first one way and then the other.

About six or eight weeks after transplanting the plants ought to be ready for topping. This is done by pinching off the bud, leaving 8 or 10 leaves to the stalk, not including the leaves at a distance of 6 inches from the ground. All suckers should be kept off the plant.

The tobacco should be allowed to get thoroughly ripe before harvesting, which is done in the following manner: Split the stalk down from the top to within a few inches of the last set of leaves. Cut two rows, laying the plants right and left, and when wilted hang the plants on laths, from 8 to 12 stalks to a lath. These should be laid in small piles at a sufficient distance apart to allow between them the passage of a wagon, on which the laths are loaded and carried to the curing shed. Care should be taken not to cut the plants after a rain or in the hot sun.

This tobacco is cured as follows: After it has been hanging in the barn four or five days, slow fires should be kindled under it, and at the expiration of twenty-four hours the heat should be gradually increased until 150° is reached. The leafy part and one-half the stem should be cured in three days and nights. After this the tobacco should be allowed to come in "order" (soft and pliable) and be dried out by fires. This alternation of getting the tobacco moist and drying it out should be kept up for three or four weeks. This tobacco is cured by open wood fires, made by placing two logs side by side and building a fire between them. Open-fire heat is preferred for all tobacco to be sent abroad.

The soil best adapted to these types is a strong, rich loam with a deep reddish subsoil.

KENTUCKY WHITE BURLEY TOBACCO.

The seed bed for this variety of tobacco is selected and prepared as in the case of the Cuban type, the only variation being in the time of seeding; which for the Burley is limited to February.

As soon as the plants are well rooted cultivation should begin, and
this should be continued during the growing season, so as not to allow the soil to become crusty and hard. The plants should not be permitted to bloom, but should be topped as soon as the button appears, leaving from 14 to 16 leaves to the stalk.

The tobacco should be allowed to become thoroughly ripe before harvesting. It is harvested in much the same way as the Yellow Pryor and other Tennessee types, but no fire is used in its curing, which is accomplished by simply hanging in the barn.

**Virginia Types (White Stem or One Sucker, Oronoco, Sun-Cured, Blue Pryor).**

The situation and kind of soil best suited for the seed bed and the methods of its preparation and management are the same for all these types as for the Cuban tobacco, but there are some differences in the time of sowing the seed and in the manner of cultivating, harvesting, and curing the different varieties.

*White stem or one-sucker tobacco.*—Seed should be planted from January to March. Plants should be set in the field in rows 4 feet apart and given a distance of 3 feet in the drill. The plants should be topped, so as to allow from 8 to 12 leaves to the stalk. The average yield is 1,500 pounds per acre.

About fourteen weeks elapse between the time of transplanting and of harvesting, as this tobacco should be thoroughly ripe when cut. The crop is cut and harvested in the following manner: The stalk is split from the top to the last set of leaves and severed about 2 inches below the split, or just below the last set of leaves. Hang the stalks on laths by opening the split, seven or eight plants being sufficient for one lath.

The curing is done as follows: Put the tobacco in the barn as quickly as possible—before it begins to turn yellow. After the barn is filled build a fire of dry oak or other hard wood and make it hot enough to scald the leaves. About five hours of firing at a temperature of from 150° to 155° will usually scald the leaves. Then diminish the heat and keep a slow fire in the barn until the stalks are cured. Forty-eight hours are required to perfect this cure.

The soil adapted to this type of tobacco is a sandy loam with a red clay subsoil. Without such subsoil the tobacco will have a dull, slaty color, while with it the tobacco will be rich, glossy, and much tougher.

*Oronoco tobacco.*—The time for sowing the seed is from February 1 to April 15. Plants should be ready for transplanting sixty days after sowing if the season is favorable.

In the field the distance between the rows should be 3½ feet and between the plants in the drill 3 feet. The plants should be topped so as to leave from 8 to 10 leaves on the stalk. Fifteen hundred pounds per acre is considered a good crop.
The tobacco is cut in the same way as the White Stem variety. When the plants are wilted, one man walks between the rows, holding the lath on which the plants are to be hung. The hanging is done by two other men, who walk to the right and left of the one carrying the lath. When the laths are full, they are carefully laid on the ground, two or three together. They are then loaded on a wagon and carried to the curing shed, where they are hung in tiers. From 6 to 8 stalks are allowed to a lath.

This type of tobacco is usually cured with a small fire in the barn. Slow fires should be started and kept burning until the leaf is well yellowed; then the temperature should be increased until the leaf is cured and the stalk is brown. After this it is only necessary to have enough fire during the early morning to dry out the leaf until the tobacco is thoroughly cured. From twenty to thirty days are required to complete this curing.

A soil with a stiff clay subsoil is adapted to the growing of this tobacco.

Sun-cured tobacco.—The time of sowing the seed is from February 1 to April 15. Plants should be ready for transplanting in about ninety days after sowing. The rows should be 3 feet 3 inches apart and the plants in the drill 2 feet. The plants are topped so as to leave 10 to 12 leaves to the stalk. The average yield is 1,000 pounds per acre. The crop is cut and harvested in the same manner as the Oronoco type.

Curing is effected as follows: When the tobacco is taken to the curing shed, it is crowded together and allowed to remain until it is quite yellow. Then the barn should be opened or the tobacco should be hung on racks in the sun until cured. Sun and dew are preferred for curing sweet-flavored tobacco. From five to eight weeks are required to effect this cure.

The soil best adapted to this type of tobacco is a medium sandy soil that is high enough to give good natural drainage.

Blue Pryor tobacco.—Seed should be sown from January 1 to March 15. Plants should be set in rows 31/2 feet apart and given a distance of 3 feet in the drill. The plants are topped so as to leave 8 or 10 leaves on the stalk. The average yield is from 1,200 to 1,500 pounds per acre. The method of harvesting is the same as for the previous types.

The tobacco is cured in the following manner: It is hung in the barn until it yellows uniformly; then a slow fire is started and continued until the leaf is cured. From three to five weeks are required for the curing of this type.

The soil best adapted to this tobacco is a gray loam with a red clay subsoil.

27609—No. 25—03—6
COMMERCIAL USES OF THE DIFFERENT VARIETIES OF TOBACCO.

Florida Sumatra tobacco is used almost exclusively as a wrapper for domestic cigars. In the southern districts the thick or broken leaves may be cured for filler purposes.

Florida Cuban is essentially a filler tobacco for domestic cigars, although much desirable wrapper is produced from this type in the southern districts.

Connecticut Havana is grown entirely for wrapper and binder purposes for domestic cigars.

Ohio Zimmer Spanish is used exclusively for filler for domestic cigars.

North Carolina Bright Yellow is used for pipe smoking, chewing, and cigarettes. The most valuable leaves are those used for wrappers for plug tobacco and for all-tobacco cigarettes. This type was formerly grown almost wholly for the domestic market, but now a considerable export trade is maintained with England, Japan, and other countries.

Maryland Smoking tobacco was formerly used to a large extent for domestic pipe smoking, but the principal market is in two or three of the “Regie” countries, France taking the bulk of the crop.

The Tennessee types are principally exported.

The Virginia types are used to a very large extent in the domestic markets for smoking and chewing tobaccos and snuff. Considerable quantities, however, are exported, especially the heavier and cheaper grades.

Kentucky White Burley is used for pipe smoking, chewing, and cigarettes. The bulk of the crop is consumed in our domestic markets, but considerable quantities are exported.

RECENT PUBLICATIONS OF THE DEPARTMENT ON TOBACCO.

The following publications are available for general distribution:
Farmers’ Bulletin No. 60.—Methods of Curing Tobacco.
Farmers’ Bulletin No. 82.—Culture of Tobacco.
Farmers’ Bulletin No. 83.—Tobacco Soils.
SPANISH ALMONDS

AND

THEIR INTRODUCTION INTO AMERICA:

BY

DAVID G. FAIRCHILD. AGRICULTURAL EXPLORER,
SEED INTRODUCTION AND DISTRIBUTION.

WASHINGTON:
GOVERNMENT PRINTING OFFICE,
1902.
BUREAU OF PLANT INDUSTRY.

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SEED INTRODUCTION AND DISTRIBUTION.

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John E. W. Tracy, Expert.
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1902.
LETTER OF TRANSMITTAL.

U. S. DEPARTMENT OF AGRICULTURE.
BUREAU OF PLANT INDUSTRY,
OFFICE OF THE CHIEF,
WASHINGTON, D. C., JULY 7, 1902.

SIR: I have the honor to transmit herewith a paper on Spanish Almonds and Their Introduction into America, and respectfully recommend that it be published as Bulletin No. 26 of the Bureau series. The paper was prepared by Mr. David G. Fairchild, Agricultural Explorer, and was submitted by the Assistant in Charge of Seed and Plant Introduction.

Respectfully,

B. T. GALLOWAY,
Chief of Bureau.

Hon. JAMES WILSON.
Secretary of Agriculture.
PREFACE.

The accompanying paper is one of a series, which it is hoped can be issued from time to time, embodying observations made on specific crops by the agricultural explorers of this Department. Already several such papers have appeared and have aroused general interest in the subjects discussed.

Almond culture is an important industry in California, and, to a more limited extent, in Arizona and Utah. It is hoped, therefore, that this bulletin may prove of value to these regions. The introduction of the varieties of almonds herein discussed can not, apparently, be without great benefit.

Ernst A. Bessey,
Assistant in Charge of Seed and Plant Introduction.

Office of Seed and Plant Introduction,
February 14, 1902.
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The most valuable almonds of commerce are those grown in southeastern Spain. They are hard-shelled varieties and bring on the English and American markets 8 to 10 cents a pound more than any other sort, being in favor with confectioners for the manufacture of their best salted and sugar-coated almonds. These superlative sorts are imported from Spain by Boston and New York importers for retail to confectioners, many thousands of dollars being expended annually on this import.

Since 1885 Californians have been growing almonds quite successfully, and there are in certain valleys in the State localities where almond culture has become distinctly profitable.

According to the statistics collected by Mr. W. A. Taylor and published in the Yearbook of the Department of Agriculture for 1897 as much as 2,500,000 pounds had been produced in California in a single year prior to that date. Commercial estimates of the crop of 1900, furnished through the kindness of Mr. Taylor, place the almond yield of California at nearly 5,500,000 pounds in that year. The quality of the product is excellent for many uses, but confectioners prefer the imported article, as is evidenced by the fact that they imported in 1897 over $683,000 worth, largely from Spain. It has been assumed that the superiority of these Spanish nuts over the Californian lies in some unexplained and unexplainable peculiarity in the climate of southeastern Spain which finds no equivalent in California. The better informed growers, however, have known that the question was largely a matter of variety, and that the best Spanish sort had never been introduced into America. The matter of its introduction may have been discussed prior to 1893 by California horticulturists, but up to that year, so far as the writer has been able to discover, only the kernels, which form the commercial article, had been known in this country. In 1893 the Division of Pomology of the Department of Agriculture secured from Mr. Charles Heath, United States consul at Catania, Sicily, a handful of the uncracked nuts which he had secured from a firm in Malaga. These were of the so-called Jordan variety, and were said to have been grown on some islands off the Spanish coast. The remark-
ably distinct form of these nuts at once attracted the attention of Mr. H. E. Van Deman, then Chief of the Division of Pomology, and Mr. W. P. Corsa, the nut specialist of the Division, and in his monograph on nut culture in the United States, which was published three years later, Mr. Corsa gave a description, with a drawing of the nut, and strongly recommended its introduction into California. Owing to many difficulties this suggestion seems never to have been followed, although almond growing in California has continued to increase in importance, and certain French sorts, including a kind known as the Provence and supposed to be the same as the Jordan, have been introduced and are now on trial in that State. Heretofore no one has succeeded in getting the scions of trees of the best Spanish almonds, although their kernels continue to be imported into the country from Malaga and Alicante, on the southeast coast of the peninsula.

As agricultural explorer of the Section of Seed and Plant Introduction, the writer last August made a somewhat hurried trip through the almond orchards of Spain, at the time when the almonds were being gathered, to secure scions. It is a pleasure to say that the scions collected are already growing at several places in the United States.a


b The following statement regarding an earlier introduction of Spanish almonds than that made by the Department was received from Mr. W. A. Taylor after Mr. Fairchild’s manuscript had been sent to the printer:

Since the Jordan almond buds secured by Mr. Fairchild reached this country and were successfully propagated, Mr. John Rock, manager of the California Nursery Company, Niles, Cal., has sent us samples, evidently of the true Jordan variety, grown on trees imported by him in dormant bud in February, 1897. Mr. Rock’s statement regarding his introduction is substantially as follows:

In 1886 he requested a French firm to secure buds of the Jordan almond in Malaga, Spain, and to propagate them for him at their nursery in France. This was done, and a lot of dormant budded trees on Myrobolan plum stocks reached him on February 17, 1897.

Fearing that the almond would not thrive on the Myrobolan roots, he grafted 100 of these dormant buds on old peach trees, using the entire stock of the Myrobolan plum, with the dormant almond bud upon it, as a scion, the balance being planted out in the usual way. Nearly all grew, but instead of being of one variety they were found to consist of many kinds, most of them resembling the common, hard-shelled almond. They made but a stunted growth and produced nuts in the third and fourth years. Three of the trees bore fruit that was apparently of the Jordan type, the nuts being of an oblong, curved sort.

Mr. Rock, early in 1902, sent samples of these nuts to Consul Ridgely at Malaga, who submitted them to dealers there for identification. They pronounced them the true Jordan almond.

It would appear from this that the credit for the introduction of the Jordan almond belongs to Mr. Rock, although the Department was not informed of this until after the stock secured by Mr. Fairchild had been established at several points in the United States.
THE ALMOND INDUSTRY IN SPAIN.

Almond growing in Spain is a local industry, its main centers being Malaga and Alicante, although other regions along the coast and even the Balearic Islands, it is said, produce small quantities of the nut. The culture is carried on with various degrees of carefulness. Large plantations on the plains about Alicante, carefully tilled and well taken care of, remind one of American orchards, with their straight rows of well pruned trees and cultivated soil (Pl. 1, figs. 2 and 3). In many fields the almond, olive, fig, and carob trees are mixed, with no attempt at regularity, while in the region about Malaga the foothills are covered with almond trees, between the rows of which grapevines are planted. Whether owing to this mixed culture or for tradition’s sake, the trees are planted far apart, 20-foot intervals being frequent. This does not appear excessive, as the trees reach a large size and live to a ripe old age, fifty years not being uncommon.

While the kind of soil no doubt plays a certain part in the production of a fine almond, the writer does not believe it decides in any way the form of the variety.

The best land for almonds in Spain is that of the foothills or sierras. This is a gravelly loam, which during August becomes as dry as dust and breaks up into irregular but not very hard lumps (Pl. 1, fig. 3). It is of a light yellowish-gray, sometimes reddish color, and is underlaid by a bed of gravel and rock so firm that it is difficult to get a soil auger into it. Such soil, according to Prof. Milton Whitney, Chief of the Bureau of Soils, to whom samples have been submitted, resembles that of the foothills of California.

The climate of this almond region is a very mild one. Freezes occur in winter and ice a half inch in thickness often forms on the water butts, but a minimum of less than 20° must be uncommon, even in the northernmost limit of almond culture, about Alicante. How severe weather the trees will endure while in dormant bud remains, therefore, to be tested in this country. As regards rainfall in this semiarid region, it is difficult to ascertain the facts, as no reliable published data can be found. From the statements of growers and old inhabitants,

"The following is the report of a mechanical analysis of the soil from an almond orchard near Malaga, Spain, made by the Bureau of Soils:

<table>
<thead>
<tr>
<th>Material</th>
<th>Per cent</th>
</tr>
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<tbody>
<tr>
<td>Organic matter</td>
<td>11.42</td>
</tr>
<tr>
<td>Gravel, 2 to 1 mm</td>
<td>6.96</td>
</tr>
<tr>
<td>Gravel, 1 to 0.5 mm</td>
<td>6.56</td>
</tr>
<tr>
<td>Medium sand, 0.5 to 0.25 mm</td>
<td>3.12</td>
</tr>
<tr>
<td>Fine sand, 0.25 to 0.1 mm</td>
<td>10.74</td>
</tr>
<tr>
<td>Very fine sand, 0.1 to 0.05 mm</td>
<td>7.64</td>
</tr>
<tr>
<td>Silt, 0.05 to 0.005 mm</td>
<td>33.54</td>
</tr>
<tr>
<td>Clay, 0.005 to 0.0001 mm</td>
<td>20.22</td>
</tr>
</tbody>
</table>

The water-soluble material is "0.13 per cent in form of bicarbonates."
however, the writer concludes that the months of July, August, and September are practically rainless and that the winter rains are neither frequent nor very abundant. The region is essentially a dry one, verging on the arid, and in sheltered portions of it, at Elche, even the tender date palm is grown. It is the only place in all Europe where this palm is grown extensively or where it bears really edible, though not excellent, fruit.

This region is a land of perpetual sunshine; and in it the olive, fig, pomegranate, the famous Malaga grape, and the carob form characteristic cultures, although the center of each of these cultures is not in the immediate locality. The olives, for example, which furnish the Spanish olives of commerce, are grown farther inland, about Granada and Seville; the figs are more important on the Balearic Islands and in southern Portugal; the pomegranates are raised on the salt lands, where figs refuse to do well; the orchards of carobs are largest about Valencia, some distance from the almond region; and the Malaga table grapes have their center about Almeria; the raisin grapes are in the neighborhood of Malaga, it is true, but occur largely in the valleys, while the almonds are generally grown in the foothills. (Pls. II and III.)

VARIETIES OF SPANISH ALMONDS.

It is probable that there are a score or more varieties of Spanish almonds which have been propagated by budding, but owing to the antiquated methods in vogue in the almond regions, little reliable information about most of these sorts is obtainable.

The writer was astonished to learn how local these sorts are and how little could be learned from one grower about sorts grown in even a neighboring locality. This would not be so surprising if one remembered the dearth of horticultural literature at the disposal of the almond growers. Probably many identical sorts are known by different names in different localities.

The English buyers, who were formerly about the only ones, have given names to some of the sorts that are quite different from those known among the growers themselves. The best variety is known in commerce as the Jordan, and yet not once was this name heard applied to the variety by the growers. They call it the "Large e fine," a descriptive name meaning simply "the large, fine almond." As to the origin of this name Jordan there is nothing new to offer. It may be a corruption of the French word "jardin," meaning garden, or the name can easily have related to the origin of the first importations into England, erroneously supposed to have come from the River Jordan. If the word Jordan occurred in the Spanish trade the former assumption might have some weight, but the term seems to have originated among the English importers.
The trade names, as distinct from the varietal, relate to the grades more than to the different sorts. They are "donkeys," "horses," "tigers," "lions," "elephants," and "mammoths," according to the size of the shelled nuts. The "donkeys" are small and bring a lower price, while the "mammoths" are simply the abnormally large nuts found by the sorters who pick over the nuts by hand. These latter bring fancy prices, only a few boxes being secured during the year out of the thousands of all grades which are shipped.

As the nuts are all cracked on the plantation by the men, women, and children, and brought down on donkey backs to the small buyers in the villages, to be sent to the large storehouses of the exporters, these latter know their almonds chiefly from the character of the kernel. Peculiarities of the American tariff, it is said, make the export of shelled nuts more profitable. Purely mechanical devices for grading these almonds, similar to the gold-coin weighing chutes of banking houses, would do away with much of the unnecessary labor of sorting.

There are two more or less distinct types recognized by the exporters of almonds, but these include several varieties.

The Jordan type of nut (see frontispiece and Pl. IV, fig. 1) is the long, narrow, but plump sort, with exceedingly hard, smooth shell, truncated base, and somewhat bent apex, with edges free from a sharp knife-like character common to many bitter almonds. The edge view is more or less arrow-shaped, and there is a distinct dorsi-ventral character to the nut. Its length alone distinguishes it from others of the Spanish sorts, it being by far the longest and slenderest type. Characters in the foliage may be discovered which will distinguish this from other types. No striking peculiarities were noticed, no opportunity occurring to make very careful comparisons.

The fruit itself is rather thin fleshed and covered with a heavy pubescence. The kernel in good specimens nearly fills the cavity of the nut and is covered with a most delicate papery skin. This skin is much thinner and more delicate than that of any other almond in the trade and is one of the most valuable qualities of this variety. In flavor and texture the flesh surpasses in delicacy any other kind.

Attempts have been made to grow this Jordan variety in the neighborhood of Alicante, but without success. Those of the growers with whom the writer talked knew nothing about the sort, so it seems reasonable to assume that these attempts were not made on any considerable scale.

The Valencia class of nut (Pl. IV, figs. 2, 3, and 4; Pl. V, fig. 1; Pl. VI, fig. 1) is radically different in shape from the Jordan, being a short, decidedly heart-shaped form, with a flat, broad kernel, thicker skin, and somewhat less delicate flesh. The longest of these Valencias are often used by shippers for the adulteration of their Jordans, and the extent to which this adulteration goes on is evidenced by the mixed
lot of shapes one sees even among the sugar-coated almonds of the confectioner. Several distinct varieties of almonds are sold by the exporters as Valencias, and a lot of seedling ungrafted trees doubtless contribute their share to make up the bulk of this high but second grade almond.

The two best of the Valencia type found in cultivation in more or less large quantity were the Planeta (Pl. I, fig. 1; Pl. IV, fig. 3; Pl. V, figs. 1 and 2), which is the popular variety grown about Alicante, and the Pastaneta (Pl. IV, fig. 2), which, although superior in flavor and form to the Planeta, is a shier bearer and has proven less profitable. The Planeta is heart-shaped, is much thicker at the base than the apex and with sides unusually straight, while the Pastaneta has a very plump, striking form, truncated at both apex and base. Figures 2 and 3 in Plate IV show these differences distinctly. The Castillet and Fabrica are other sorts of the same general type found growing in a single garden at Alicante, and they merit mention here only to point out the fact that there are doubtless a large number of distinct varieties scattered through the orchards of Spain.

The Valencia nuts are grown about Alicante, and not, as the name would indicate, about Valencia, which latter is distinctly the citrus province of Spain.

The Mollar is a name given to a variety of the soft-shelled almond grown largely for home consumption. (Pl. VI, fig. 1.) It was found growing about Alicante, but the writer suspects it is a name given to any soft-shelled sort. Seedlings without any local names, even, were shown, and some were of sufficient promise to indicate plainly that much can be expected from the seed of these best sorts if judiciously selected. With a view of furnishing almond breeders in America with material for selection, a quantity of nuts was secured for distribution. The bitter almond, used for stocks, is a little, round, sharp-pointed, plump-formed nut, at once distinguishable from the grafted sorts. (Pl. IV, fig. 5.)

METHOD OF PLANTING AND CULTURE.

Most of the almond trees of Spain are grafted, and the bitter variety is usually employed as a stock. Few nurseries exist in the region, and these pay little attention to the almond. Not a single nursery of almond trees was seen, and the writer was informed that, in most cases at least, the seeds of the bitter almond were planted in a rough seed bed, the young trees transplanted to the places they were to occupy in the orchard, and when two years old, or even more, were budded. Budding is done in the spring. The trees are not commonly budded near the ground, but at a height of 2 to 4 feet above it—a fact plainly evident on all the old trees, which show the point of
union of stock and bud some distance above the base of the trunk. (Pl. V, fig. 2; Pl. VII, figs. 1 and 2.)

The flowering season is the deciding moment for the almond more than for almost any other fruit, for it is the earliest flowering of all our cultivated fruit trees, and consequently most subject to injury by late frosts. Even in the sierras about Malaga a total loss of the crop sometimes occurs in certain valleys as a result of a local late frost. The flowering season for the Jordan begins in January or February, as nearly as can be made out from the conflicting statements given, and is not appreciably later for the other sorts grown near Alicante.

The culture as carried on in Spain is simple enough, and seems to consist, in most localities, of watching for the nuts to ripen and in beating them from the trees when the proper season has arrived, which is in early August. (Pl. III, fig. 3.) The nuts are easily separated from the dry, leathery flesh, and are spread out on the rocks to dry, or carefully piled in the courtyard for safe-keeping. (Pl. VII, fig. 3.) When dried sufficiently they are cracked and the kernels taken from them, packed in bags and boxes, and shipped by pack mule to the nearest buyer.

**GUMMOSIS OF THE ALMOND.**

In some of the almond orchards about Malaga, which were in rather a poor condition, trees were found which were dying from a kind of gummosis that manifested itself in a dying of the bark of the main trunk, a withering and death of the tips of the twigs (Pl. VI, fig. 2), and the formation of gum drops as large as a turkey egg on the trunk and main branches. The fruit of the trees suffering from gummosis was also affected. The shell was discolored in spots, and the kernel was often spotted or the tip covered with a soft gum, which was more or less slimy to the touch. Many trees were seen about the small town of Casara Bònella which were doomed to a speedy death from this disease. Whether or not this gummosis was the effect or the cause of the trouble the writer is unable to say. It seemed to cause the growers no alarm, and was considered by them as a well-known trouble, its prevalence varying with the season. Specimens of the diseased trunks have been submitted to an expert in the Department, and it is possible the cause of the trouble may be discovered.

**POSSIBILITY OF ESTABLISHING THE JORDAN ALMOND IN AMERICA.**

The principal difficulty in the successful introduction of the Jordan variety of almond into America will be to find localities suited to almond culture which are not subject to late frosts. The soil conditions, if suited to the growth of other good varieties, will, in all probability, fill the requirements put upon them by this superlative sort.
nians have shown already that they can grow from a half million to
two and a half million pounds of almonds per year, and of a quality
which "compares favorably with all but the best;" and if regions free
from January and February frosts can be discovered there seems no
reason to doubt the successful issue of an experiment.

Why no other nation than Spain has grown these varieties is not
difficult to explain when one realizes that the nuts are exported almost
exclusively to England and this country, and that even the French mar-
kets do not handle them. The natural inertia and indifference of the
growers in Sicily account for the failure to thoroughly test the culti-
vation of the Jordan almond there.

Although California is the largest almond producer in America,
there are small areas in Texas, New Mexico, Arizona, Nevada, Utah,
Idaho, and Oregon where growers should be found who are willing to
experiment with these introductions.
DESCRIPTION OF PLATES.


PLATE I. Almond orchards about Alicante.—Fig. 1. A single large tree of the variety Planeta.—Fig. 2. One of the largest almond orchards near Alicante, showing a fine state of cultivation and freedom from weeds and other vegetation.—Fig. 3. Cultivating an almond orchard near Alicante in August. Note the character of the soil and the freedom from weeds.

PLATE II. Jordan almond orchards about Malaga.—Fig. 1. The low foothills covered with olive and almond trees.—Fig. 2. An old almond orchard among the hills near Cartana. Notice the clean culture.—Fig. 3. Tree of Jordan almond, near the city of Malaga, from which scions were obtained for introduction into the United States.

PLATE III. Scenes in the Spanish sierras, where the best Jordan almonds are grown.—Fig. 1. The village of Almogia; almond trees in the foreground.—Fig. 2. Scattered almond trees on the mountain side.—Fig. 3. Beating the fruit from an almond tree on the mountain side.

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Fig. 2.—One of the Largest Almond Orchards near Alicante.

Fig. 3.—Cultivating an Almond Orchard in August.

Almond Orchards about Alicante.
FIG. 1.—Low Foothills Covered with Olive and Almond Trees.

FIG. 2.—An Old Almond Orchard among the Hills near Cartana.

FIG. 3.—Tree of Jordan Almond near Malaga, from which Scions were Taken.

Jordan Almond Orchards about Malaga.
Fig. 1.—The Village of Almogia. Almond Trees in Foreground.

Fig. 2.—Scattered Almond Trees on the Mountain Side.

Fig. 3.—Beating the Fruit from an Almond Tree on the Mountain Side.

The Spanish Sierras, where the best Jordan Almonds are grown.
1. Jordan Almonds from Malaga.

2. Pasteleta Almonds from Alicante.

3. Planeta Almonds from Alicante.


5. Bitter Almonds from Malaga.

Varieties of Spanish Almonds Fresh from the Trees (Reduced One-Third).
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Fig. 1. - Jordan Almond Tree from which samples were taken.

Fig. 2. - Branch of ripe Jordan almond just plucked from the tree.

Fig. 3. - Almond Growers' Descendants of the Moors.
LETTERS ON AGRICULTURE IN THE WEST INDIES, SPAIN, AND THE ORIENT.

BY

DAVID G. FAIRCHILD, Agricultural Explorer.

SEED AND PLANT INTRODUCTION AND DISTRIBUTION.

Issued November 20, 1902.
BUREAU OF PLANT INDUSTRY.

Beverly T. Galloway, Chief of Bureau.

SEED AND PLANT INTRODUCTION AND DISTRIBUTION.

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A. J. Pieters, Botanist in Charge.
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John E. W. Tracy, Expert.
George W. Oliver, Expert.
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LETTER OF TRANSMITTAL.

U. S. DEPARTMENT OF AGRICULTURE.
BUREAU OF PLANT INDUSTRY.
OFFICE OF THE CHIEF.
Washington, D. C., September 2, 1902.

Sir: I have the honor to transmit herewith letters and reports from Mr. David G. Fairchild, Agricultural Explorer, regarding agricultural conditions noted by him in travels in the British West Indies, Philippine Islands, Spain, China, Japan, India, and the region of the Persian Gulf, and recommend that they be published as Bulletin No. 27 of the Bureau series. The observations of Mr. Fairchild were made while he was traveling as the assistant of Mr. Barbour Lathrop on expeditions planned by him in cooperation with this Department.

These reports and letters have been submitted with a view to publication by Mr. A. J. Pieters, Botanist in Charge of Seed and Plant Introduction and Distribution.

Respectfully,

B. T. GALLOWAY,
Chief of Bureau.

Hon. James Wilson,
Secretary of Agriculture.
PREFACE.

From time to time Mr. D. G. Fairchild, Agricultural Explorer for the Department, has given in letters to the Secretary of Agriculture his impressions of matters pertaining to agriculture as observed by him in his travels. Mr. Fairchild's wide experience and his habit of observing closely the agricultural conditions of the countries through which he passes make his communications of especial interest and value. The Secretary of Agriculture directed the publication of these letters, and five of them, written at different times from January 30, 1899, to August 22, 1902, together with three other papers, which from their nature seem to belong here, are included in this bulletin. Mr. Fairchild's letters are arranged chronologically and are published practically in full.

A. J. Pieters,
Botanist in Charge.

SEED AND PLANT INTRODUCTION AND DISTRIBUTION,
Washington, D. C., July 30, 1902.
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LETTERS ON AGRICULTURE IN THE WEST INDIES, SPAIN, AND THE ORIENT.

AGRICULTURE IN THE BRITISH WEST INDIES.

Port of Spain,
Trinidad, British West Indies,
January 30, 1902.

Considerable shipments of West Indian yams\(^a\) have been arranged for, which I believe will form an addition to the root crops of the Gulf States, and of Florida especially. These yams are the staple food of the Jamaican blacks, and are worthy of general introduction to American tables. They are totally distinct from what are usually known in America as yams, belonging to quite a different family of plants. They yield a very large amount of food material per acre, the average of three years' trial in Trinidad being over ten tons.

You will be interested in an account of the preparations which are being made in the British West Indies to establish experiment stations and agricultural colleges for the investigation of problems in tropical agriculture and for the instruction of planters and natives in modern methods.

I was present at a special meeting of the Jamaica Institute in Kingston, where was discussed the plans for an experiment station to be established in Jamaica. I met there the representative scientists and agricultural educators of the island, and at their request spoke to them on the organization of American agricultural colleges and experiment stations. From the acquaintances made at the meeting I learned that it was their aim to model the new station after the American plan.

The Royal West Indian Commission has recommended in its report on the means which should be employed to relieve agricultural depression in the islands, the establishment of a department of agriculture to be supported by Imperial grant, and not, as in India, to be dependent upon the colonial government. The expressed purpose of this new department is the "restoring of the sugar industry to a condition in which it could be profitably carried on, and to encourage the establishment of other industries in such colonies as afford suitable conditions

\(^a\) See p. 12 of this bulletin.
to supplement the staple industry." The funds at the disposal of the department are £17,500 yearly for ten years, and Dr. D. Morris, formerly assistant director in Kew, has been selected as commissioner. Contrary to my impression before coming here, this department does not include in so far as the expenditure of Imperial funds is concerned all the British West Indies. The colonies of British Guiana with 65 million acres, Trinidad with over one million acres, and Jamaica with more than 2½ million acres, were considered by the commission as able to support their own excellent experiment stations, and receive from the Imperial Government no grants in aid, the commissioner having only advisory power over the independent stations of these colonies. The total area, therefore, which will be affected by the Imperial grant of £17,500 is only a trifle over 825,000 acres, only 580,000 of which are cultivable. This does not necessarily mean that certain aid in the way of agricultural instruction may not be given to the colonies of British Guiana, Jamaica, and Trinidad.

Dr. Morris's plans for the expenditure of the funds intrusted by Parliament to his department have been outlined in the report of the commission published in 1897, as well as somewhat more fully in a speech before the agricultural conference held in Barbados previous to our arrival. They include as principal features the continuance of the very excellent experiments in the breeding of sugar cane which were inaugurated by Dr. Harrison, of British Guiana, while he was still in Barbados, and which have opened up a new field of research and proved beyond a doubt that the sugar cane is capable of very great improvement by means of crossing and selecting the seedling canes. There have been produced seedling varieties which contain more than one-fourth more sugar per ton of cane than the best Bourbon cane heretofore grown in these islands. The variety known as Barbados No. 147 has yielded three-fourths of a ton more sugar per acre than the Bourbon variety.

It should be noted, however, that notwithstanding the great interest in the experiments and the number of investigators engaged, there has been no systematic breeding done and the male parentage of the best canes is in no case known, while the female parent is in many cases a matter of conjecture. At least, after diligent inquiry, I have been unable to find any record of hand crosses being made.

A second feature of the work will be the introduction of new plant industries, and the various botanical stations already established on the islands of Tobago, Grenada, St. Vincent, Barbados, St. Lucia, Dominica, Monserrat, Antigua, and St. Kitts-Nevis, and the large and excellently equipped botanic gardens in Jamaica, British Guiana, and Trinidad make the systematic work of introduction a much simpler matter; and were the conservatism of the average English planter less great, many new and profitable industries, I believe, could be estab-
lished. This conservatism is sure to play a great rôle in the carrying out of this feature of the work, and I am more fully convinced than ever that the American cultivator when he does once enter the field of tropical agriculture will make his mark, as he has in the agriculture of temperate regions, by introducing into the markets of the world a host of new food products. My attention has been called to a large number of tropical fruits that could be grown successfully in Porto Rico and which would bear shipment by fast steamer to New York, where, if once properly advertised, they would make a market for themselves and become as common as the pomelo or Japanese persimmon. These fruits are as yet nothing but seedlings, as no work in their amelioration has been done. What they could be bred into, the experienced American horticulturist can easily conjecture.

A third feature of the department’s prospective work has to do with the establishment of agricultural schools on the islands of Dominica, St. Vincent, St. Lucia, and St. Kitts-Nevis for the manual training of orphans and destitute children; the employment of teachers in agricultural science in the higher schools and colleges; courses in agriculture of a normal character, to which the teachers in the elementary schools will be invited; and small grants to elementary schools teaching the theory of agriculture. In connection with the educational part of the plans of the new department, traveling teachers or instructors will be sent about the islands, holding meetings similar to the farmers’ institutes in America. Agricultural exhibitions or fairs in the different islands will be fostered by small grants for prizes, etc.

The Imperial Government has already advertised for a new steamship line direct from Jamaica to the mother country, with a view to the encouragement of the Jamaica fruit trade, and a second to run between Trinidad, Barbados, and Canada (Halifax). No provision is made to develop the fruit trade with New York, although Dr. Morris informed me that this might ultimately be done. The fear that our tariff might at any time be changed to their detriment has decided the authorities to encourage trade with the mother country and Canada only.

After a somewhat careful study of the institutions of Jamaica, Barbados, and Trinidad, it becomes evident to me that there is not as yet what an American would consider a modern experiment station in the West Indies. There are well-equipped chemical laboratories and comfortable, well-arranged, botanical laboratories, but no happy combinations of botanist, entomologist, chemist, and agriculturist, which make up an American experiment station.

The most fully equipped botanical garden and the most profitable place in the West Indies for American students who wish to learn the elements of tropical agriculture is here in Trinidad, where a comfortable laboratory and an unusually rich economic botanical garden, under
the able management of Mr. J. H. Hart, would enable a young American to pursue any line of research relating to the culture of tropical plants. Mr. Hart’s interest in American methods and his acquaintance with American characteristics would make him a very profitable associate for any student who could be sent.

The key to the situation lies in the breeding of tropical plants, and already here in Trinidad the first successful attempts at grafting cocoa have been made. Cocoa, coffee, tea, and many other of the tropical food plants will soon be propagated by grafting, and a host of new and better varieties will be developed by hybridizing and selecting.

In conclusion, I wish to call attention to the object of the expedition which Mr. Lathrop is conducting, which is not to study exhaustively any one country, but to get an idea of its possibilities and ascertain whether or not it would be worth while to send an explorer into it to study its resources, spending months in such study, and at the same time to pick up such seeds and plants as would be of evident utility should they succeed when introduced into America. Only such species as are already successful as food or otherwise economic plants in the countries visited will be sent.

We have already sent, or arranged to have sent, the yams above mentioned, a collection of the Celebrated Barbados sweet potatoes; four of the most noted varieties of East Indian mangoes; a number of plants of the “Trinidad” lime, the largest lime I ever saw; cuttings of a new variety of Poincettia, the showiest foliage plant I have ever seen; a collection of Trinidad varieties of Hibiscus, some of which are the showiest of their kind, and will surely be appreciated; a quantity of the “Para” grass, one of the most highly prized forage grasses of the Tropics, which will succeed admirably in Florida, it is believed; and seeds of the cashew tree, which bears what in the opinion of the connoisseurs is the most delicious of all table nuts, the cashew nut. The cultivation of this tree could be made to develop into an industry similar to the pecan industry of Louisiana, if properly introduced into Porto Rico or southern Florida.

**JAMAICA YAM CULTIVATION.**

The cultivation in Jamaica of the vegetables known as yams seems to date from a remote period, as no one, even of the oldest inhabitants, seems able to recollect when any of the varieties now grown were not sold on the markets. Yam culture has, however, within the last ten years, greatly increased, perhaps doubled, and in the eastern portion of the island the patches devoted to it are more numerous than those given up to any other plant, save the banana, which to-day forms the principal export fruit of the island. Fully 40 per cent of the native women who walk to market with baskets of produce on their heads, at this time of year at least, have their baskets filled with yams. The
yam forms certainly one of the most important articles of exchange at the large markets, and it would be no exaggeration to say that it is the staple food plant of the Jamaica blacks and a most important vegetable of the Europeans and half-castes.

Just when and by whom the yam was introduced into Jamaica, I have not been able to discover. It is not, however, indigenous, although some of the varieties which will be mentioned later are probably of Jamaican origin.

The culture of this vegetable is not, as might be supposed, confined to the native blacks, but is given serious attention by some of the most intelligent planters on the island. Especially suited as the yam is to culture in the higher altitudes, it forms a part of many coffee planters' business to grow a certain number of yams for their own consumption and for sale to the blacks. The profits from such culture are not great, but the business is reasonably remunerative.

So far as the consular digest shows, no yams are exported to America, although were a taste for the finest variety created, there would certainly be a good market for it, as it is a vegetable of sufficiently characteristic flavor to win for itself a place on the finest hotel tables and attract the attention of the most exacting. The variety which is so superior to all others, is known by the name of "Yampic," and is worthy the serious consideration of Florida and Louisiana planters as a vegetable to be grown for the highest-priced or fancy markets. Certainly, a baked Yampic is more palatable than a baked Irish potato, and the crisp skin of the baked root has a flavor not possessed by any vegetable, so far as I know.

The culture of the plant is not so simple as might be supposed at first sight, and, as in the treatment of many plants, different varieties (in this case species, botanically speaking) require different methods.

The Yampie is a vine resembling our American species of *smilax* somewhat, with clusters of large fleshy roots like sweet potatoes. It is propagated by what are called "heads," which are no more than the extremities of the enlarged roots, containing adventitious buds which under suitable conditions are able to develop into new vines. These heads are planted (in Jamaica, at any time of year almost) in hills 6 to 8 feet apart each way, 3 heads being placed 6 inches or so apart in each hill, and a stout 8-foot pole is driven near one of the heads, upon which the vigorous vines are trained. Planted in rich soil they grow without any attention other than the cultivation necessary to keep the weeds down, and from each single head several vines spring. These vines draw their nourishment from the head, sucking it dry as a squeezed orange, and by the time the vines are established on their own roots they begin forming underneath the heads the fleshy roots which form the crop. In the course of five or six months these roots are large enough to harvest. The roots are gathered without destroy-
ing the vines, and sometimes three or more crops are taken from one planting. After the harvest of the deeply buried roots, the portions above are allowed to grow and "make heads," as they say here. These heads are used to start a new plantation, being cut into large pieces, each containing several buds, and are then buried or covered in a pile, together with straw or leaves, until the buds start, when they are planted as just described. From one head several of the edible roots are produced, but the proportionate increase in comparison with sweet potatoes is in the latter's favor. The yield is not more than three or four times what is planted. So far as I could ascertain, it is the general practice in Jamaica to plant large heads, the larger the better, or at least large cuttngs of the root itself. No such system of sprouting is employed as with the sweet potato; in fact, the idea prevails that the young plant is dependent for too long a time upon what nourishment it draws from the head to make such a method possible. Only feeble plants would result.

Of the recognized varieties of yams, the Negro yam, Lucy yam, or Blue Vine yam, which are considered by Mr. R. W. Miles, one of the best informed growers of these plants in the island, as synonymous or at least only slightly different varieties, is that bearing in the shortest time from planting. If planted in April it matures its crop in October. The White yam, although requiring longer to mature, is a much better keeper; in fact, it can be kept for months with perfect ease if the broken surfaces are painted with a mixture of quicklime and water. The Afloo or Yellow yam is extensively grown, but is considered no better than the White and is inferior in keeping qualities. The Yampie is a poor keeper and from the difficulties in its culture, as well as its great inferiority in size, is, for amount of nutriment furnished, a much more expensive product. Slight bruises injure the roots and decays start in very quickly.

The yam plantations are more abundant and successful in the cooler moist regions of the island, I am informed, and from all appearances it is reasonable to assume that the plant requires a great deal of moisture.

Should an attempt be made to grow these yams in America it could only hope for success in regions where either the rainfall is heavy enough, over 20 inches a year, or where water for irrigation is at command. This is not stating that the plant can not withstand a reasonable amount of dry weather. The heads ought to be planted as soon as danger from frost is past in spring; advantageously, in boxes in a cold frame. Two months would be no exorbitant estimate for starting the heads, and they might well be planted in February under a cold frame. When planted in hills the heads should be well covered, the earth being drawn up well about the base of the vine, as with sweet potatoes. To maintain sufficient heads for planting the follow-
ing season, the crop should be removed without disturbing any more than necessary the base of the vine and that collection of irregular root tips which forms the incipient head. The latter should be covered and allowed to remain as long as possible before digging.

Experience would teach what modifications of the methods in vogue here would be necessary in the Southern States of America.

It seems certain that the cultivation of these superior varieties of yams, especially of Yampie, would be lucrative if such yams were introduced into our northern markets and people were informed how they should be prepared. The Jamaica Cookery Book, issued in 1897, gives four or more different methods of preparing the Jamaica yam, but omits the important recipe for baking, although the baked Yampies are more palatable than any other form of prepared yam. The crisp browned skin of a Yampie baked for ten minutes in a quick native oven is especially palatable.

OPPORTUNITIES FOR AGRICULTURAL AND BOTANICAL RESEARCH IN THE PHILIPPINE ISLANDS.

S. S. "Tonkin."
Messagerie Maratime.
Between Singapore and Colombo,
April 17, 1900.

The agricultural and botanical institutions in the city of Manila are in the most dilapidated condition. In 1897 the more or less extensive herbarium and collections of natural history, as well as the library of scientific books relating to the Philippines, was accidentally burned. There are now existing in the city only a few miscellaneous works on the fauna and flora of the islands and a small but neatly kept museum of zoological and botanical specimens in the Jesuit Academy, in charge of Padre Simon.

Some works on forestry which were formerly in the office of the Inspection de Montes, or inspection of lands, were sought for in vain. The office building was occupied by the Twenty-seventh Regiment and crowded with camp stoves and other army supplies, looking as little as possible like a forestry department. It is evident that this department was given more than usual attention by the Spanish colonial government, and as evidence of this Captain Ahern, of the board of claims, informed us that the forest laws were far more carefully drawn up and more comprehensive than those of our own country.

Judging from the large quantities of very excellent timber which have been used in the construction of churches and houses, the forests must have contained and still possess a wealth of exceptionally good tropical wood. Polished floors made of 14-inch boards, as straight as if newly laid and without a check, are a great rarity elsewhere in the Tropics, and such a floor as that of the Jesuit Church, which is as
smooth as marble, made of large squares of hard wood, would be a novelty anywhere. In the astronomical observatory is a dark mahogany-brown table top, 6 feet wide and 12 feet long, of native "harra" wood, which shows the large size to which these forest trees sometimes grow, and corroborates the statements made in works of travel as well as by officers that large forests of giant trees exist, into the hollow stumps of some of which it is possible to ride on horseback.

With such valuable timbers, the problem of their protection and proper exploitation becomes an important one, notwithstanding the well-understood fact that comparatively few tropical cabinet woods pay for exportation to Europe or America. The Dutch have shown in Java what can be done in the forestry management of a tropical island, and their system is well worth study.

There are the remains of a botanical garden near the heart of the city which was formerly under the directorship of Dr. Regino Garcia, a man of intelligence and a botanist. Dr. Garcia was in the employ of the Spanish Government from 1866 to January 31, 1899, and received from that and other governments various decorations and diplomas for expositions of Philippine products. At present the garden is in charge of an American, and his supervision extends to the public plazas and roadways. The garden itself contains only about six or seven acres, lying between the two principal driveways to the "Lunetta" or promenade. During the insurrection prior to the American occupation, the iron fence about the garden was removed and many of the best specimens of plants dug up or cut down. The larger trees were roughly pruned and hacked to pieces, and so far as possible everything which could serve as a shelter for the insurgents against the fire from the walled city near by was pulled down. A small two-story frame building of five rooms and a gate-keeper's lodge were, however, left standing, and the former is being put into a habitable condition. As to labels, those most perishable and yet necessary adjuncts of a botanical garden, there are practically none, nor could I discover that there existed any list of the few hundred plants contained in the garden. A redetermination of most of the species will be necessary.

Although I have seen botanic gardens which were little more than heterogeneous collections of ill-kept plants and lawnless stretches of bare earth, this garden in Manila is at present the worst I have ever seen.

The street tree planting which is going on deserves careful direction in the selection of trees best suited for avenue purposes. Nothing could add more to the general comfort of the citizens of Manila than a replanting of the numerous small plazas and the setting out and protection of shade trees along such streets as are wide enough to admit them. It is no doubt true that many street trees which served to shelter the insurgents were cut down by the Spanish, but such sad
looking wastes as the "Lunetta," are evidences that there never has
been in Manila anything worthy the name of a park.

Maps of the city show that a series of parks and avenues could be
easily arranged with the walled city as a starting point, which would
greatly improve and beautify the place, and the old moat and canal,
if properly handled, could be transformed into one of the most pic-
turesque spots in the Orient.

I do not believe the botanical work done in the islands was ever
great, and when compared with what Holland has done for her colonies
it is as nothing.

It would be unfair in this connection to omit to mention the very
creditable work of Soler y Vidal on the forest flora of the islands, or
to fail to allude to the other Spanish botanists who have contributed
to a knowledge of the Philippine botany, but considering the length of
the occupation and the richness of the plant world one is forced to the
conclusion that valuable botanical opportunities have been wasted.

The agricultural problems to be solved and the botanical explora-
tions to be made are very attractive, and offer an interesting life to
any young man who is willing to work for the interests of a native
race like the Filipinos and identify himself with the development of a
rich tropical archipelago.

Some of the questions which, according to certain prominent busi-
ness residents, are most evidently worthy of consideration, pertain to
the work of plant introduction and plant pathology; others relate to
the complicated matters of native labor, imperfect means of transport-
tation, and want of modern machinery; but the most important in
the minds of all the business men, planters as well as exporters, is the
quick pacification of the country districts and the regulation of the
custom-house and other municipal departments.

The cultivation of tea is a possibility, but the profits will depend
largely on the price of labor, which has been gradually rising since the
American occupation of the islands.

Coffee of a reputed excellent quality was once grown in the islands,
but the trees were destroyed by an insect pest, of which, Dr. Garcia
informs me, the life history has been, in part at least, studied out.
Whether the Ceylon coffee-leaf disease is already in the islands or not
was not ascertained.

Good grades of cotton have been produced and the culture of Sea
Island and Egyptian varieties has been suggested as likely to yield
profitable returns and form an article of export. It is probable that
some of the many islands possess a climate especially suited for cotton
culture. The small island of Lombok, in the Dutch East Indies, it is
said, grows a good quality of cotton for export, and its culture is
entirely in the hands of the natives.
The Manila hemp industry is still a monopoly, although the plant grows well in other tropical regions, and could be easily cultivated in the Straits Settlements, according to Dr. Ridley of the Botanic Gardens in Singapore. According to information furnished by one of the largest hemp exporters in Manila, the methods of culture are those practiced with any semiwild plant, it being grown over a large area of forest land, especially in the regions about Albay. The problem of increased production is not the cultivation of more hemp plants to a given area but the invention of a machine of large capacity for extracting the fibre. With the old hand machines, which require only three men to work them, and are carried on the heads of the operators into the forests of the hemp plant, the extraction is done so slowly that for every stalk which is cut and stripped into fiber at least five are left to decay in the field. The rapidity with which the fiber deteriorates after the stalks are cut has so far prevented the work of extraction being done at one central point. Increased means of transportation might make such a central factory possible.

The manager of one of the largest tobacco factories, for which Manila is famous, asserted that the quality of the leaf received from the native growers was inferior to what it had been twenty years ago, and although it was well known that the original seed was imported from Habana, that no late importations of good tobacco seed from Cuba had been made. The distribution by the Government of a large quantity of the best Cuban and Sumatran seed is an experiment well worth making, and the careful selection of the seed from the best Manila-grown strains a matter of prime importance, considering the very large dividends paid by the Sumatra companies out of sales made principally in America, and the possibility of there being produced in the Philippines a cigar wrapper equal to the famous Sumatran.

There is a great variety of native-made fabrics which are most diaphanous in nature. These are woven in plain but pretty patterns, and are so universally worn by the natives of even the poorest classes that they give the street and market scenes an appearance of neatness and bright color not met with elsewhere in the East. These fabrics are made from the Manila hemp fiber and that of the native pineapple, and are often shot with threads of bright-colored silk. Though of a harsh texture, and objectionable when worn next the skin, they are easily washed and starched, and are of great durability. The Chinese of Singapore are said to pay big prices for this pineapple cloth, of which they make their loose, comfortable jackets. It is possible that improved machinery and an increasing Chinese demand may make the manufacture of these Manila fabrics a paying industry. As yet the fiber of the pine is obtained chiefly by means of primitive machines worked by hand.

The prospects for rubber cultivation are as yet unexplored. There
may be localities where the Para rubber trees can be grown and will yield paying amounts of rubber, but the occurrence of a pronounced dry season on most of the islands will probably reduce the flow, as it does in Ceylon, below the point of profitable cultivation. An early survey of the islands with this in view should be made, and experimental groves set out if necessary. The employment of an expert acquainted with rubber cultivation might save the colony much time and money, as he could point out the regions in which rubber trees would be most likely to succeed.

For the orchid hunter the rich and little explored island of Mindanao will yield many new treasures. It is considered by an orchid fancier and successful orchid breeder of Manila as the most promising island in the archipelago for this family of plants.

The Manila markets have a large variety of native vegetables and fruits, but the absence of such a superior vegetable as the alligator pear and the great scarcity of the tropical yam, upon which the blacks of Jamaica live, indicate that there are many lines along which profitable plant introductions can be made.

Although the inertia of the Oriental native will be a constant drawback to the work of introducing new cultures, such successful examples as those furnished by the introduction of the cotton plant into Egypt during our civil war, and the civilizing effects of the introduction of coffee among the savage head hunters of northern Celebes in 1882 should be encouragement enough to induce our Government to try on a larger scale the civilizing effects of the introduction and improvement of tropical plants in the islands.

**AGRICULTURAL CONDITIONS IN SPAIN.**

**Barcelona, Spain, August 6, 1901.**

Before leaving southeastern Spain, where I have been successful in getting the finest almonds in the world for our California growers, it gives me pleasure to write a few general impressions of the country.

The idea grows on one, with a prolonged stay, that this region is agriculturally now so far behind that it will have hard work to catch up. The price of farm labor in southeastern Spain has dropped to an equivalent of 21 cents a day. Spanish as well as foreign capital is in chary of investment in new undertakings. There is wealth here, but the Spaniard can get 5 per cent on Government bonds and hesitates to exploit a mine or go into sugar beet raising lest some change in the tariff regulations will injure his business; he prefers, therefore, to invest his money in bonds and live quietly on the interest they bring. Foreign capital is afraid of changes and invests cautiously. Certain companies advertise that buyers will be charged for any changes due to new Government regulations.
The operations of the farm in southern Spain (Andalusia especially) are exceedingly primitive. Egyptian methods are not so crude in many respects. In some places the subsoil plow seems to be entirely unknown, and I have seen a wheat stubble field of at least 100 acres being worked over by mattocks; 15 to 20 men were working their way laboriously across the field.

The absence of cattle is most striking in southern Spain, no fodder except small patches of alfalfa under irrigation being obtainable. In place of cattle, large herds of mixed-bred goats are kept, and everywhere their high-tasting milk is served. The only butter used is in the hotels and houses of foreigners, and it is so bad that most foreigners prefer to go without it. Swedish and Danish brands are sold. Consul Ridgely, of Malaga, informed me that the duty on butter from America would have to be lowered before any considerable import could be made. My impression is that it will not be a big market, for the people have gone without butter for so many centuries.

Farm machinery of American and English make is being imported slowly. The agent in Madrid for an American pump manufacturer told me that his assistant who tried to sell an English reaper in a southern village was mobbed by the laborers and came near losing his life. Thrashing machines of large size are quite out of the question. I am told that the farmers will not combine and buy one, and are so jealous of one another that even a traveling thrashing machine would have a very hard time. Few farmers have enough grain to warrant their purchasing a machine for their own use. The old thrashing floor of Biblical times is in evidence everywhere. Every village has an open space outside the town where thrashing and winnowing by hand are done. I have seen 25 men and 20 mules at work on one of these floors, taking about two weeks to do what a 10-horse thrasher would accomplish in two days; every farmer with his own stack, thrashing-board, and mule.

There is one point regarding the thrashing machine which is complained of throughout the Levant. It does not crush and break up the straw sufficiently. In Egypt the straw is considered quite as valuable as the wheat, being fed to live stock as "tibbin." The old style of thrashing floor prepares the straw admirably for this stock feeding. Furthermore, the straw-chopping machines known here do not prepare the straw satisfactorily.

Commercial fertilizers are beginning to be used, but unfortunately spurious imitations have been sold, and they have prejudiced many farmers against them.

The principal cultures in Spain are the almond and raisin industries of the extreme southeast, the hard wheat of the interior dry regions, the Valencian orange and lemon plains of the northeast coast, and the olive orchards about Sevilla.
The almond orchards are scattered through many provinces and as a rule are small, the dry sierras and sheltered hillsides being preferred. There are several sorts which are shipped to the New York market, but the best, and the one that formed the principal object of my visit to Spain is the "Jordan." This has long been coveted by Californian almond growers, and as it is a distinct variety I see no reason, except the difficulty of finding valleys in California free from January and February frosts, why the plants sent will not grow as well there as they do in Spain. These are the finest almonds in the world and enormous quantities are sent to America.

The raisin industry has suffered very severely from Phylloxera, and is localized in a few towns along the coast, Almeria being one of the centers. Gradually all vines are being grafted on American resistant roots. I understand that these raisin varieties have been already introduced into California, but my time was so taken up with the almonds that I did not learn much about this culture.

Spanish wheat is not as a rule of first quality. The tender wheats, I am told, are lacking in gluten, and the hard wheats make a variety of macaroni inferior to that produced by Russian "Taganrog" wheat. I made some small preliminary purchases of tender and hard wheats which I believe will show resistance to black rust and be valuable on the plains.

There may be in the world other plains more fertile and highly cultivated than that of Valencia, but I have never seen them. The orange and lemon orchards extend on both sides of the railway as far as the eye can see, and the train travels for hours through them. Last year over three million boxes (of 100 fruits each) and thousands of freight cars loaded with unboxed fruits were exported; largely to England. This province of Valencia is the richest in Spain, except Catalonia, in which Barcelona is situated. Unlike Catalonia, its wealth comes from its exports to foreign countries, whereas Barcelona’s wealth is built up on the sales of manufactured articles sold in the other provinces of Spain. Barcelona is said to have more industries than all the rest of Spain put together.

The methods of culture in Valencia are rational, and although the land is in the hands of small owners, I am told, there is a uniformity of varieties and more or less cooperation in the matter of shipping. I do not believe they yet understand the art of shipping as Californians do. The difference in gauge of their railways from those in France makes a transshipment at the border necessary, in which transshipment much time is lost and damage done.

The beet-sugar industry flourished very well for a few years, but is now, I am informed, being greatly overdone. Nowhere in the world does sugar cost more than in Spain. The import duty is something excessive, and it is no wonder the first beet-sugar factories made money.
Olives for pickling and export to America and England, and olives for oil, form, second to the cultivation of the vine for wine purposes, the next greatest culture. Many thousands of the olive trees were planted by the Moors a century or more ago, and the good and bad varieties are mixed together. The crop is a precarious one, insect pests being abundant, but a good year will yield very heavy returns, up to 80 per cent, I have been told. Forests of olives of many miles extent are traversed on the railways from Malaga to Barcelona.

The vine is in evidence everywhere and wine is said to be "cheaper than water" in some places. The methods of preparation are not as a rule modern and the wines are strong, and fetch (with some special exceptions) low prices on the market. The culture of wine grapes is no longer very profitable.

NOTES ON CONDITIONS IN CHINA.

Colombo, Ceylon, January 4, 1902.

We remained in Shanghai only so long as was necessary for the Japanese steamer on which we left San Francisco to unload her cargo of American dried fruit, tinned beef (with the Department inspection tags on it), and American flour.

European and American business in the city of Shanghai is booming. Many new houses are in process of construction, and of late the white population has considerably increased. New enterprises are seeking to get a foothold everywhere; office rents are high, and it is often well-nigh impossible to get suitable office rooms.

The missionaries, displaced by the troubles, are returning to their posts, and foreign merchants claim that the outlook for trade improvement is most favorable in this region, as Shanghai, at the mouth of an immense waterway, is and must remain the great distributing point of all central China.

I am informed that American trade is more than holding her own against that of other countries, and the impression seems to be that she has decided natural advantages and should be able to keep them. Japan's trade has greatly increased here of late, and she is not only an active but may become a dangerous competitor.

A twelve days' stop in Hongkong enabled me to go to Canton in search of the south Chinese peaches and plums, scions and trees of which, I am happy to write, are now en route to Washington, together with some promising leitchees, bamboos, and persimmons for California and Florida.

Canton, one of the largest of Chinese cities, said to have a population of more than two millions, lies seven hours by steamer up the great West River from Hongkong, which latter is for south China what Shanghai is for central China, the great distributing point.
The Cantonese metropolis lies in an extensive, fertile delta of rice fields and orchards, through which in every direction run navigable canals and river branches that form favorite retreats for the Chinese pirates, and the steamers plying on these waterways are provided with stands of loaded arms and quick-firing guns. Two years ago, after a good deal of travel in the Orient, I found Canton one of the most interesting places in the world, and a second visit has not led me to change my mind, although many Americans see nothing more in it than a "disgustingly filthy place."

A chair ride through the streets of this immense metropolis (although filthy and as narrow as the alleys of a steamer passage way) presents many curious sights, and suggests possibilities of future development along lines favorable to any business in competition with western commerce and manufactures. One can not fail to have forced upon him the tremendous amount of physical and mental power which lies waiting to be employed in more lucrative occupations than the careful chopping of a sheep's entrails or the making of exquisitely beautiful images of rice paste, which sell for a few cents apiece.

The precision of movement, the concentration, the earnestness of application, and the continual activity which are now exerted on the pettiest trifles, can not fail, when employed in the manufacture of articles which the white man wants, to have a marked influence upon the market supply of such goods.

Whether you watch the countless junks or sampans along the waterways, or jostle with the crowds in the narrow thoroughfares, the impression is the same; you are in the midst of two millions of the most industrious, temperate, and philosophically minded people in the world.

Canton was the home of many an emigrant Chinaman, and his abilities as a workman can be best understood if seen both in his own land and in the countries to which he has emigrated.

This populous city, which is almost entirely built up in one or two story houses, covers many miles of territory, and is surrounded by rice fields, orchards, taro patches, and groves of guava, while the fertile foothills in the interior are clothed, I am told, with orchards of chestnut, peaches, and plums, which supply in their season the fruit markets of the Cantonese.

Rice is the staple food, and there are many varieties suited to distinctly different uses. They even export to their relatives in America (smuggling it out of Canton because the export of rice is prohibited by imperial law) a variety which they consider superior to any of our home-grown sorts. The gardens of citrus fruits, leitchees, carambolas, and guavas are often surrounded by taro patches and paddy fields.

Everywhere one is impressed by the quantity of marsh plants cultivated. These in their several varieties play a most important rôle
in the food economy of the Chinese, and we have much to learn from them regarding methods of handling our swamp lands.

"As is well known, the Chinese are good gardeners, and although one is disappointed to find how crudely they graft and propagate their plants, he must admire their appreciation of the value of manure, however disgusting the manner of its collecting may be. The secret of their success seems to be in the attention they give to each individual plant. They live with and care for it as a stable boy does his pet racing thoroughbred.

Two horticultural practices struck me as especially interesting. The Man Tim peonies, which are the Chinaman's pride, and for which he is willing to pay as high as a gold dollar apiece for each blossom, are grown in one of the towns near Tientsin until some time in December, when they are imported by the thousand into Canton, a week or more journey by steamer. Here they are repotted and brought into bloom in time for the Chinese New Year.

A variety of jasmine is started in a similar way in Canton, grown until flower buds begin to form and then is sent in great quantities to Tientsin, where it is planted in pots, brought into flower, and the fragrant blossoms are used to mix with the tea leaves during the drying process, in order to give them the desirable aroma. Should the matter of their use promise to improve the market value of the tea production of our country we will make it a point for investigation next autumn, securing, if desirable, a quantity of the plants for propagation. The Chinese and Japanese papers, by the way, have all printed telegrams regarding the success of the efforts of the Department of Agriculture in the home production of tea, and producers and shippers in Japan and China are much interested in the financial outcome of the experiments, though as yet they seem to be quite skeptical, believing the cost of picking will be too great.

There are two new elements which have recently combined to disturb the set conditions in this part of China—the American occupation of Manila and the war about Pekin. The former has led to a remarkable increase in prices of labor, hotel accommodations, and food products. Coolie wages have greatly increased in Hongkong since the Spanish-American war, and there is much complaint about the scarcity of Chinese labor in the dockyards and other new important enterprises that are being started.

Hotel prices are 50 per cent higher than they were before the war, and residents claim that the general cost of living has doubled in the last five years.

The effect of the Boxer troubles will be far reaching, for the Chinese Government, in order to pay the war indemnity, has levied a tax of the equivalent of 5 American cents a year on each rafter of every house in the country. Already the Viceroy in Canton is having great difficulty in collecting the taxes, and white people living there
say that this tax is arousing a great deal of animosity toward foreigners, and that one of the results of the war, it is believed, will be to change the ideas of the upper-class Chinaman regarding Western methods and make him more willing to accept them.

The common people in the coast and river ports have been most unfavorably impressed by reports of alleged brutality of foreign troops, and, I am told, their opinion of the white man has been decidedly lowered. Foreigners come in for a share in the war tax, and already pay about 5 per cent ad valorem duty on practically everything imported.

Already American flour is being imported in large quantities into China, and is sold cheaper there than the native wheat can be grown and ground.

The growth of our agricultural as well as other exports to China will, I believe, be a phenomenal one, and will include many classes of canned and dried goods from our orchards, and preserved meats and dairy products from our farms and ranches.

There are, aside from these purely American products, many strictly Chinese things as yet unknown to our cultivators, which might probably be grown profitably for export into the Orient, such as the red watermelon seeds, of which the consumption must be enormous; the "Chinese olives," of equal importance; the wood oil tree, the product of which is used for all classes of painter's work; ginger, water chestnuts, dried persimmons, and a host of other products. The discovery of such new industries can only be made by the presence of trained observers who are not stationed so long in the regions as to lose touch with American conditions, but remain long enough to thoroughly master the methods of cultivation of the crops and secure the necessary seeds and plants for introduction.

I can give no adequate idea of the impression of wealth as a field for plant introduction work which this short visit to Canton has given me. It is worthy of all the attention which has been given to it in the past, and will amply reward any efforts which may be made in the future.

The great interest, however, of a visit to Canton is in the attempt one is continually and almost involuntarily making to forecast the probable development of the Chinese race.

From the close contact with the peasant classes of the various countries they visit into which your agricultural explorers are forced, they are placed, perhaps, in positions peculiarly advantageous for comparisons of the relative intelligence, industry, and endurance of the different races. The value of comparisons regarding the capacity of different races does not generally depend so much on long acquaintance with the customs of a single nationality as on a comparative knowledge of the inhabitants of many different countries.
The Chinaman is a marvel of industry and accuracy, and is probably developing with all the rapidity which his centuries of inherent conservatism will permit.

The farming class is, so far as I have observed, more intelligent about its own affairs, quicker, and vastly more industrious than the peasant class of Europe. These Chinese peasants are not as a rule unwilling to learn, and are quick to appreciate the value of tools which are really improvements over their own. The delight which a Chinese mulberry grower showed at the sight of a pair of modern pruning shears which I was using, could hardly have been equaled by a peasant in southern Europe.

There are everywhere the most unmistakable signs of progress, and the sooner Americans come to look upon China as a growing commercial nation the better it will be for our interests.

The accounts of the Chinaman’s wonderful ability to imitate have not been exaggerated, but his reputed want of the inventive faculty does not stand the test. These conceptions are falsely colored, either by the blind prejudice of the transient visitor to China or the disappointment of the old white resident, who forgets how moderately the average workman of any old civilization is equipped with inventive powers.

One among many examples of their ingenuity will serve to illustrate how false this idea is. In Taku, during the construction, recently, of some very large iron flat boats or lighters with which to unload or coal the incoming steamers, the problem of lowering these heavy iron boats that had been constructed on a high framework became a puzzling one. Large derricks and expensive steam cranes were discussed. One of the Chinese master workmen suggested placing under the lighters a large number of columnar close-woven wicker baskets packed with sand. Then by knocking out the stays formerly employed the lighter would rest on the pillars of sand, and by puncturing the baskets the sand would gradually run out, allowing the heavy boat to settle to the desired level. This inexpensive suggestion of the Chinaman was followed by the European constructors, proving a complete success and saving much time and money.

Throughout China, the Europeans carry on their business by means of Chinese clerks, called “compradors.” The comprador is an absolute necessity, and from being a mere accountant and interpreter he gradually rises to a position of control, becomes often immensely wealthy, and supports the European who originally hired him. This course of affairs is of frequent occurrence; so common, in fact, that the Europeans are often spoken of as merely the employees of the wealthy Chinese.

That the Chinaman understands how to accumulate wealth is so well known as to need no emphasizing. In a Hongkong paper I saw
recently the notice of the death of a Chinaman worth $5,000,000 in gold.

One of the principal steamship lines between Hongkong and Manila, nominally American, is reported to be controlled entirely by its wealthy Chinese comprador.

The biggest English shipping company in China, which owns a large fleet of coasting steamers, employs only Chinese crews on its ships, and even sends the crews to England to come out with the new steamers they are building in large numbers. Even the new Japanese passenger line on the Pacific employs Chinese stewards. Last year the carrying trade of the China coast is said to have increased over 40 per cent.

In 1898, scarcely a single steam launch was owned in Canton, while to-day I am informed that there are between 300 and 400, mostly owned and in large part built entirely by Chinese. In the Chinese dockyard at Canton over eighty of these big, strong launches were turned out last year.

The Hongkong and Wampoo Dock Company, of Hongkong, pays so well that its stocks are quoted at $290 silver, and all of the laborers are Chinese, only the managers and draftsmen being Europeans. Plans are now in progress to build in Hongkong the largest dockyard in the world, one slip of which is to be 900 feet long, or 100 feet longer than the largest slip in the new Krupp yard at Kiel. This work will be done by Chinese. Near Canton, I am informed, a wealthy Chinese syndicate proposes to build dikes and reclaim several thousand acres of land to be used for rice growing.

An officer in the British army assures me that the Chinese arsenal at Tientsin is manufacturing cannon and small arms which fall very little short of being as good as those of European manufacture, and this without even the supervision of Europeans.

These are some of the facts that are being talked about here in the East, and they are unmistakable straws to my mind, showing that the awakening of China is going on with a rapidity which will soon astonish those Westerners who refuse to recognize the course things are taking.

THE PERSIAN GULF REGION.

YOKOHAMA, JAPAN, April 8, 1902.

I have just returned from a trip up the Persian Gulf to Bagdad in search of dates, hard wheats, and whatever else of interest was to be found, and take the first occasion to send a brief account of conditions in the Persian Gulf and lower Mesopotamia. The region is a difficult one to get into, being a long way out of the beaten track of travel, and I find that even in a place lying so near on the map as Bombay there is little to be found out about it.
Owing to the rigidity with which the Turkish quarantine laws are enforced, few English people from India go into the region, although there are regular weekly steamers of the British-India line going up the gulf, which, though small, are not very uncomfortable.

The trip from Bombay to Bagdad and back required two months, and the greater part of this time was spent in travel. The collections made during the trip include 224 date palms, representing 45 of the best varieties from the various noted date-growing regions; a number of Persian and Arabian hard wheats, in quantities large enough for preliminary trials; and several interesting fodder plants, about which latter, however, it is impossible to predict anything.

The main object of the trip being to secure the best dates and hard wheats, I feel it has been on the whole very successful; and predict an important future for some of the dates, which are sorts far superior to any that come on our markets from this region and are likely to ripen earlier than the north African varieties, which latter characteristic is considered by those interested in this new industry a most important one. The purchases which I have made and shipped for Mr. Lathrop include over 100 different things, and weigh about 10 tons. They left Bombay the 6th of last April and full particulars regarding them went forward.

Recent affairs at the Arabian port of Koweit have attracted the attention of the public to the question of the political control of the Persian Gulf. This trip along its shores tends to strengthen one’s impression that affairs in that region are gradually coming to a head, and that it will not be long before important political changes in Persia and Arabia will take place.

Both the Arabian and the Persian coasts of the Gulf, as seen from the steamer, are precipitous barren cliffs or stretches of desert sand. Little indication of wealth is in sight, and the towns, with their flat-roofed mud houses and filthy streets, indicate the undeveloped nature of the country. There are extensive tracts of territory in the interior, I am informed, where the subterranean streams of fresh water come to within 3 feet of the surface of the soil. But it was only after leaving the Gulf of Persia and starting up the broad river Shat-el-Arab, which is formed by the junction of the Tigris and Euphrates, that I began in some small measure to realize the extent of the unimproved lands of the Sultan’s possessions in Arabia.

Chaldea and Mesopotamia are Biblical places to whose present conditions I had never given any thought, and the actual conditions of the region were a great surprise to me. It is easy to understand where the great wealth of Babylon and Nineveh came from after traveling for five and one-half days up a muddy river which so nearly fills its banks that the inhabitants of the village have only to reach down from them to wash their hands in its waters. On both sides as
far as the eye can reach stretch level plains of alluvium which is so fine that one could hunt all day without finding a stone the size of a man's fist.

The Tigris, for over 700 miles in length, from Basrah to Mosul, resembles more a huge crooked irrigation canal than anything else, and, with the exception of a stretch of 70 miles of date gardens between Mahammera and Kurna, the lands on both banks as far as one can see are practically unimproved desert.

Scarcely a shrub or plant of any size has been spared by the wandering tribes of Arabs, who grab up even the smallest roots for firewood. Yet much of this region, it is supposed, was once covered with vegetation, and at one time supported many millions of people.

The recent excavations are revealing every year more evidences of the former immense wealth of this remarkable country, which has remained so many centuries neglected. There exists perhaps nowhere in the world such a single area of unimproved fertile desert land which is capable of irrigation. That the region has been irrigated is shown by the ruins of old canals which are supposed to date back, some of them, to Babylonian times, and which, according to recent surveys of a French engineer sent out by the Turkish Government, could be repaired and put into operation.

One of the principal canals of this old system, the Nahr Wan, is over 185 miles long, and must, with its thirty branches, have irrigated many millions of acres of land which are now as barren of vegetation as the deserts of California.

The soil is adobe, remarkably like the Nile silt, and capable without manuring of growing almost any crop which will mature in a subtropical climate.

The occasional gardens of the native sheiks, or chiefs, along the river are full of all sorts of citrus fruits, apricots, peaches, and pomegranates, proving the suitability of the soil. The fine hard and soft wheats grown there attest, further, its value for grain-growing purposes, and yet with all this immense territory, through which I traveled for nearly a week, the largest place on the banks of the Tigris between Basrah and Bagdad was a town of less than 4,000 inhabitants.

The situation partakes of the incredible. No one I met in the country, not even the Turkish official in charge of the Sultan's estate, or Sheik Kassem Kedery, one of the wealthiest chiefs of the place, could give any idea as to the number of millions of acres there are in this fertile valley, which is almost as level as the table I am writing on.

As in the valley of the Nile, patches of salt land are to be seen here and there, but to wash this salt out there is a water supply all the year round waiting to be tapped by canals.

The winter climate is as delightful as that of California in the same season, but the summers are about as hot as anywhere in the world.
There are very few native inhabitants, but these few are sober, and, as Orientals go, industrious; and yet this whole region is almost as barren as the desert of Sahara.

The recent discoveries of oil on the Persian side of the Karun River, one of the tributaries of the Shat-el-Arab, are possibly the beginning of a new era for Mesopotamia, and the Anatolian railway through Asia Minor to Bagdad, for which Germany holds the concession, although looked upon only as a very remote possibility by the white residents, may open up this neglected corner of Arabia to planters with large resources.

The concession for the exploitation of the oil recently discovered at Kasr-i-Sherin was granted by Persia to an English millionaire mine owner, and it is interesting to note that the new oil fields lie in disputed territory between Arabia and Persia. If the borings, which are being made by an American expert, should prove the existence of really extensive oil fields, Turkey may put in a claim for the territory and the matter become subject for an international dispute. From an agricultural standpoint these great valleys of the Tigris and Euphrates will have to be reckoned with as a future center of production of grain, cotton, dried fruits, wool, and live stock. They are capable of producing all of these in quantities only limited by the amount of water which the river can supply.

The Euphrates is said to be a sluggish stream, with many sand banks and comparatively little water, but the Tigris is a river varying in width from 250 to 500 yards, in its narrowest banks only reaching 50 yards, and flowing at a rate of from six-tenths of a mile to 4 miles an hour.

America's interests in the gulf are represented by less than a score of missionaries, whose medical work, whatever the Mohammedans may think of their missionary work, is highly spoken of.

There are good opportunities for American trade in wind-mills, farm machinery, piece goods, etc., and through the efforts of Mr. Hurner, our vice-consul at Badgad, a contract is being made by which an American company is to build a steel bridge across the Tigris to take the place of the present most dilapidated pontoon affair of almost pre-Babylonian simplicity.

Whether Americans will ever take a hand in the opening up of this wonderfully fertile region or not, they can not fail to be interested in it as a country of immense agricultural wealth and a possible future competitor in the markets of the world.

The principal plant industry of the country, the culture of the date, is dependent in a measure upon the American market, which is the biggest buyer of the best quality of this fruit.
MILCH CATTLE AND CARABAOS.

BREEDS OF MILCH CATTLE AND CARABAOS FOR THE PHILIPPINE ISLANDS.

During a stay in Ceylon and a visit to Poona, India, my attention was called to the question of the milk supply of these tropical regions. Notwithstanding the marked improvement in the methods of milk sterilization, the continued use of canned milk and butter becomes finally, to anyone living in the Tropics, unpleasant, and the question of securing fresh dairy products is a most important one for the comfort of European residents.

The best breeds of milch cattle, like Jerseys, Guernseys, and Holsteins, when introduced into the Tropics very quickly degenerate. They are not suited to its climate and can not be easily acclimatized. They soon grow thin and sickly, cease giving large quantities of milk, and die.

In Ceylon several attempts to acclimatize them have been made, but with no success, and I am told that the dairymen who have made these trials have been obliged to return to the use of the South Indian or Madras breeds. Recently, however, the Sind cattle have come into prominence as a milch breed, and the introduction of this breed into other parts of India has been a great success. It is a remarkably vigorous race, and the cows are much better milk producers than the South Indian or Madras breed.

A visit made to the agricultural college in Colombo was very interesting in this connection. In the college herd the three breeds were represented.

The bulls of the Sind variety are great, handsome fellows, with immense humps on their shoulders, for they belong to the *Bos indicus* species. They were dark chestnut in color, with black extremities, and one could find nowhere healthier-looking animals than these Sind specimens which were some time ago imported from Karachi. The cows were sleek coated, with large udders and fine broad backs—pictures of health. The Madras animals were of that long-legged, lean type which is so common in the Oriental Tropics, and the cows had small udders and peaked backs; while the Jersey bull which had been brought down from one of the high altitude tea estates, for breeding purposes, was a sad enough sight, pale about the eyes and mouth, sway-backed, and with hind legs all out of shape, though not nearly so ill-conditioned as the pitiful looking, emaciated cows of the same breed, which were seemingly in the very last stages of consumption.

The object lesson could not have been more convincing nor the contrast between the perfect health of the Sind cattle and the mangy appearance of the European race more striking.

The statement by Mr. Drieberg, the director, that without the Sind cattle it would be impossible to make up the Ceylon dairy was quite significant.
While in Poona, India, the site of the Bombay Agricultural School, I saw more of this Sind breed of cattle and learned that although it deserved all that it was credited with in Ceylon, it has been superseded, for butter-making purposes, at least in the Bombay presidency, by the milch carabaos.

The carabao or water buffalo (Bubalus bubalis, Lyd.) is a well-known object in Manila, and its use as a beast of burden thoroughly understood, but, so far as I am aware, little attention has been paid to it as a milk producer.

Unthinking prejudice, which prevents us from eating many excellent things, may play the same rôle in Manila that it does in Ceylon, and forbid the employment of buffalo milk. If this is so it is a great pity, for there is a race of water buffaloes which come from Delhi, India, that gives over 30 pounds of milk per day, while the best Sind cattle give only 18, and this buffalo milk is so rich in fat that 12 to 13 pounds of it make a pound of butter, whereas 20 pounds of milk of a Sind cow are required.

These Delhi buffaloes are easier to keep, less expensive, and cleaner (having almost no hair) than ordinary cattle. They sell for about 180 rupees, or $56 gold, in Bombay, and can be bought at Dawans, the buffalo market, near Grant Road Station, but could be best secured by applying to Mr. Mollison, director-general of agriculture for India, at Poona, who could probably be prevailed upon to arrange to have good specimens picked out.

In general, the animals are priced according to the amount of milk they give, 10 rupees being added to the price for every two additional pounds of milk given per day.

Another good variety of milch buffalo is that from Gujarāt, called the Surti. It yields only about 20 pounds of milk per day, and is sold at from $33 to $36 gold. The cost of keeping this variety per day amounts at Poona to only 16 cents gold, and it is considered the most economical race by Mr. Kelkar, the foreman in charge of the college herd. According to him, a dairy should have both buffaloes and Sind cattle. The buffaloes are better for butter production, and the cattle are superior for milk purposes, because the milk fetches a better price, being, in fact, much preferred to that of the buffaloes, which has a bluish color and a slight, though not disagreeable, odor.

Both the buffaloes from Delhi and Gujarāt and the Sind cattle are well worth introducing into the Philippines. The buffaloes should be tested for butter making, though they cost more to feed than the Sind cattle, which latter will prove, however, especially useful for milk.

Breeding animals of these different races might be secured through Director Mollison, of Poona, who could arrange for their shipment to Manila through such a well-known shipping firm as Latham & Co., of Bombay.
As regards the quality of the butter made from buffaloes' milk, I can only judge from its general use in the Bombay presidency that it is in no way really objectionable, though its white color is not so attractive nor its aroma so full as that of Danish butter.

The introduction of these good milk breeds of cattle and buffaloes would add materially to the comfort of the white people in the Philippines, and deserves the serious attention of the Department of Agriculture.

**AGRICULTURE IN JAPAN.**

Steamship Hongkong,
En route to San Francisco,
August 22, 1902.

The most startling fact about Japan is the small area of cultivation that almost completely supplies the wants of a large population. According to statistics supplied by the Government, out of the less than 147,000 square miles in Japan proper not more than 19,000 square miles are cultivated, which means that an agricultural area one-third the size of Illinois comfortably supports some 42,000,000 people, and this means that every square mile of cultivation supports on the average about 2,200 persons.

This becomes still more interesting from the other fact that the agriculture which supports these millions is one in which animal husbandry is almost totally lacking.

To the Occidental an agriculture without farm food animals of any kind is hard to imagine, but to Orientals, who do not know the taste of dairy products nor relish the most delicate beefsteaks or mutton chops, the care of live stock seems a disagreeable and even degrading business.

No considerable herds of cattle are said to exist in the islands, and sheep, hogs, and goats are nowhere bred to any extent. A few work bulls and cows are kept in stalls, and from these the foreigners get their supply of beef, which is of very good quality. Small quantities of these animals are exported from Kobe to Manila and China. This lack of domestic animals and the resulting absence in the country of stable manure or crops grown for fodder give to the farming of Japan a peculiar feature.

That this one-sided agriculture is a mistake, the most progressive of Japanese agriculturists frankly admit. It necessitates, or at least has brought about, a rotation in many sections of the country of barley and rice. Such a rotation, and a still simpler one of rice followed by a season of fallow must have gradually decreased the fertility of the soil had not the system of collection and distribution of night soil been so extensively developed.
If instead of barley the Japanese farmer could have grown a leguminous winter fodder crop, such as the Egyptian fellah has for centuries cultivated, he could have prevented, in part at least, this impoverishing process.

With no animals to feed there has naturally been no development of fodder crops in Japan, but the necessity to fertilize with seaweeds, liquid manures, and straw ashes has given the peasant an appreciation of the value of manures which is surprisingly in advance of that of Western nations.

Comparing the keen knowledge of fertilizers shown by the Japanese peasants with that of the Greek, Italian, or Spanish farmers, or even with the small farmers of our country, one appreciates how advanced they are along these lines of farming and what an enormous waste of nitrogenous materials is continually going on in Europe and America.

The peasant classes of Japan are the cleanest personally of any in the world, and with an income which is so small that an American farmer would starve to death on it, they live happily and surround themselves with comforts which even many of our fairly well-to-do people do not possess. When compared with the peasants of any European country the Japanese live more comfortably by 50 per cent, at an actual cost of less than half what the European spends. They have learned by centuries of experience how to best utilize the vegetable products of their country. Their bamboo utensils, mud-thatched roofs, paper screen walls, cheap straw and rush mats, homemade, durable clothing, exquisite inexpensive wood and lacquer work, and multitude of pliable paper articles are some of the luxuries in which, compared with the European peasants, they are rich. This remarkable frugality and intelligent use of trifles enables the Japanese farmer to get along on an income of less than $100 gold a year, and on this to support a family of four or five persons.

The capital of these peasants is so small as a rule that a thrifty American farmer could buy out a small village of them. One hundred gold dollars would in many thousands of cases pay for all the belongings of a comfortably situated family. From the standpoint of foreign money, therefore, the Japanese farmer is a poor man, and a tax which would scarcely be felt by our landowners would be a heavy burden for him.

With the increasing tastes among all classes for better food and greater conveniences and the steady increase in population, it seems probable that the development of the agricultural resources of the country will not much more than keep pace with the increasing home demands, and that for some time to come, at least, Japan's exports of the products of the farm will be very limited. The commodity of which she has an abundance, however, is human energy, and it is a pitiful sight to an American to see the wastage of manual labor that
is expended in the rice fields of this country. Small, irregular fields owned by conservative families make the use of labor-saving machinery practically impossible, even if the bitter conservatism of the laborers would permit machines to be used which would take away the only occupation they have.

A wrong impression of this interesting agriculture would be given were one to fail to mention the efforts which the General Government and the provincial governments are making to improve it. In fact, no country except the United States has made such rapid progress as Japan in the establishment of institutes of agricultural research. She has copied our system and adapted it to her different conditions. Within the last five or six years there have been established in the provinces nine well-equipped experiment stations, which compare favorably in their corps of specialists with those which were started in America only a few years ago. One central station at Tokyo controls these branch stations, or at least has supervision over them, and disburses every year $90,000 gold to the party of experts, twenty-six assistants, over seventy employees, and a hundred or so laborers, who carry on this work. In addition to these nine branch stations, there are a large number of municipal and prefectural stations scattered through the country, and even one private station supported by a marquis, formerly one of the Daimios, or feudal lords. Several of these institutes of research were visited and the excellence of their equipment was a surprise. They were, as a rule, neat, wooden laboratories, supplied with good apparatus and small working libraries, and were surrounded by white-staked experiment plots, or provided with glass houses for experiments with chemical fertilizers or breeding cases for noxious insects.

The directors and assistants are many of them industrious, enthusiastic men, who enjoy nothing so well as the use of their microscopes or to study the habits of injurious insects. They delineate with extraordinary skill the characters of the parasites, either fungous or insect.

Chemical fertilizers monopolize the largest share of the attention of these stations. The large number of factories of rape-seed cake, etc., necessitates a correspondingly large number of analyses by the chemists, and as many of the stations are directed by chemists who have passed through the agricultural college of Komaba, where Professor Loew (formerly in the United States Department of Agriculture) is actively engaged in teaching, it is natural that the tendency of the lines of research should be chemical.

No provision has been made for any local control over these stations by practical farmers, such as compose our boards of control in America. As a result of this separation from the practical farmer there is naturally a great lack of appreciation of the work done by the stations. This tendency toward too close laboratory work and too little practi-
cal experimentation on the farm may be explained by the fondness of Japanese students for quiet contemplation. Microscopic and artistic descriptive work appeals to them more than practical field experiments. This, it is said, is a deplorable feature of Japanese medical education also, the young doctors mastering thoroughly the theory of medicine, but rarely learning it as an art.

This increased interest in scientific plant cultivation in Japan is unmistakable, and with the introduction of compulsory school education several years ago and the formation in every district of agricultural societies, the quick dissemination and assimilation of new facts relating to the different plant industries are practically assured. Bulletins, illustrated with photographs and charts for the instruction of the farmers, are being printed by the thousand, and in the middle schools the sciences related to agriculture are taught much as they are in America. Even in many of the primary schools, gardens of named plants for the instruction of the children are to be found. These changes would come slowly with any other race than one which, like the Japanese, is saturated with a love for plants. The lowest-born coolly knows more about the care of a potted plant than 90 per cent of the educated classes of America or Europe. They are a race of plant artists, and care for fancy varieties of flowers as other nations do for pet animals. Yet it is a surpri-ing fact that notwithstanding this love for plant life the Japanese are not great plant breeders, and artificial hybridization is a process not well understood by them.

One of the effects of Western civilization upon the country will be the gradual introduction of more meat into the daily diet of the people. Already the number of butcher shops in all of the principal cities is increasing, and the number of animals slaughtered is three or four times what it was ten years ago. The growing taste of the Japanese for foreign food is recognized as a fact by many old resident Americans. Whether the Government will succeed in making stock raising an important industry in the country is a debatable question.

The tea industry has received a new stimulus through the removal of the duty in our country, but the president of the largest association of tea growers in Japan stated that it will not lead to any considerable increase in the tea-growing area. At a recent meeting of the association a resolution was passed having for its object the improvement of the quality of the exported article rather than the increase of the quantity. The exporters say that the change in the tariff has had the effect of raising the price at which the Japanese producers sell to them.

Within the last two or three years, machinery has been introduced successfully into a number of tea-firing factories, and one of these factories where 10 men now do the work which it required 100 to do before was visited. The rolling of the fresh leaf is still done by hand, however, although the central experiment station experts are working
upon several new inventions along this line which they hope to perfect. At present they do about the same class of rolling that the Jackson rollers do in Ceylon and India.

People who have studied the question think that Japan as an agricultural exporting nation will hardly become important for many years. There is, however, a possibility that the industries of canning and drying fruits may be given an impetus by the Government in the near future, and that Japanese fruit growers will ultimately export large quantities of cheap canned goods of this character to China and India. Japanese canned peaches which sell at 12½ cents a quart are not at all bad, and it is said that 17,000 of these cans were put up last year by one establishment.

That the Japanese are reaching out after Chinese trade seems to be an acknowledged fact, and with their greater facilities for learning the language they should be able to introduce the Western products which they manufacture into parts of China now inaccessible to Europeans and Americans, and will very probably play an important rôle in the opening up of China.
PLATES.
DESCRIPTION OF PLATES.

PLATE I. Fig. 1.—A modern Spanish fanning mill. Fig. 2.—A modern Spanish thrashing machine. Fig. 3.—A modern Spanish subsoil plow.

II. Fig. 1.—Homes of the natives on the bank of the Tigris River. Fig. 2.—Scene in a date garden, Bagdad.

III. Fig. 1.—Sind cow from Karachi, India. This cow gives 18 pounds of milk, or less than 1 pound of butter, per day. It costs in Karachi $19 to $22. Fig. 2.—Delhi carabao from Delhi, India. This animal has given over 30 pounds of milk per day. Cost, 180 rupees, or over $50. Fig. 3.—Rump view of Delhi carabao, showing large udder.

IV. Fig. 1.—Surti milk carabao from Gujarát, India. This animal yields 20 pounds of milk, or 1½ pounds of butter, per day, at a cost of 16 cents a day for feed. It is considered one of the most economical of all the milk breeds of buffalo. It costs in Bombay $33 to $36. (Photograph taken on experiment farm at Poona, India.) Fig. 2.—Rump view of Surti milk carabao (same animal as in fig. 1), showing udder.

V. Fig. 1.—Interior view of laboratory of Professor Hirase, at Hikone, showing the equipment of a botanical laboratory in a middle school in Japan. Fig. 2.—Exterior view of the experiment station buildings at Shizuoka, Japan, one of many such experiment stations in the country. Fig. 3.—The plum market of Ikeda, showing the auctioning off of freshly picked fruit at this center of plum culture in Japan.
Fig. 1.—A Modern Spanish Fanning Mill.

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Fig. 2.—Delhi Carabao from Delhi, India.

Fig. 3.—Rump View of Delhi Carabao.
Fig. 1—Surti Milk Carabao from Gujarat, India.

Fig. 2—Rump View of Surti Milk Carabao.
Fig. 1.—Botanical Laboratory, Hikone, Japan.

Fig. 2.—Experiment Station Buildings, Shizuoka, Japan.

Fig. 3.—The Plum Market, Ikeda, Japan.
BULLETINS OF THE BUREAU OF PLANT INDUSTRY.

The Bureau of Plant Industry, which was organized July 1, 1901, includes Vegetable Pathological and Physiological Investigations, Botanical Investigations and Experiments, Grass and Forage Plant Investigations, Pomological Investigations, and Gardens and Grounds, all of which were formerly separate Divisions, and also Seed and Plant Introduction and Distribution, the Arlington Experimental Farm, and Tea Investigations and Experiments.

Beginning with the date of organization of the Bureau, the independent series of bulletins of the Section of Seed and Plant Introduction, the last number of which was 22, and of each of the other Divisions were discontinued, and all are now published as one series of the Bureau.

The bulletins issued in the present series are:

No. 1. The Relation of Lime and Magnesia to Plant Growth. 1901.
2. Spermatogenesis and Fecundation of Zamia. 1901.
4. Range Improvement in Arizona. 1901.
5. Seeds and Plants Imported through the Section of Seed and Plant Introduction. Inventory No. 9, Nos. 4351-5500. 1902.
14. The Decay of Timber and the Methods of Preventing it. 1902.
17. Some Diseases of the Cowpea. 1902.
20. Manufacture of Semolina and Macaroni. 1902.
22. Injurious Effects of Premature Pollination. 1902.
23. Berseem; the Great Forage and Soilng Crop of the Nile Valley. 1902.