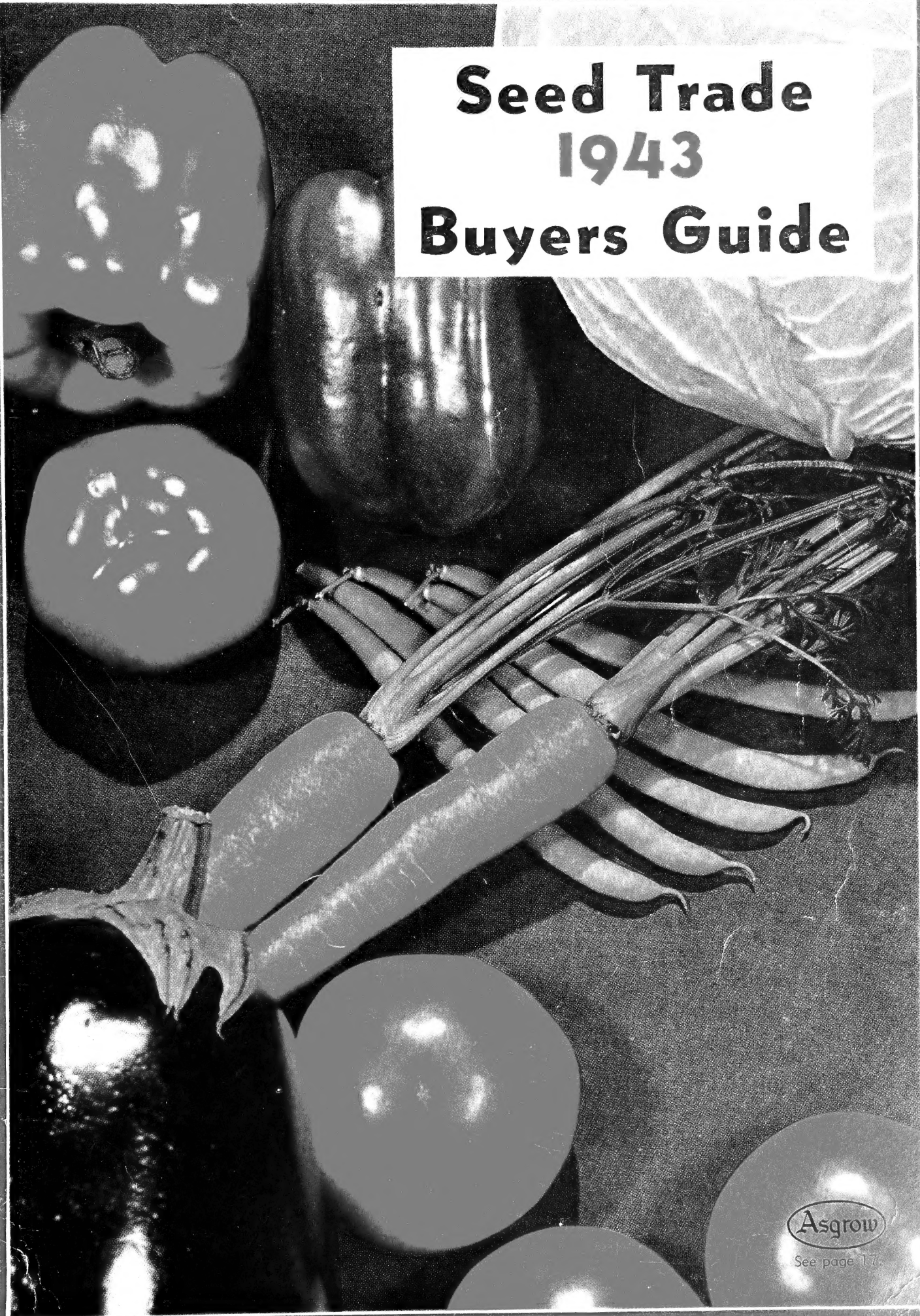


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Do not assume content reflects current scientific knowledge, policies, or practices.



# Seed Trade 1943 Buyers Guide



**Asgrow**  
See page 17.

1855



1937

*Austin L. Rogers*

HE LEARNED as a boy that nothing is accomplished without a background of Quality. As a young man, nearly seventy years ago, he started his business on the same foundation.... Quality. Throughout the generations that foundation has never weakened, though it carries, today, a structure many times greater than any he envisioned.

*BLOOD TELLS*

ROGERS BROS. SEED CO.

BREEDERS and GROWERS

PEAS

BEANS

SWEET CORN

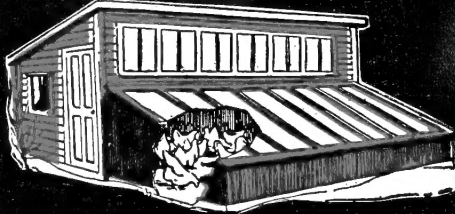
308 W. Washington St.

Chicago

# Warp's Window Materials

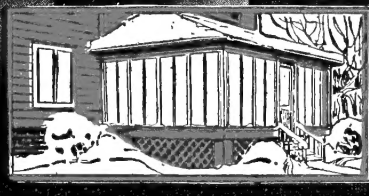
## Increase Your Profits - Give Better Service

Poultry House Windows



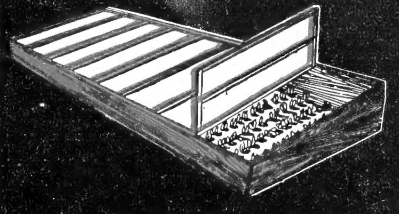
More Winter Eggs With No Extra Feed  
Healthy Chicks in One-Third Less Time

Porch Enclosures  
and Covering Screen Doors



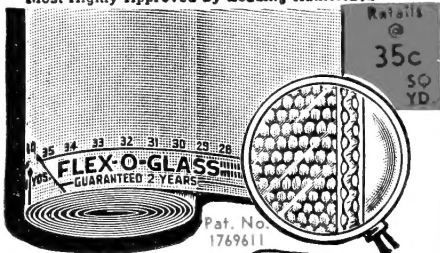
Save Fuel—Avoid Drafts  
Just Nail on Over Screen

Hot Beds & Greenhouses



Grow Hardier Plants Quicker  
Holds in Heat Better than Glass

Genuine **FLEX-O-GLASS**  
GUARANTEED 2 FULL YEARS  
Most Highly Approved by Leading Authorities

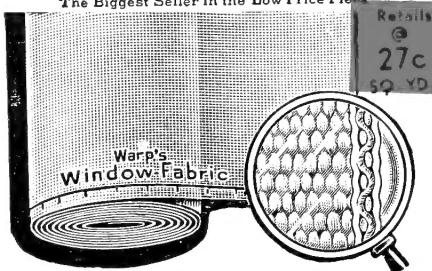


THE LEADING WINDOW MATERIAL

- Lets Thru More Healthful Ultra-Violet Rays than other Substitutes (clear across the Spectrum) as proved in various Authentic Tests, and Holds in Heat Better Than Glass.
- Absolutely Waterproof — Unbreakable. Has 124 strong, preshrunk Threads per Square In. Impregnated with extra high M.P. Composition that will not run, discolor or melt in a Window.
- Extra Heavy — Extra Durable. Guaranteed 2 years by the Manufacturer.
- Most Widely used—Extensively advertised. Feet, Yards, and Inches plainly printed along Selvage for easy cutting.

Cat. #	Yds.	Width	Sq. Ft.	Lbs.	Dealers Cost
FOG-100	100 yds.	36"	900	56	\$23.50
FOG-50	50 yds.	36"	450	32	11.75
FOG-25	25 yds.	36"	225	16	5.88

Warp's **WINDOW-FABRIC**  
Ordinarily Lasts One Season  
The Biggest Seller in the Low Price Field



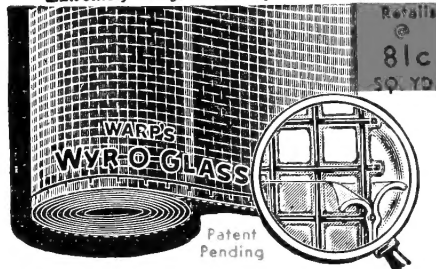
PLAIN WAXED CLOTH

Over 80 threads per Square Inch.  
Impregnated with light stable, high melting point wax.  
Lets through Sun's Ultra-Violet Rays.  
Holds in heat better than glass.

Every Yard, Foot and Inch plainly marked along edge for easy measuring and cutting.

Cat. #	Yds.	Width	Sq. Ft.	Lbs.	Dealers Cost
WF-100	100 yds.	36"	900	42	\$18.00
WF-50	50 yds.	36"	450	22	9.00
WF-25	25 yds.	36"	225	12	4.50

Warp's **WYR-O-GLASS**  
Wire Base Glass Substitute  
Extremely Tough and Very Transparent



A WIRE BASE PLASTIC GLASS

- Tough Galvanized 1/4 Inch mesh Wire Base, drawn Tough and Thin to admit more light.
- Every Joint and Wire imbedded in a cushion plastic, before final Transparent coating is applied, for double reinforcing and to eliminate air pockets.
- Plastic Glass applied to both sides, sealing wires inside. Everything fused into one Solid Weatherproof Sheet. No cheap rosin or glue to discolor or decompose, and—no air pockets to trap moisture in Warp's Wyr-O-Glass.
- Very Transparent. Extra high in Ultra-Violet ray Transmission. Good Insulator.
- Double Thickness Coating along both edges. Feet and inches plainly marked along Selvage.

Cat. #	Yds.	Width	Sq. Ft.	Lbs.	Dealers Cost
WOG-50	50 yds.	36"	450	28	\$27.00
WOG-25	25 yds.	36"	225	14	13.50
WOG-10	10 yds.	36"	90	7	5.40

Special Deal **GLASS SUBSTITUTES**  
ON A COMPLETE LINE OF

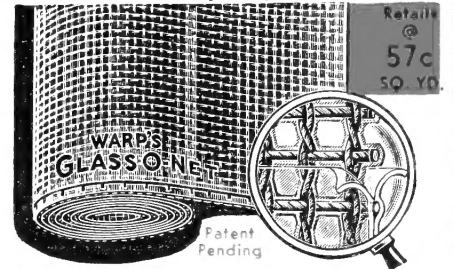


FREE Dispenser

Triples Sales	Width	Sq. Ft. per roll	Sells For
50 sq. yds. Flex-O-Glass	36"	450	35c yd.
25 sq. yds. Window-Fabric	36"	225	27c yd.
15 sq. yds. Glass-O-Net	36"	135	57c yd.
10 sq. yds. Wyr-O-Glass	36"	90	81c yd.

All Packed In One Box — Weight 65 Lbs. \$40.70  
Cat. No. SPD200      Retailers for

Warp's **GLASS-O-NET**  
Mesh Base Glass Substitute  
Used Where Transparency Is Important



A PLASTIC GLASS COVERED NETTING

- Made on 1/4 Inch mesh Waterproofed Cords. Extra strong. Dyed Light Fast Green.
- Every Cord Imbedded in Cushion Plastic to eliminate air pockets where greatest strain occurs.
- Plastic glass applied over Cushion and Cords to seal everything together into one solid weather-proof sheet.
- Very Transparent, High Ultra-Violet Ray transmission. Can be washed with Soap and Water.
- No cheap rosin, glue or paste to decompose in Warp's Glass-O-Net, and no air pockets to trap moisture.
- Double Thickness Coating along reinforced edges. Feet and inches plainly marked along selvage.

Cat. #	Yds.	Width	Sq. Ft.	Lbs.	Dealers Cost
GON-50	50 yds.	36"	450	18	\$19.00
GON-25	25 yds.	36"	225	10	9.50
GON-15	15 yds.	36"	135	6	5.70

Warp's **SCREEN-GLASS**  
Plastic Covered Wire Cloth  
Layer-Built to Give Longer Service



TRIPLE LAMINATED SCREEN BASE

Fine Mesh Galvanized Wire Base, first dipped in a transparent pliable plastic, then laminations applied to both sides to give it greater wearing qualities.  
Tough, Durable, Layer-Built Plastic Coating starts where others leave off, to make it last longer.  
Pliable and Transparent. Feet and inches are marked along Selvage. (Ship. wt. 3 oz. per sq. ft.)

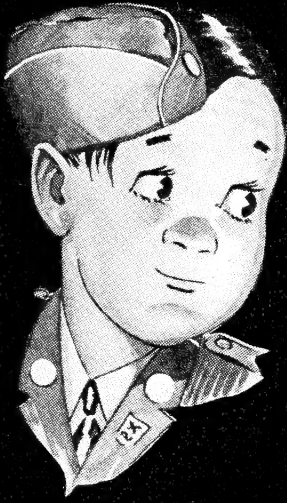
Cat. #	Width	Roll	Roll	Roll
36SG	36"	\$8.25	\$16.50	\$33.00
28SG	28"	6.75	13.50	27.00

All items on this page are manufactured by FLEX-O-GLASS MFG. CO. (Warp Bros.), 1104-6-8 No. Cicero Ave., Chicago, Ill.  
Distributed by Leading Hardware Jobbers — (Not Sold by Mail Order Houses) — Samples Free on Request

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DISBROW KRAFT PACKETS FOR VICTORY GARDENS ★ ★ ★



A PERFECT  
COMBINATION



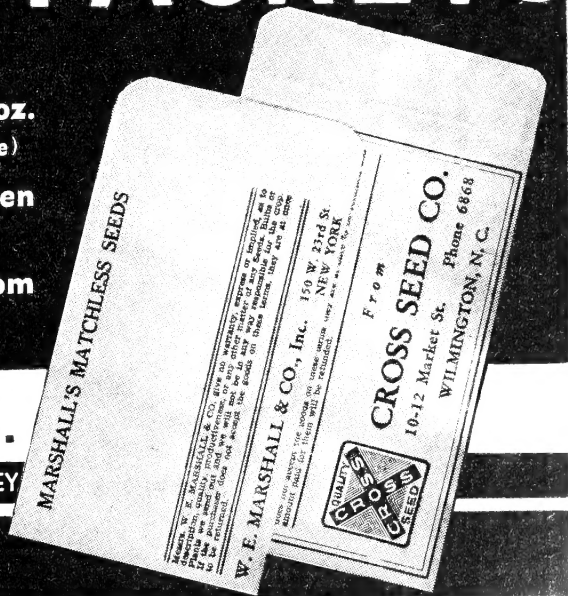
SERVICE & EYE APPEAL COMBINED IN

# DISBROW SEED BAGS & PACKETS

Disbrow Seal Brand Brown Kraft Packets in all sizes (1/2 oz. to 2 lbs.) save you time and money. (Send for Sample)

Disbrow Grey Kraft Self Seal Packets for the Seedsmen can't be beat.

Disbrow Metal Fold Envelopes and Kraft Satchel Bottom Bags are used by the leaders of the industry.



**DISBROW MFG. CO., INC.**

NEWARK

PAPER CONVERTERS

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# Northrup, King & Co.

## WHOLESALE

# Seeds

*Established 1884*  
Minneapolis  
Minn.

### FARM SEEDS

Clovers  
Alfalfas  
Grasses  
Forage  
Crops  
Seed Grains

Breeders and  
Producers of  
**KINGSCROST**  
Hybrid Seed Corn

### GARDEN SEEDS

Extensive  
Growers of  
BEANS, PEAS  
LETTUCE, ONION  
CARROT, RADISH  
and other small  
seeds  
Breeders and Producers  
of  
**KINGSCROST HYBRID**  
**SWEET CORN**  
and a full line of hybrid  
and open pollinated  
Sweet Corn

Carlots and Less

Ask For  
Quotations

The Best  
Seeds  
Produce  
More  
Food  
for  
Victory

GARDEN  
**V**  
FOR  
VICTORY

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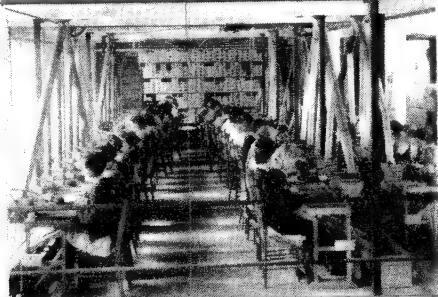
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# Seed Trade Buyers Guide

TWENTY-SIXTH EDITION

VOLUME XXVI

FOR THE YEAR OF 1943



WITH most of the world still at war, and the consequent demand for food and food crop seeds heavier than ever before, seedsmen this year occupy an extremely important position. A large percentage of the seed we produce is being sent, through Government Lend-Lease channels, to our Allied Nations. Every available pound, other than that exported, is expected to be spoken for by our own millions of Farmers, Home and War Gardeners, Truck Growers and Food Processors.

It is confidently expected that when peace returns seedsmen will be confronted with still greater demands if the hungry populations of former enemy and invaded countries are to be nourished. United States producers and wholesalers of vegetable, field and flower seeds, the grasses, bulbs and roots are approaching, therefore, the busiest and most difficult years in seed trade history.

The retail, mail-order and packet seed groups are today functioning smoothly under the severe handicaps of labor shortage, necessary rationing of many equipment items, and the complete discontinuance of certain allied lines, formerly very profitable.

All of these individual groups of seedsmen are today ably carrying on under war conditions, and in addition are charting their courses for the post-war period, a time which all hope is not far distant. To these competent and patriotic horticultural leaders we dedicate the 1943 SEED TRADE BUYERS GUIDE, doing so in the hope that its contents will prove of value during these trying times.

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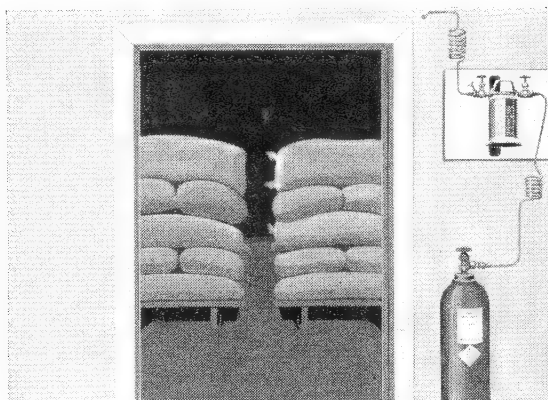
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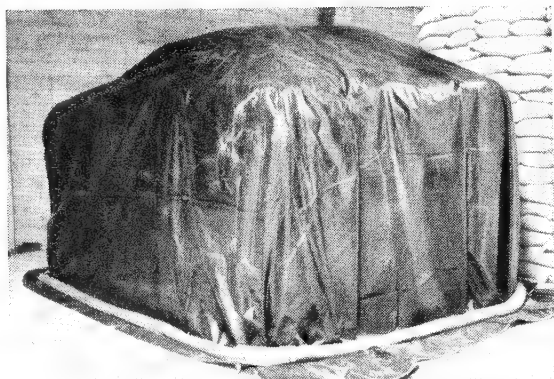
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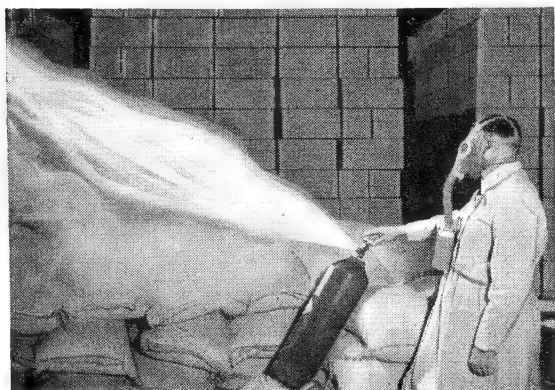
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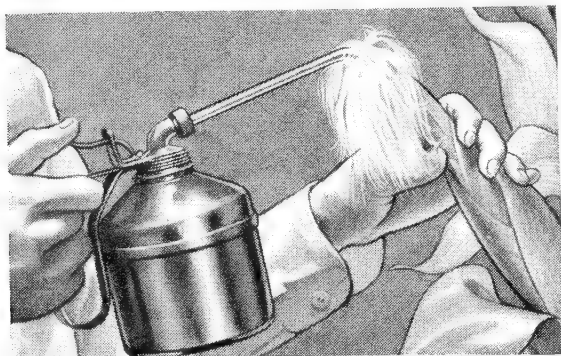
LARGE WAREHOUSE STOCKS are easily penetrated by Methyl Bromide. Kill is complete—in every stage of insect development

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Sec'y, Mrs. Charles E. Brainard  
10 Bainbridge Road,  
W. Hartford, Conn.  
Connecticut Vegetable Growers  
Association  
Pres., John Barron  
Branford, Conn.  
Sec'y, Frank W. Roberts  
Maple Shade Road,  
Middletown, Conn.

## DELAWARE

State of Delaware Dahlia Society  
Pres., Warren G. Hank  
East Summit Ave.,  
Elmhurst, Del.  
Sec'y, Augustus Yerkes.  
110 Glenside Ave.,  
Newport, Del.

## DISTRICT OF COLUMBIA

Botanical Society of Washington,  
D. C.  
Pres., Dr. Charlotte Elliott  
Bur. Plant Industry, U. S.  
Dept. of Agric.  
Washington, D. C.  
Cor. Sec'y, Marguerite S. Wilcox  
U. S. Horticultural Sta.,  
Beltsville, Md.  
National Capital Dahlia Society  
Pres., Frank H. Goetzger  
3110 Date St., Mt. Rainier, Md.  
Sec'y, Mrs. C. E. Ross  
113 West Moreland Road,  
Falls Church, Va.  
Potomac Rose Society  
Pres., J. Preston Swecker  
1352 Iris St., N. W.,  
Washington, D. C.  
Sec'y, Mrs. Dorella Klaber  
1679—35th St., N. W.,  
Washington, D. C.  
Washington (D. C.) Garden Club  
Pres., Mrs. Lu Sandford  
6408 Utah Ave., N. W.,  
Washington, D. C.  
Sec'y, Mrs. John C. Ristine  
1834 N. Hartford St.,  
Arlington, Va.  
Wild Flower Preservation Society  
of D. C.  
Pres., Alvah Godding  
St. Elizabeth's Hospital,  
Washington, D. C.  
Sec'y, P. L. Ricker  
3740 Oliver St., Chevy Chase,  
Washington, D. C.

## FLORIDA

Florida Federation of Garden Clubs  
Pres., Mrs. W. H. Covington  
328 Cortez St.,  
Tallahassee, Fla.  
Sec'y, Mrs. J. W. Henderson, Sr.  
P. O. Box 201,  
Tallahassee, Fla.  
Florida Gladiolus Growers  
Association  
Pres., Fred J. Wesemeyer  
Clearwater, Fla.  
Sec'y, Sidney R. Perry, Jr.  
Terra Ceia Island Farms,  
Terra Ceia, Fla.  
Florida Grape Growers Association  
Pres., Dr. Charles Demko  
Altoona, Fla.  
Sec'y, R. E. Norris  
Tavares, Fla.  
Florida Rose Society  
Pres., Frank Stirling  
Route 1, Fort Lauderdale, Fla.

Sec'y, Cora Eileen Link  
Route 1, Fort Lauderdale, Fla.  
Florida State Horticultural Society  
Pres., Frank M. O'Byrne  
Lake Wales, Fla.  
Sec'y, Bayard F. Floyd  
Davenport, Fla.

## GEORGIA

Dahlia Society of Georgia  
Pres., Nelson Crist  
1482 Stokes Ave., S. W.,  
Atlanta, Ga.  
Sec'y, B. L. Kennedy  
3453 Roxboro Road, N. E.,  
Atlanta, Ga.  
Georgia Forestry Association  
Pres., T. G. Woolford  
Retail Credit Co., Atlanta, Ga.  
Sec'y, W. H. Barnwell  
Atlanta, Ga.  
Garden Club of Georgia  
Pres., Mrs. Murdock Equen  
2505 Habersham Road,  
Atlanta, Ga.  
Sec'y, Mrs. T. J. Stewart  
Vineville Ave., Macon, Ga.  
Georgia Rose Society  
Pres., Donald M. Hastings  
% H. G. Hastings Co.,  
Atlanta, Ga.  
Sec'y, A. J. Nitzschke  
240 P. O. Bldg., Savannah, Ga.  
Georgia State Horticultural Society  
Pres., Charles J. Hudson, Jr.  
% H. G. Hastings Co.,  
Atlanta, Ga.  
Sec'y, R. L. Keener  
Dept. of Horticulture, Univ. of  
Georgia, Athens, Ga.

## IDAHO

Idaho State Horticultural  
Association  
Pres., Doyle Symms  
Houston, Idaho  
Sec'y, George F. Yost  
Emmett, Idaho  
North Idaho Horticultural Society  
Pres., Frank B. Gano  
R. F. D. 2, Lewiston, Idaho  
Sec'y, J. R. Mullarkey  
Lewiston, Idaho

## ILLINOIS

The Garden Club of Illinois, Inc.  
Pres., Mrs. Raymond Knotts  
3139 Kenilworth Ave.,  
Berwyn, Ill.  
Sec'y, Mrs. Edward C. Haase  
605 Cherry St., Winnetka, Ill.  
Illinois Gladiolus Society  
Pres., L. E. May  
2158 W. 107th Place,  
Chicago, Ill.  
Sec'y, F. M. Clark  
722 S. Foley St.,  
Champaign, Ill.  
Illinois State Horticultural Society  
Pres., Logan Culp  
Carterville, Ill.  
Sec'y, C. C. Mast  
209 No. 12th St., Quincy, Ill.  
Illinois State Vegetable Growers  
Association  
Pres., Louis Wetterman  
Box 507, Des Plaines, Ill.  
Sec'y, Leo J. Hagemann  
910 Laramie St., Peoria, Ill.  
Horticultural Society of Central  
Illinois  
Pres., Frank Chatten  
Quincy, Ill.  
Sec'y, Raymond Leeper  
Ursa, Ill.  
Horticultural Society of Northern  
Illinois  
Pres., V. L. Page  
Rockford, Ill.  
Sec'y, Mrs. Catherine T.  
Brigham  
R. 7, Rockford, Ill.  
Horticultural Society of Southern  
Illinois  
Pres., Fred Hawkins  
Texico, Ill.  
Sec'y, Curt E. Eckert  
Belleville, Ill.

## INDIANA

Indiana Berry Growers' Association,  
Inc.  
Pres., Ray Norris  
Pekin, Ind.  
Sec'y, Monroe McCown  
Purdue University,  
Lafayette, Ind.

Dahlia Society of Indiana  
Pres., J. C. Rice  
Martinsville, Ind.  
Sec'y, H. Joe Letterman  
Linton, Ind.  
Garden Club of Indiana  
Pres., Mrs. Clarence Hughel  
5345 University Ave.,  
Indianapolis, Ind.  
Sec'y, Mrs. Burke Nicholas  
5860 Forest Lane,  
Indianapolis, Ind.  
Indiana Gladiolus Society  
Pres., Harold Goldstein  
Goshen, Ind.  
Sec'y, William J. Ferrier  
219 Walker St.,  
Michigan City, Ind.  
Indiana Horticultural Society  
Pres., V. V. Clarke  
Bristol, Ind.  
Sec'y, Monroe McCown  
Purdue University,  
Lafayette, Ind.

Indiana State Vegetable Growers  
Association  
Pres., A. P. Morris  
Crawfordsville, Ind.  
Sec'y, Fay C. Gaylord  
Horticultural Bldg.,  
West Lafayette, Ind.  
Eastern Indiana Horticultural  
Society  
Pres., Charles C. Scott  
R. 1, Yorktown, Ind.  
Sec'y, Lowell H. Waid  
310 New York Ave.,  
Muncie, Ind.

## IOWA

Federated Garden Clubs of Iowa  
Pres., Miss Ada I. Swalwell  
Collins, Iowa  
Cor. Sec'y, R. S. Herrick  
State House, Des Moines, Iowa  
Iowa Fruit Growers Association  
Pres., Robert M. Clark  
Mitchellville, Iowa  
Sec'y, R. S. Herrick  
State House,  
Des Moines, Iowa  
Iowa Gladiolus Society  
Pres., A. J. Ansler  
4052 Madison, Sioux City, Iowa  
Sec'y, R. S. Herrick  
State House,  
Des Moines, Iowa  
Iowa Rose Society  
Pres., B. R. Bryson  
Iowa Falls, Iowa  
Sec'y, R. S. Herrick  
State House,  
Des Moines, Iowa  
Iowa State Horticultural Society  
Pres., Victor Felter  
Indianola, Iowa  
Sec'y, R. S. Herrick  
State House,  
Des Moines, Iowa  
Iowa State Vegetable Growers  
Association  
Pres., W. Leon Thorson  
St. Ansgar, Iowa  
Sec'y, C. L. Fitch  
Ames, Iowa

## KANSAS

Kansas Associated Garden Clubs  
Pres., Mrs. Walter Stadel  
1340 Campbell Ave.,  
Topeka, Kans.  
Sec'y, Mrs. E. J. McCreight  
Liberal, Kans.  
Association of Kansas Landscape  
Architects  
Pres., Franklin T. Rose  
Topeka, Kans.  
Sec'y, Homer Jameson  
930 Cambridge, Topeka, Kans.  
Kansas State Horticultural Society  
Pres., J. Homer Sharpe  
Council Grove, Kans.  
Sec'y, George W. Kinkead  
State House, Topeka, Kans.

## KENTUCKY

Dahlia Society of Kentucky  
Pres., H. T. Kruse  
997 Vine St., Louisville, Ky.  
Sec'y, Mrs. W. F. Kleinjohn  
726 Barrett Ave.,  
Louisville, Ky.  
The Garden Club of Kentucky  
Pres., Mrs. H. Alvin Stiltz  
269 West Main St.,  
Lexington, Ky.  
Sec'y, Mrs. James Chandler  
3222 Wren Rd., Audubon Park,  
Louisville, Ky.

Kentucky State Horticultural Society  
Pres., Herman J. Yopp  
Paducah, Ky.  
Sec'y, Ted Cooper  
Paducah, Ky.

## LOUISIANA

Louisiana Garden Club Federation  
Pres., Mrs. William Reed  
Lake Charles, La.  
Sec'y Mrs. Mack Bradley  
Winnsboro, La.  
Louisiana State Horticultural Association  
Pres., Daniel A. Newsham  
New Orleans, La.  
Sec'y, George P. Dupuy  
1838 Cambronne St.,  
New Orleans, La.  
North Louisiana Horticultural Association  
Pres., William Fitzhugh  
Merriweather Road,  
Shreveport, La.  
Sec'y, Ed. Sanders  
P. O. Box 283, Shreveport, La.

## MAINE

Garden Club Federation of Maine  
Pres., Mrs. E. Stewart Orbeton  
West Rockport, Maine  
Sec'y, Miss Bessie Bowers  
Camden, Maine  
Maine Gladiolus Society  
Pres., Walter B. Andrews  
Oakland, Maine  
Sec'y, Mrs. George J. Walenta  
South China, Maine  
Maine State Pomological Society  
Pres., A. N. Blanchard  
Cumberland Center, Maine  
Sec'y, E. L. White  
Bowdoinham, Maine

## MARYLAND

Maryland Daffodil Society  
Pres., Mrs. Luther Benton  
201 St. Dunstons Rd.,  
Baltimore, Md.  
Sec'y, Mrs. George Cassels-Smith  
Ruxton, Md.  
Federated Garden Clubs of Maryland  
Pres., Mrs. E. H. McKeon  
The Belvedere, Room 300,  
Baltimore, Md.  
Sec'y, Mrs. Marshall A. Carlton  
222 Oakdale Rd.,  
Baltimore, Md.  
Maryland Gladiolus Society, Inc.  
Pres., Dr. G. A. Willis  
Havre de Grace, Md.  
Sec'y, H. V. Wright  
Edgewood Arsenal,  
Edgewood, Md.  
Maryland State Horticultural Society  
Pres., Stanley M. Fulton  
Hancock, Md.  
Sec'y, A. F. Vierheller  
College Park, Md.  
Maryland Vegetable Growers Association  
Pres., H. J. W. Rayner  
Salisbury, Md.  
Sec'y, W. R. Ballard  
College Park, Md.

## MASSACHUSETTS

Massachusetts Forest & Park Association  
Pres., William P. Wharton  
Groton, Mass.  
Sec'y, Harris A. Reynolds  
3 Joy Street, Boston, Mass.  
Massachusetts Fruit Growers Association  
Pres., Dr. Ralph A. Van Meter  
Mass. State College,  
Amherst, Mass.  
Sec'y, Prof. William R. Cole  
Mass. State College,  
Amherst, Mass.  
Garden Club Federation of Massachusetts  
Pres., Mrs. Robert M. Bowen  
Hearthstone Farm,  
Concord, Mass.  
Sec'y, Mrs. Walter S. Williams  
East Norton, Mass.  
Massachusetts Horticultural Society  
Pres., Edwin S. Webster  
Chestnut Hill, Mass.  
Sec'y, Edward I. Farrington  
300 Mass. Ave., Boston, Mass.

Massachusetts Tree Wardens and Foresters Association  
Pres., A. W. Stewart  
Quincy, Mass.  
Sec'y, Frank A. Babcock  
Rockport, Mass.  
Cape Cod Cranberry Growers Association  
Pres., I. Grafton Howes  
Dennis, Mass.  
Sec'y, L. C. Hall  
Wareham, Mass.

## MICHIGAN

Michigan Blueberry Growers Association  
Pres., William G. Riemer  
Grand Junction, Mich.  
Sec'y, Paul Brower  
Hudsonville, Mich.  
Michigan Certified Seed Potato Growers Association  
Pres., Harold Bailey  
Gaylord, Mich.  
Sec'y, Lee C. Sneathen  
Charlevoix, Mich.  
Dahlia Society of Michigan  
Pres., B. D. Collins  
323 Stephenson Bldg.,  
Detroit, Mich.  
Sec'y, Thos. M. Place  
176 Moross Ave.,  
Mt. Clemens, Mich.  
Michigan Bulb Growers Association  
Pres., U. Nagle  
R. F. D. 1, Kalamazoo, Mich.  
Sec'y, Paul R. Krone  
East Lansing, Mich.  
Federated Garden Clubs of Michigan  
Pres., Mrs. William Linn Wilson  
1620 Niles Ave.,  
St. Joseph, Mich.  
Cor. Sec'y, Mrs. Bradley Patton  
Highland Road,  
Ann Arbor, Mich.  
Garden Club of Michigan  
Pres., Mrs. Phelps Newberry  
Clovelly Rd.,  
Grosse Pointe Farms, Mich.  
Sec'y, Miss Elsie DuCharme  
982 Burns Ave., Detroit, Mich.  
Michigan Gladiolus Society  
Pres., A. M. Grootendorst  
Benton Harbor, Mich.  
Sec'y, Paul R. Krone  
Michigan State College,  
East Lansing, Mich.  
Michigan State Horticultural Society  
Pres., J. J. Hill  
Montrose, Mich.  
Sec'y, H. D. Hootman  
Horticultural Bldg.,  
East Lansing, Mich.  
Michigan Vegetable Growers Association  
Pres., Condon Zant  
Grand Rapids, Mich.  
Sec'y, Keith Barrons  
Michigan State College,  
East Lansing, Mich.  
Northeastern Michigan Gladiolus Society  
Pres., Fred Loessel  
809 Patterson St.,  
Bay City, Mich.  
Sec'y, James Van Laan  
310 Hill St., Bay City, Mich.  
Upper Peninsula Potato Growers Association  
Pres., A. P. Kline  
Stephenson, Mich.  
Sec'y, D. L. Clanahan  
Marquette, Mich.

## MINNESOTA

Minnesota Dahlia Society  
Pres., R. S. Bryant  
R. F. D. 2, Hopkins, Minn.  
Sec'y, Mrs. A. R. Owen  
1856 Laurel Ave.,  
St. Paul, Minn.  
Minnesota Fruit Growers Association  
Pres., Henry W. Leidel  
La Crescent, Minn.  
Sec'y, J. D. Winter  
Mound, Minn.  
Minnesota Garden Flower Society  
Pres., Mrs. W. R. Wingate  
3821 Zenith Ave.,  
Minneapolis, Minn.  
Sec'y, Mrs. F. S. Swisher  
3025 Zarthon Ave.,  
St. Louis Park, Minn.  
Minnesota Gladiolus Society  
Pres., A. J. Mandehr  
1115 Goodrich Ave.,  
St. Paul, Minn.  
Sec'y, J. M. Law  
692 Holly Ave.,  
St. Paul, Minn.

Minnesota Greenkeepers Association  
Pres., Joseph Rush  
Country Club,  
Minneapolis, Minn.  
Sec'y, Stan Graves  
Hillcrest G. & C. Co.,  
St. Paul, Minn.  
Minnesota Peony and Iris Society  
Pres., R. C. Schneider  
708 Osceola Ave.,  
St. Paul Minn.  
Sec'y, Mrs. H. B. Tillotson  
1320—5th St., S. E.,  
Minneapolis, Minn.  
Minnesota Red River Valley Potato Improvement Association  
Pres., Thomas Heneghan  
East Grand Forks, Minn.  
Sec'y, Carl G. Ash  
Crookston, Minn.  
Minnesota Rose Society  
Pres., Dr. Joseph H. Vogel  
New Ulm, Minn.  
Sec'y, Dr. L. E. Longley  
University Farm,  
St. Paul, Minn.  
Minnesota State Forestry Association  
Pres., Parker O. Anderson  
University Farm,  
St. Paul, Minn.  
Sec'y, Phil H. Hanson  
State Office Bldg.,  
St. Paul, Minn.  
Minnesota State Horticultural Society  
Pres., Benjamin F. Dunn  
1115—8th Ave., S. E.,  
Rochester, Minn.  
Sec'y, R. S. Mackintosh  
University Farm,  
St. Paul, Minn.

## MISSISSIPPI

Federation of Garden Clubs of Mississippi  
Pres., Mrs. Harris Barksdale  
Jackson, Miss.  
Sec'y, Mrs. J. M. Holman  
Jackson, Miss.

## MISSOURI

Federated Garden Clubs of Missouri  
Pres., Mrs. K. C. Weber  
513 W. Columbia,  
Farmington, Mo.  
Sec'y, Mrs. L. B. Coghill  
511 Doss, Farmington, Mo.  
Missouri State Horticultural Society  
Pres., H. W. Guengerich  
Unity Farm, Lees Summit, Mo.  
Sec'y, Prof. W. R. Martin, Jr.  
Columbia, Mo.  
Northwest Missouri Rose Club  
Pres., Ronald A. Kennedy  
1021 E. Linwood,  
Kansas City, Mo.  
Sec'y, C. A. Grove  
1914 So. 12th St.,  
St. Joseph, Mo.

## MONTANA

Montana Federation of Garden Clubs  
Pres., Mrs. S. H. Irvine  
Stevensville, Mont.  
Recording Sec'y, Mrs. C. A. Day  
1039 No. 30th, Billings, Mont.  
Montana Potato Improvement Association  
Pres., H. G. Bosley  
Savoy, Mont.  
Sec'y, E. E. Isaac  
Bozeman, Mont.  
Montana Horticultural Society  
Pres., George Thacher  
Corvallis, Mont.  
Sec'y, George L. Knight  
Missoula, Mont.  
Northern Montana Forestry Association  
Pres., E. N. McDevitt  
Somers, Mont.  
Sec'y, A. E. Boorman  
Kalispell, Mont.

## NEBRASKA

Nebraska Certified Potato Growers  
Pres., W. T. Young, Jr.  
Kimball, Nebr.  
Sec'y, William Morrow  
Alliance, Nebr.  
Federated Garden Clubs of Nebraska  
Pres., Mrs. W. A. Cole  
134 E. 4th, Hastings, Nebr.

Sec'y, Miss Lucia Dillenbach  
900 N. Hastings Ave.,  
Hastings, Nebr.  
Nebraska Gladiolus Society  
Pres., Verne C. Fuhlrott  
1140 East 10th St.,  
Fremont, Nebr.  
Sec'y, Mrs. C. B. Alger  
5102 North 50th St.,  
Omaha, Nebr.  
Nebraska Potato Improvement Association  
Pres., Ted Currier  
Morrill, Nebr.  
Sec'y, H. O. Werner  
College of Agriculture,  
Lincoln, Nebr.  
Nebraska State Horticultural Society  
Pres., William Porter  
Nebraska City, Nebr.  
Sec'y, E. H. Hoppert  
Nebr. College of Agriculture,  
Lincoln, Nebr.

## NEW HAMPSHIRE

New Hampshire Federation of Garden Clubs  
Pres., Mrs. Charles J. Lincoln  
Amherst, N. H.  
Sec'y, Miss Marian Spaulding  
Tamworth, N. H.  
New Hampshire Horticultural Society  
Pres., James W. Elton  
Hampton Falls, N. H.  
Sec'y, Alfred L. French  
R. F. D. 2,  
Contoocook, N. H.  
Society for the Protection of New Hampshire Forests  
Pres., Allen Hollis  
17 Capitol St., Concord, N. H.  
Sec'y, Edgar C. Hirst  
20 No. Main St.,  
Concord, N. H.

## NEW JERSEY

Dahlia Society of New Jersey  
Pres., Ray Smith  
14 Eastwood Pl.,  
Cedar Grove, N. J.  
Sec'y, Mrs. F. S. Fisher  
121 Abernethy Drive,  
Trenton, N. J.  
New Jersey Federation of Shade Tree Commissions  
Pres., Prof. Oliver P. Medsger  
9 Columbia Ave.,  
Arlington, N. J.  
Sec'y, Philip E. Alden  
Municipal Bldg.,  
Kearny, N. J.  
New Jersey Fruit Institute  
Pres., C. B. Lewis  
Riverton, N. J.  
Sec'y, L. N. Applegate  
Freehold, N. J.  
The Garden Club of New Jersey  
Pres., Mrs. Kenneth V. C. Wallace  
310 Ridge St., Newark, N. J.  
Sec'y, Mrs. Randall D. Warden  
471 Ridge St., Newark, N. J.  
New Jersey Peach Council  
Pres., Lester Collins  
Moorestown, N. J.  
Sec'y, Arthur J. Farley  
New Brunswick, N. J.  
New Jersey Society of Certified Tree Experts  
Pres., I. B. Dewson  
45 N. Broad St.,  
Ridgewood, N. J.  
Sec'y, Ralph I. Kauffman  
56 Sylvan St.,  
Rutherford, N. J.  
New Jersey State Horticultural Society  
Pres., William K. Hookstra  
Beverly, N. J.  
Sec'y, Prof. Arthur J. Farley  
New Brunswick, N. J.  
New Jersey State Potato Association  
Pres., J. Edw. Chamberlin  
Cranbury, N. J.  
Sec'y, Robert Ewing  
Greenwich, N. J.  
Sec'y (Corresp.) W. H. Martin  
New Brunswick, N. J.  
North Jersey Landscape Association  
Pres., H. C. Koffler  
54—41st St., Irvington, N. J.  
Sec'y, Warren F. Schuch  
19 Rowe St., East Orange, N. J.

## NEW YORK

Empire State Gladiolus Society  
Pres., Rev. Clayton H. Birch  
Ludlowville, N. Y.

Sec'y, H. E. Hulbert  
McGraw, N. Y.

Empire State Potato Club, Inc.  
Pres., William Hodnett  
Fillmore, N. Y.

Sec'y, M. F. Butts  
Sodus, N. Y.

Federated Garden Clubs of  
New York State, Inc.  
Pres., Mrs. Clement Bowers  
Maine, N. Y.

Sec'y, Mrs. Wirt Darrow  
88-57—195th Place,  
New York, N. Y.

The Horticultural Society of  
New York  
Pres., Henry F. Du Pont  
598 Madison Ave.,  
New York, N. Y.

Sec'y, Clarence L. Hay  
598 Madison Ave.,  
New York, N. Y.

New York State Fruit Testing  
Co-operative Association  
Pres., George A. Morse  
Williamson, N. Y.

Sec'y, Richard Wellington  
Geneva, N. Y.

New York State Horticultural  
Society  
Pres., Bruce P. Jones  
Hall, N. Y.

Sec'y, Roy P. McPherson  
LeRoy, N. Y.

New York State Vegetable  
Growers Association  
Pres., Fred S. Johnston  
Pennellville, N. Y.

Sec'y, W. T. Tapley  
Geneva, N. Y.

Eastern New York Gladiolus  
Society  
Pres., Clayton F. Toben  
49 Saunders St.,  
Whitehall, N. Y.

Sec'y, Olin E. Frisbee  
198 Homer Ave.,  
Comstock, N. Y.

Long Island Horticultural Society  
Pres., E. L. D. Seymour  
218 Hilton Ave.,  
Hempstead, L. I., N. Y.

Sec'y, Joseph F. Roesch  
N. Y. State Inst. of Agric.,  
Farmingdale, L. I., N. Y.

## NORTH CAROLINA

North Carolina Forestry Association  
Pres., Colin G. Spencer  
Carthage, N. C.

Sec'y, Mrs. Thelma Sabiston  
Carthage, N. C.

The Garden Club of North Carolina  
Pres., Mrs. D. J. Lybrook  
Advance, N. C.

Sec'y, Mrs. Ned Smith  
Hawthorne Rd.,  
Winston-Salem, N. C.

## NORTH DAKOTA

North Dakota Peony Society  
Pres., R. J. Darling  
231 Conklin Ave.,  
Grand Forks, N. Dak.

Sec'y, Mrs. M. B. Kannooski  
Box 63, Grand Forks, N. Dak.

North Dakota Potato Growers  
Association  
Pres., Peter J. Flaten  
Hoople, N. Dak.

Sec'y, E. J. Taintor  
Park River, N. Dak.

North Dakota State Horticultural  
Society  
Pres., P. R. Owens  
Grand Forks, N. Dak.

Sec'y, Harry A. Graves  
 Fargo, N. Dak.

## OHIO

The Ohio Association of Garden  
Clubs  
Pres., Mrs. Silas B. Waters  
2005 Edgecliff Point,  
Cincinnati, Ohio

Sec'y, Prof. Victor H. Ries  
O. S. U., Columbus Ohio

Dahlia Society of Ohio, Inc.  
Pres., Mrs. E. MacDowell  
4479 W. 194th St.,  
Fairview Village, Ohio

Cor. Sec'y, Edward A. Papesh  
11108 Langton Ave.,  
Cleveland, Ohio

Ohio Forestry Association  
Pres., Hon. Guy B. Findley  
Elyria, Ohio

Sec'y, Charles R. Page  
Agric. Expt. Sta.,  
Wooster, Ohio

Garden Club of Ohio  
Pres., Mrs. Wm. A. Moeller  
Arrow Cottage, Haughton Rd.,  
Macedonia, Ohio

Cor. Sec'y, Mrs. S. H. Monson  
2874 Chadbourne Rd.,  
Shaker Heights, Ohio

Rock Garden Society of Ohio  
Pres., Charles H. Smith  
Box 73, Burnett Woods Sta.,  
Cincinnati, Ohio

Sec'y, Mrs. Stephen E. Cone  
194 East McMillan St.,  
Cincinnati, Ohio

Ohio Small Fruit Improvement  
Association  
Pres., C. E. Drumheller  
Buena Vista, Ohio

Sec'y, Mrs. Sara Norris  
P. O. Box 308, Wooster, Ohio

Ohio State Gladiolus Society  
Pres., Louis H. Esterline  
E. 334th St., Willoughby, Ohio

Sec'y, W. W. Wood  
Rudolph, Ohio

Ohio State Horticultural Society  
Pres., H. L. Mantle  
Painesville, Ohio

Sec'y, F. H. Beach  
Horticulture Dept.,  
Ohio State University  
Columbus, Ohio

Ohio Student Horticultural Society  
Pres., Jim Marine  
Dept. of Horticulture,  
Ohio State University,  
Columbus, Ohio

Sec'y, Kenneth Varian  
Dept. of Horticulture,  
Ohio State University,  
Columbus, Ohio

Ohio Vegetable & Potato Growers'  
Association  
Pres., Adam Fornof  
Columbus, Ohio

Sec'y, Earl B. Tussing  
Horticulture Dept.,  
Ohio State University,  
Columbus, Ohio

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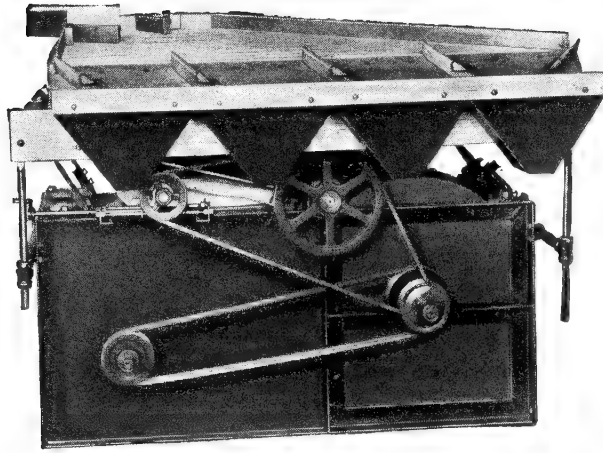
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TOTAL VEGETABLE SEED PURCHASED FOR LEND-LEASE, 1941-42  
*Figures below represent contracts only. Deliveries will probably be somewhat smaller.*

GROWING AND SPOT PURCHASES

Kind	SPOT		GROWING	
	Pounds	Dollars	Pounds	Dollars
Asparagus	200	60	2,000	470
Beans	489,580	64,441	887,500	131,271
Beets	205,716	197,337	330,900	193,006
Broccoli	1,160	2,400		
Cabbage	85,315	120,980	36,200	48,405
Carrots	196,664	620,079	163,500	197,973
Cauliflower	3,291	45,046	3,500	43,000
Celery	742	1,435	1,200	2,468
Chard, Swiss	13,460	11,285	1,000	400
Corn, Sweet	21,280	3,426		
Cucumber	12,758	7,542	11,000	5,879
Eggplant	50	113		
Endive	386	192	1,500	648
Herbs			10	23
Kohlrabi			400	490
Leek	580	4,480	5,650	14,050
Lettuce, Heading	49,738	30,770	225,600	161,074
Lettuce, Leaf	100	45		
Lettuce, Romaine Cox	3,300	1,389	38,700	23,655
Muskmelon			500	275
Onion	96,610	365,932	88,350	186,298
Parsley	5,600	2,420	4,000	1,300
Parsnip	13,150	9,900	35,000	13,830
Peas, Smooth	65,000	6,077	277,000	31,120
Peas, Wrinkled	660,584	121,646	4,328,000	494,989
Pumpkin	250	106	300	135
Radish	54,518	19,298	629,860	195,012
Rutabaga	22,294	26,618	38,000	8,350
Salsify			500	260
Spinach	24,870	15,085	265,000	73,350
Squash	13,339	7,666	46,200	18,557
Tomato	4,643	7,586	7,600	17,240
Turnip	51,738	12,623	45,300	9,754
	2,096,916	1,704,977	7,489,270	1,874,359

# BUY

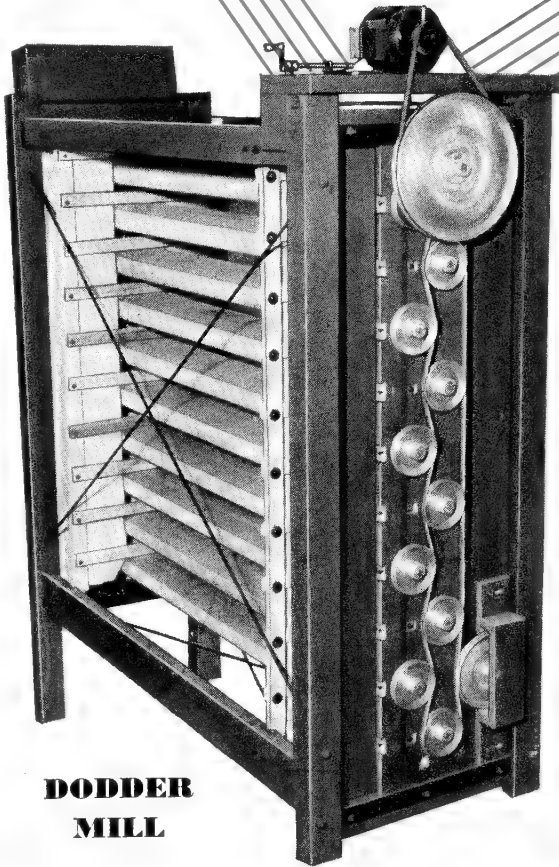
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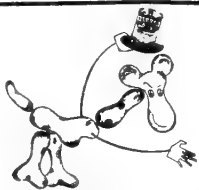
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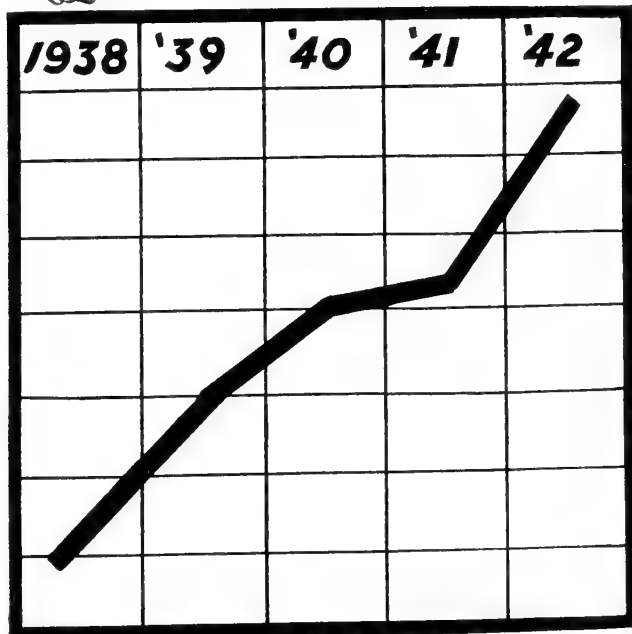
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Storrs Station: *Storrs*; E. G. Woodward.<sup>1</sup>

DELAWARE—*Newark*: G. L. Schuster.<sup>1</sup>

FLORIDA—*Gainesville*: W. Newell.<sup>1</sup>

GEORGIA—

*Experiment*: H. P. Stuckey.<sup>1</sup>

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KANSAS—*Manhattan*: L. E. Call.<sup>1</sup>

KENTUCKY—*Lexington*: T. P. Cooper.<sup>1</sup>

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MAINE—*Orono*: F. Griffie.<sup>1</sup>

MARYLAND—*College Park*: R. B. Corbett.<sup>1</sup>

MASSACHUSETTS—*Amherst*: F. J. Sievers.<sup>1</sup>

MICHIGAN—*East Lansing*: V. R. Gardner.<sup>1</sup>

MINNESOTA—*University Farm, St. Paul*: C. H. Bailey.<sup>2</sup>

MISSISSIPPI—*State College*: C. Dorman.<sup>1</sup>

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Fruit Station: *Mountain Grove*; P. H. Shepard.<sup>1</sup>

Poultry Station: *Mountain Grove*; T. W. Noland.<sup>1</sup>

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NEBRASKA—*Lincoln*: W. W. Burr.<sup>1</sup>

NEVADA—*Reno*: S. B. Doten.<sup>1</sup>

NEW HAMPSHIRE—*Durham*: M. G. Eastman.<sup>1</sup>

NEW JERSEY—*New Brunswick*: W. H. Martin.<sup>1</sup>

NEW MEXICO—*State College*: Fabian Garcia.<sup>1</sup>

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NORTH DAKOTA—*State College Station, Fargo*: H. L. Walster.<sup>1</sup>

OHIO—*Wooster*: Edmund Secest.<sup>1</sup>

OKLAHOMA—*Stillwater*: W. L. Blizzard.<sup>1</sup>

OREGON—*Corvallis*: W. A. Schoenfeld.<sup>1</sup>

PENNSYLVANIA—*State College*: F. F. Lininger.<sup>1</sup>

PUERTO RICO—

Federal Station: *Mayaguez*; Atherton Lee.<sup>1</sup>

Insular Station: *Rio Piedras*; J. A. B. Nolla.<sup>1</sup>

RHODE ISLAND—*Kingston*: M. H. Campbell.<sup>1</sup>

SOUTH CAROLINA—*Clemson*: H. P. Cooper.<sup>1</sup>

SOUTH DAKOTA—*Brookings*: I. B. Johnson.<sup>1</sup>

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Western Station: *Puyallup*; J. W. Kalkus.<sup>2</sup>

WEST VIRGINIA—*Morgantown*: C. R. Orton.<sup>1</sup>

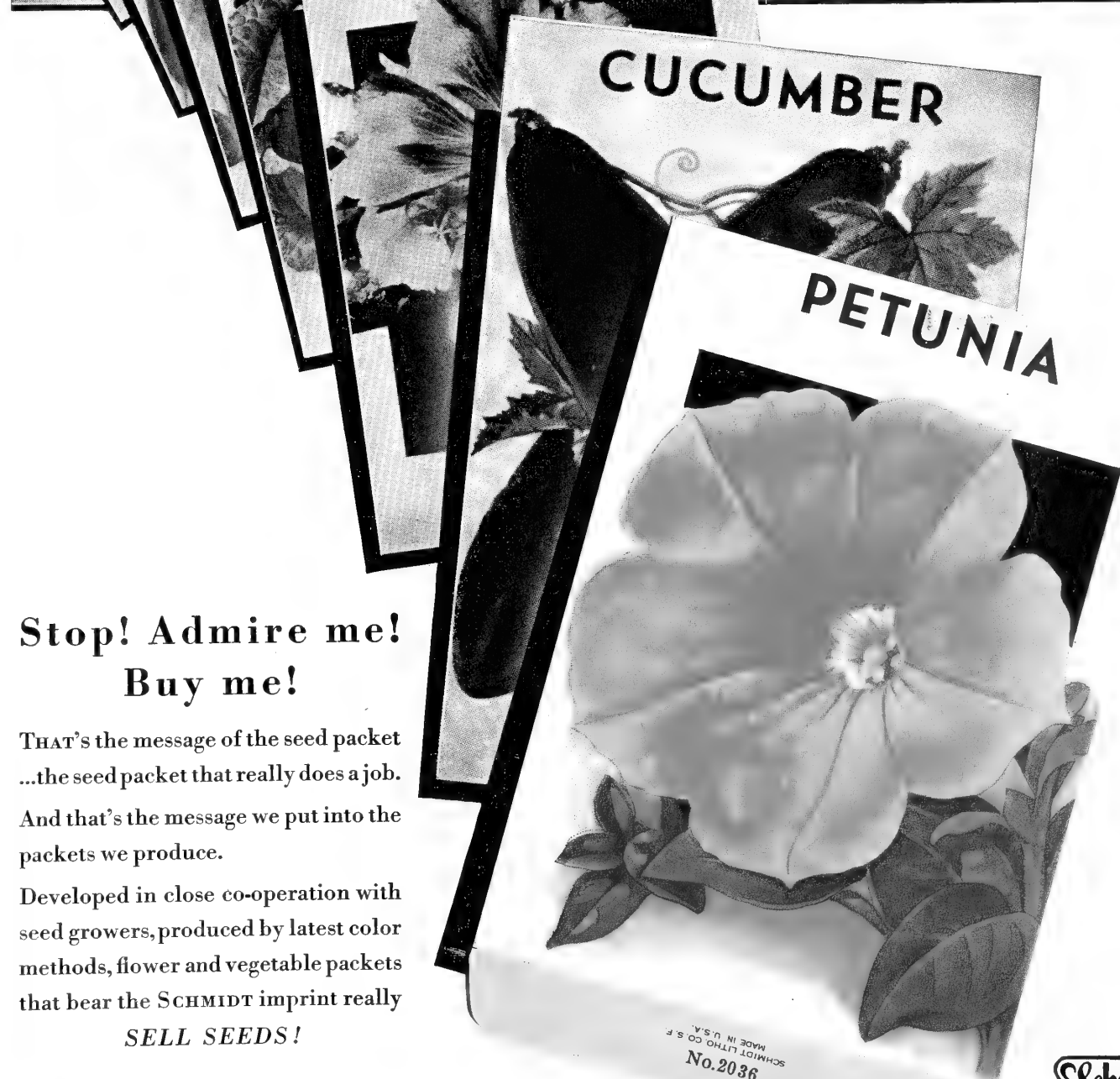
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WYOMING—*Laramie*: J. A. Hill.<sup>1</sup>

<sup>1</sup> Director.

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Rohnert Co., Waldo  
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Sherwood Seed Co.  
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James, R. H.  
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Rocky Ford, Colo.  
Robinson & Sons, Lawrence  
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Woodruff & Sons, Inc., S. D.  
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Hart Seed Co., The Chas C.  
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Thomson, W. H.  
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Monticello, Fla.

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Brown Seed Co., Alfred J.  
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Idaho Falls, Idaho  
Duthie Company  
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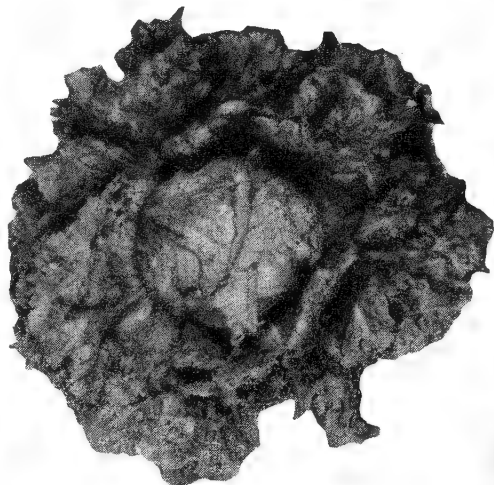
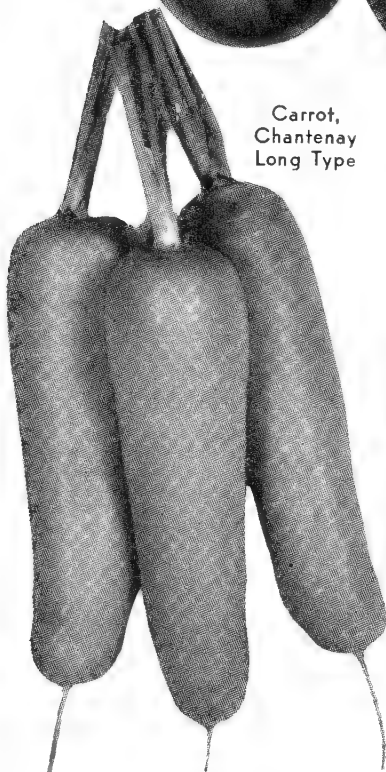
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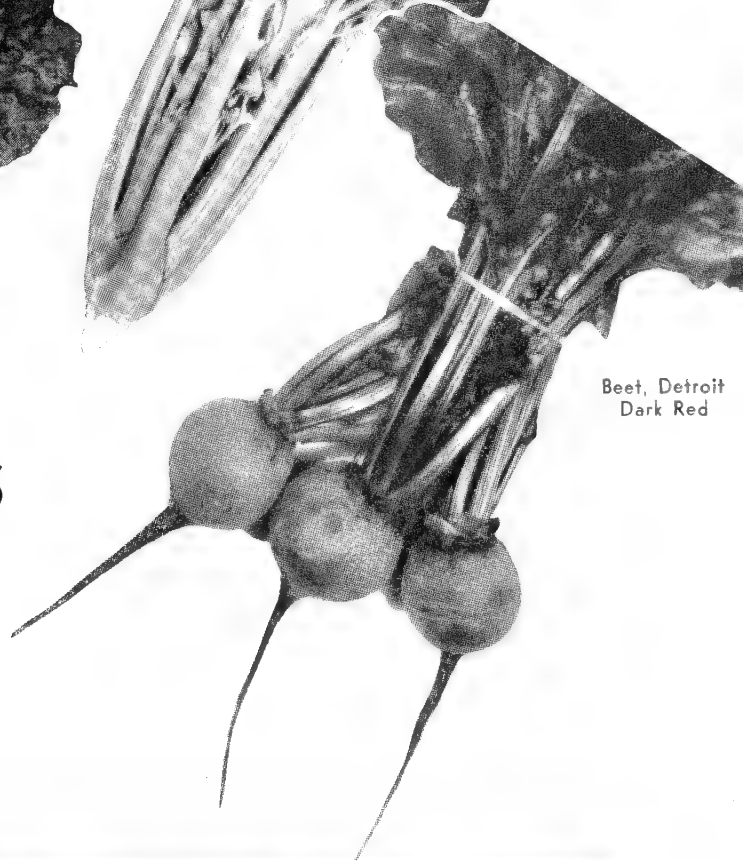


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Davis Seed Corp.  
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Quinlan Seed Store  
Terre Haute, Ind.  
McMahan Seed Co.  
Valparaiso, Ind.

#### IOWA

Hamilton Seed & Coal Co.  
Cedar Rapids, Iowa  
Berry Seed Co.  
Clarinda, Iowa  
Standard Seed Co.  
Des Moines, Iowa  
Council Bluffs Seed Co. (Sweet Corn)  
Council Bluffs, Iowa  
Dakota Improved Seed Co.  
Emmetsburg, Iowa  
Schutter, Fred H.  
Pleasant Valley, Iowa  
Michael-Leonard Co.  
Sioux City, Iowa

#### KANSAS

Mangelsdorf Seed Co., The F. A.  
Atchison, Kans.  
Bowman Seed Co., The  
Concordia, Kans.  
Barteldes Seed Co., The  
Lawrence, Kans.  
Coe Seed Co.  
Topeka, Kans.  
Ross Seed Co.  
Wichita, Kans.

#### KENTUCKY

Brent Seed Co., C. S.  
Lexington, Ky.  
Bunton Seed Co.  
Louisville, Ky.  
Hall Seed Co.  
Louisville, Ky.  
Yopp Seed Co.  
Paducah, Ky.

#### LOUISIANA

Reuter Seed Co., Inc.  
New Orleans, La.  
Kalmbach-Burckett Co., Inc.  
Shreveport, La.  
Wilson Seed Co., Lane  
Shreveport, La.

#### MARYLAND

Griffith & Turner  
Baltimore, Md.  
J. Manns & Co.  
Baltimore, Md.  
Meyer Seed Co., The  
Baltimore, Md.



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..... WILL PLEASE YOUR CUSTOMERS

They are hardy, true to type and will produce good crops. They are grown under perfect climatic conditions by men who have a vast knowledge of seed production.

Rohnert's modern cleaning plant assures clean, pure seeds. For over 46 years they have specialized in the growing of

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CHARD  
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Emerson Co., Thos. W.  
Boston, Mass.  
Ross Bros. Co.  
Worcester, Mass.

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King & Son, H. C.  
Battle Creek, Mich.  
Ferry-Morse Seed Co.  
Detroit, Mich.  
Burgess Seed & Plant Co.  
Galesburg, Mich.  
Brown Seed Co., Alfred J.  
Grand Rapids, Mich.  
Brown & Son, Inc., A. J. (Peas and  
Beans)  
Grand Rapids, Mich.

#### MINNESOTA

Farmer Seed & Nursery Co.  
Faribault, Minn.  
Northrup, King & Co.  
Minneapolis, Minn.  
Associated Seed Growers, Inc.  
St. Paul, Minn.

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Rudy-Patrick Seed Co.  
Kansas City, Mo.  
Chesmore Seed Co.  
St. Joseph, Mo.  
Mitchellhill Seed Co.  
St. Joseph, Mo.  
Corneli Seed Co.  
St. Louis, Mo.  
United States Seed Co., Inc.  
St. Louis, Mo.  
Beazley Seed Co.  
Springfield, Mo.  
Springfield Seed Co.  
Springfield, Mo.

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Elliott Seed Co.  
Billings, Mont.  
Michael-Leonard Co.  
Billings, Mont.  
Associated Seed Growers, Inc.  
Bozeman, Mont.  
Woodruff & Sons, Inc., F. H.  
Great Falls, Mont.  
Associated Seed Growers, Inc.  
Hamilton, Mont.  
Northland Seed Co.  
Sidney, Mont.

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Fremont, Nebr.  
Griswold Seed & Nursery Co.  
Lincoln, Nebr.  
Nebraska Seed Co., The  
Omaha, Nebr.  
Bowman Seed Co., The  
Superior, Nebr.  
Robinson Seed Co., The J. C.  
Waterloo, Nebr.

#### NEW JERSEY

White Co., Joseph (Tomato and Pepper)  
Bridgeton, N. J.  
Mosbell Co., John  
Montvale, N. J.  
Pedrick & Sons, Geo. R.  
Pedricktown, N. J.  
Hurff Co., Edgar F.  
Swedesboro, N. J.  
Stokes Co., Francis C. (Tomato)  
Vincentown, N. J.

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Harvey Seed Co.  
Buffalo, N. Y.  
Crossman Seed Corporation  
East Rochester, N. Y.  
Banfield Jennings Corp.  
Elmira, N. Y.  
Fredonia Seed Co.  
Fredonia, N. Y.  
Page Seed Co., The  
Greene, N. Y.  
Associated Seed Growers, Inc.  
LeRoy, N. Y.  
Lupton & Son, J. M.  
Mattituck, L. I., N. Y.  
Ertag, Inc., A.  
New York, N. Y.  
Griscom & Co., Inc.  
New York, N. Y.  
Herbst Bros.  
New York, N. Y.  
Loewith, Inc., Julius  
New York, N. Y.  
Thomas Madsen & Co.  
New York, N. Y.  
Radwaner Seed Co., I. L.  
New York, N. Y.  
Stumpp & Walter Co.  
New York, N. Y.  
Vaughan's Seed Store  
New York, N. Y.

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Hornaday Seed Co.  
Greensboro, N. C.  
Wyatt & Sons Co., Job P.  
Raleigh, N. C.  
Cross Seed Co.  
Wilmington, N. C.  
Roudabush's Seed Store  
Wilmington, N. C.  
Cox's Seed Store  
Winston Salem, N. C.

#### NORTH DAKOTA

Magill & Co. (Operating Fargo Seed  
House)  
Fargo, N. Dak.  
Will & Co., Oscar H.  
Bismarck, N. Dak.

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Holmes Seed Co., The  
Canton, Ohio  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Moore, Charles R. (Broker)  
Cincinnati, Ohio  
O. & M. Seed Co., The  
Green Springs, Ohio  
Stoller's Seed House  
Paulding, Ohio  
Woodruff & Sons, Inc., F. H.  
Toledo, Ohio  
Clark & Sons, C. S.  
Wakeman, Ohio

#### OKLAHOMA

Johnston, W. B.  
Enid, Okla.  
Muskogee Seed House  
Muskogee, Okla.  
Hardeman-King Co.  
Oklahoma City, Okla.  
Keller Seed Store  
Shawnee, Okla.  
Binding-Stevens Seed Co.  
Tulsa, Okla.  
Shannan Feed & Seed Co.  
Tulsa, Okla.

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Michael-Leonard Co.  
Ontario, Ore.  
Lilly Co., The Chas. H.  
Portland, Ore.  
Portland Seed Co.  
Portland, Ore.  
Jenks-White Seed Co.  
Salem, Ore.

#### PENNSYLVANIA

Landreth Seed Co., D.  
Bristol, Pa.  
Schell, Inc., Walter S.  
Harrisburg, Pa.  
Buist Co., Robert  
Philadelphia, Pa.  
Burpee Co., W. Atlee  
Philadelphia, Pa.  
Kirby, Norval E.  
Philadelphia, Pa.

#### SOUTH CAROLINA

Baily Seed Co., E. W.  
Charleston, S. C.  
Mixson Seed Co., W. H.  
Charleston, S. C.  
Shuler & Smoak  
Orangeburg, S. C.

#### SOUTH DAKOTA

Dakota Improved Seed Co.  
Mitchell, S. Dak.

#### TENNESSEE

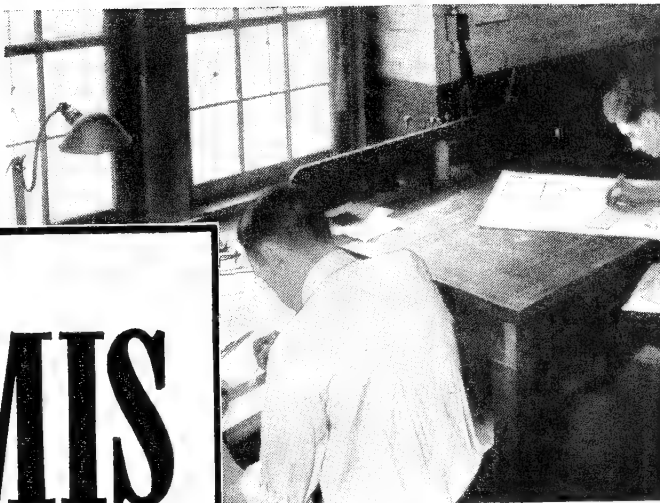
Knoxville Seed Co.  
Knoxville, Tenn.  
Mayo, D. R.  
Knoxville, Tenn.  
Parker Bros. Co.  
Knoxville, Tenn.  
Security Feed & Seed Co.  
Knoxville, Tenn.  
Snapp & Sons, J. P.  
Limestone, Tenn.  
Associated Seed Growers, Inc.  
Memphis, Tenn.  
Buchanan Seed Company, R. B.  
Memphis, Tenn.  
Russell Heckle Seed Co.  
Memphis, Tenn.  
Schwill & Co., Otto  
Memphis, Tenn.  
Dobson-Hicks Co.  
Nashville, Tenn.  
Hardison Seed Co., E. K.  
Nashville, Tenn.

#### TEXAS

Eastern Seed Co.  
Corpus Christi, Texas  
Hardie Seed Co., David  
Dallas, Texas  
Magnolia Seed Co.  
Dallas, Texas  
Nicholson Seed Co., Robert  
Dallas, Texas  
American Seed Co.  
Fort Worth, Texas  
Martin Seed Co.  
Houston, Texas  
Woodruff & Sons, Inc., F. H.  
Mercedes, Texas  
Associated Seeds, Inc.  
Robstown, Texas  
Associated Seeds, Inc.  
San Antonio, Texas  
Satex Seed Co.  
San Antonio, Texas  
Reuter Seed Co.  
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**TESTING**—Every process in the manufacture of Bemis products is under the watchful eyes of laboratory experts. Results: Better bags.



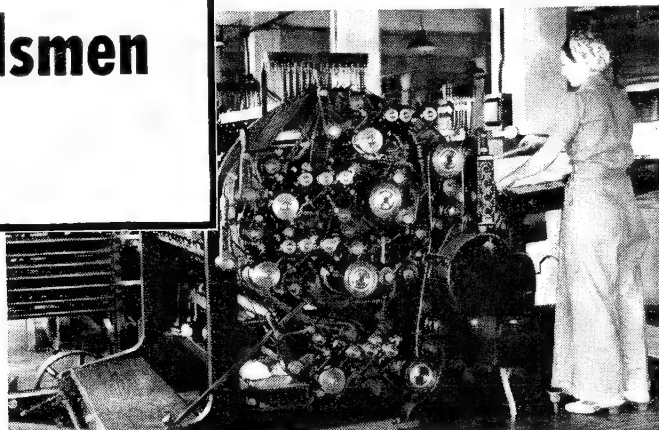
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Bemis Economy Mailing Bags	Bemis Feed Bags
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Bemis Dry-Tite Tarpaulins	Bemis Burlap
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CRESTED WHEAT GRASS  
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**LAKIN SEED CO.**

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**FIELD,**

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Porter-Walton Co.  
Salt Lake City, Utah

### VIRGINIA

Tait & Sons, Inc., Geo.  
Norfolk, Va.  
Wood & Sons, T. W.  
Richmond, Va.

### WASHINGTON

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Boyce Co., J. A.  
Mt. Vernon, Wash.  
Christianson, Alf.  
Mt. Vernon, Wash.  
Leckenby Seed Co.  
Mt. Vernon, Wash.  
Sluis, Peter  
Mt. Vernon, Wash.  
Leckenby Seed Co.  
Seattle, Wash.

Lilly Co., The Chas. H.  
Seattle, Wash.

Portland Seed Co.  
Seattle, Wash.

Michael-Leonard Co.  
Spokane, Wash.

Spokane Seed Co.  
Spokane, Wash.

Beard-Adams Seed Co.  
Yakima, Wash.

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Olds Seed Co., L. L.  
Madison, Wis.  
Manitowoc Seed Co.  
Manitowoc, Wis.  
Hunkel Co., G. H.  
Milwaukee, Wis.  
Jacques Seed Co.  
Prescott, Wis.  
Wisconsin Cabbage Seed Co. (Yellow  
Resistant Cabbage Seed)  
Racine, Wis.  
Associated Seed Growers, Inc.  
Sheboygan, Wis.

### WYOMING

Michael-Leonard Co.  
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Associated Seed Growers, Inc.  
Powell, Wyo.

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Andalusia, Ala.  
Houston Brokerage Co., Sam  
Birmingham, Ala.  
Lambert & Sons, R. E.  
Darlington, Ala.  
Riemers' Farms  
Elberta, Ala.  
Wind & Co., I.  
Huntsville, Ala.  
Alabama Pecan Development Co., Inc.  
(Crotalaria)  
Mobile, Ala.  
Van Antwerp Seed Co.  
Mobile, Ala.  
Capitol Grain & Feed Co.  
Montgomery, Ala.

### ARIZONA

Buckeye Seed & Feed Co.  
Buckeye, Ariz.  
Southwest Flour & Feed Co.  
Glendale, Ariz.  
Advance Seed Co.  
Phoenix, Ariz.  
Capital Fuel, Feed & Seed Co.  
Phoenix, Ariz.  
Liefgreen Seed Co.  
Phoenix, Ariz.  
Valley Lumber, Fuel & Feed Co.  
Phoenix, Ariz.  
Northrup, King & Co. (Bomberger  
Division)  
Yuma, Ariz.  
Sanguinetti, E. F.  
Yuma, Ariz.  
Whitman Seed Co.  
Yuma, Ariz.  
Yuma County Farmers Marketing  
Association  
Yuma, Ariz.

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Blytheville, Ark.

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Eudora, Ark.

Lee, Arthur G.  
Fort Smith, Ark.

Helena Wholesale Grocery Co.  
Helena, Ark.

Isgrig Seed Co.  
Little Rock, Ark.

Cochran Co., H. K.  
Little Rock, Ark.

Ware & Son, C. V.  
Pine Bluff, Ark.

Whyte Feed Mills  
Pine Bluff, Ark.

Jacob Hartz Seed Co.  
Stuttgart, Ark.

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Melilotus Indica)  
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Portland Seed Co.  
Eureka, Calif.  
Loomis, Jay  
Hemet, Calif.  
Aggeler & Musser Seed Co.  
Los Angeles, Calif.  
Germain Seed & Plant Co.  
Los Angeles, Calif.  
Lagomarsino & Sons, F.  
Sacramento, Calif.  
Smith & Co., F. F.  
Sacramento, Calif.  
Ferry-Morse Seed Co.  
San Francisco, Calif.  
Sevin-Vincent Seed Co.  
San Francisco, Calif.  
Volkman & Co., C. M.  
San Francisco, Calif.  
Paramount Seed Co.  
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# To Control INSECT and RODENT PESTS IN YOUR WAREHOUSE

Fumigate your stock with LARVACIDE. Penetrates kernels to kill egg life and larvae, as well as adult pests. Small lots are conveniently handled in vault or 55 gallon metal drum with tight cover.



## NO EFFECT UPON SEED GERMINATION

—Used as directed, LARVACIDE has no effect upon the germination of dry seed, after aeration.

**RODENTS** are killed by your fumigation for insects. For rodents alone, use light dosage, with overnight exposure. LARVACIDE drives rats out of retreats to die on the open floor without carcass nuisance.

Note that LARVACIDE is an *active control agent*. Instead of waiting for rodents to seek it out, it goes after them, killing by wholesale. Note too—with LARVACIDE, *small indoor rodent jobs may be handled without using gas mask*. LARVACIDE literature tells how.

## For EASIER SOIL FUMIGATION

Chemical Soil Fumigation with LARVACIDE controls most damping-off and other harmful soil fungi . . . as well as nematodes, weed seeds, persistent weeds and insects. No steam boiler or other costly and cumbersome apparatus is required. LARVACIDE is injected below soil surface a week or two before planting, to allow time for soil aeration.

Selling top dressing and flatting soil essentially free of weeds and damping-off organisms can be a profitable specialty item.

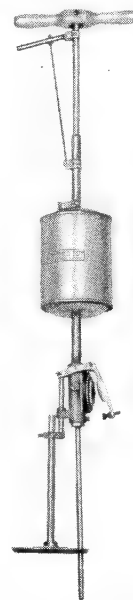
Use LARVACIDE in seed beds, frames, flats, greenhouses . . . also in compost soil (for weed control) to be drawn upon later.

## For PROFITABLE RESALE

FARMERS will buy the 1 lb. bottle for use in farm bins and elsewhere around the farm, to control insects and rodents. GROWERS and HOME OWNERS buy LARVACIDE to fumigate their soil for weed control, etc., as above.

WRITE FOR LITERATURE giving full information on Pest Control and Soil Fumigation . . . also ask for our Resale Proposition.

*The Larvajector measures depth and dosage. With it one can treat up to 1000 square feet an hour.*



# Larvacide

CHLORPICRIN

is a tear gas fumigant (over 99% pure Chlorpicrin) shipped in liquid form, in cylinders 25-180 lbs., and 1 lb. bottles, each in safety can, 6 or 12 to wooden case. LARVACIDE is stocked in principal cities.

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Wholesale Only

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Growers of

**Super Gold and So. American  
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**Western Kentucky Blue Grass.**

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Our prices and quality are always right.

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Steele, Briggs Seed Co., Ltd.  
Regina, Sask., Canada  
Speers & Co., Ltd., J. H.  
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Streetsville, Ont., Canada  
Goodall, Ltd., James  
Stouffville, Ont., Canada  
Vance Bros. Seeds  
Tilsonburg, Ont., Canada  
Canada Seed Co., Ltd., The  
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McKenzie Co., Ltd., A. E.  
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Steele, Briggs Seed Co., Ltd.  
Toronto, Ont., Canada  
United Farmers Co-operative Co., Ltd.  
Toronto, Ont., Canada  
Watkins Seeds, Ltd.  
Toronto, Ont., Canada  
Northern Canadian Seed Sales  
Winnipeg, Man., Canada  
Steele, Briggs Seed Co., Ltd.  
Winnipeg, Man., Canada  
O'Loane, Kiely & Co.  
Vancouver, B. C., Canada  
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Winnipeg, Man., Canada

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Denver, Colo.  
Western Seed Co.  
Denver, Colo.

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Comstock, Ferry & Co.  
Wethersfield, Conn.  
Hart Seed Co., Chas. C.  
Wethersfield, Conn.  
Woodruff & Sons, Inc., F. H.  
Milford, Conn.

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Thomson, W. H.  
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Athens, Ga.  
Everett Seed Co.  
Atlanta, Ga.  
Walton Seed Co. (Cowpeas and  
Soybeans)  
Augusta, Ga.

Evans Marketing Agency, A. J.  
Fort Valley, Ga.  
Etheridge Seed Co., R. N.  
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Snelson Seed Co.  
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Growers Ass'n.  
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Boise, Idaho  
Shields  
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Caldwell, Idaho  
Oakes & Co., Edgar L.  
Caldwell, Idaho  
Gooding Seed Co., The  
Gooding, Idaho  
Duthie Co.  
Lewiston, Idaho  
Means Co., Mark  
Lewiston, Idaho  
Moscow-Idaho Seed Co.  
Moscow, Idaho  
Northwestern Seed Growers, Inc.  
Moscow, Idaho  
Dingel & Smith  
Twin Falls, Idaho  
Gem State Seed Co.  
Twin Falls, Idaho  
Globe Seed & Feed Co.  
Twin Falls, Idaho

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Michael-Leonard Co.  
Chicago, Ill.  
Ostberg Seed Co.  
Chicago, Ill.  
Rudy-Patrick Seed Co.  
Chicago, Ill.  
Schultz Seed Co., J. M.  
Dieterich, Ill.  
Wright Seed & Grain Co.  
Dieterich, Ill.  
Keith & Son, L. J.—(Redtop)  
Fairfield, Ill.  
Ging & Co.  
Farina, Ill.  
Egyptian Seed Growers Exchange—  
(Redtop)  
Flora, Ill.  
Beebe, C. A.  
Forreston, Ill.  
Noble Bros.  
Gibson City, Ill.  
Shultz Seed Co.  
Olney, Ill.  
Sommer Bros. Seed Co.  
Pekin, Ill.  
Kelly Seed Co.  
Peoria, Ill.  
Keller & Sons, Geo.  
Quincy, Ill.  
Condon Bros., Seedsmen  
Rockford, Ill.

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Crabbs, Reynolds, Taylor Co.  
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Crawfordsville Seed Co.  
Crawfordsville, Ind.



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Since 1854 the name DICKINSON has stood for the highest purity . . . highest germination and yielding power in farm seeds . . . and it does today.

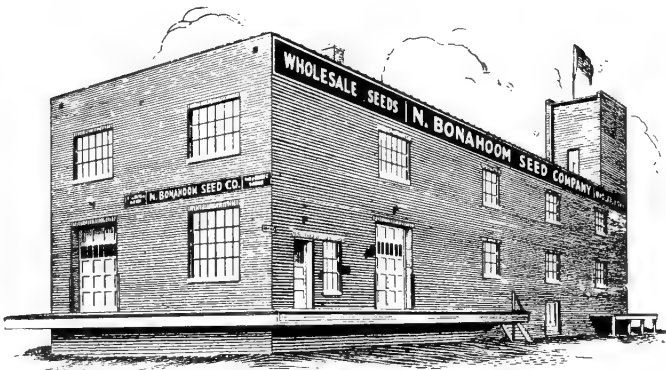
**THE ALBERT DICKINSON COMPANY**

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Est. 1854

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*"Wholesale Field Seeds"*



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SWEET CLOVER  
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FARM SEEDS**



Carpet, Dallis, Rye, Other Grasses.  
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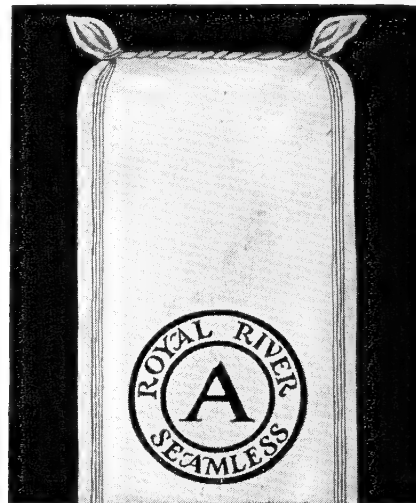
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Buenos Aires, Argentina  
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Buenos Aires, Argentine  
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Anderson & Co., Pty., Ltd.  
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Clements & Marshall, Ltd.  
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Dawson & Harrison, Ltd.,  
Perth, Australia  
Denhams, Pty., Ltd.  
Brisbane, Queensland, Australia  
Farmer & Co., Pty., Ltd.  
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Foster & Sons, Pty., Ltd.  
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Melbourne, Australia  
Gippsland & Northern Co-op Co., Ltd.  
Melbourne, Australia  
Hackett, Ltd., E. & W.  
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Launceston, Tas., Australia  
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Melbourne, Australia  
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Sydney, N. S. W., Australia  
Peterson Bros. & Craig, Ltd.  
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Melbourne, Vic., Australia  
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Devonport, Tas., Australia  
Rumsey's Seeds Pty., Ltd.  
Parramatta, N. S. W., Australia  
Secombe, T. C.  
Coff's Harbour, N. S. W., Australia  
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Sydney, Australia  
South Australian Farmers Co-op. Ltd.  
Adelaide, S. A., Australia  
Watters & Son Pty., Ltd.  
Melbourne, Australia  
Webb & Co., Ltd.  
Devonport, Tas., Australia  
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Western Australian Farmers Co-op., Ltd.  
Perth, Australia  
Wright, Stephenson & Co., Pty., Ltd.  
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Sydney, Australia

## DENMARK

Daehnfeldt, Ltd., L.  
Odense, Denmark

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Brown & Co., Ltd., D. T.  
Poulton-le-Fylde, Lancashire, England  
Bunting & Co., G. A.  
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Carter's Tested Seeds, Ltd.  
Raynes Park, London, England  
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Ferensway Chambers, Hull, England  
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London, England  
Cullen & Sons, Thos.  
Witham, England  
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Sudbury, Suffolk, England  
Donath, L.  
Richmond, Surrey, England  
Engelmann, Ltd., C.  
Saffron Walden, Essex, England  
Finney & Co., Ltd., Samuel  
Newcastle, England  
Gascoyne Co., Ltd., G.  
Worcester, England  
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Bury St., Edmunds, England  
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Dunmow, Essex, England  
Hurst & Son  
London, England  
Johnson & Son, Ltd., W. W.  
Boston, England  
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Langport, Somerset, England  
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Reading, England  
Toogood & Sons, Ltd.  
Southampton, England  
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Bristol, England  
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London, England  
Whalley, Ltd., Thomas  
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Poona, India  
Sulabh Nursery & Seed Co.  
Calcutta, India  
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**IRELAND**

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Banbridge, Ireland  
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Wellington, New Zealand  
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Dunedin, New Zealand

National Mortgage & Agency Co. of  
New Zealand, Ltd.

Dunedin, New Zealand  
Nimmo & Blair, Ltd.  
Dunedin, New Zealand  
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Reynolds & Co., W. E.  
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Wellington, New Zealand  
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Mowbray, Capetown, South Africa  
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South Africa

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Helsingborg, Sweden

Engstrom Aktiebolaget, Carl  
Eslof, Sweden  
Frosbeck, S.  
Skanninge, Sweden  
Gehlins Frohandel, A. B.  
Malmo, Sweden  
Goteborgs Tradgarsforening  
Gothenburg, Sweden  
Hallands Frokontor, Aktiebolaget  
Getinge, Sweden  
Holmberg Aktiebolaget, Algot & Sons  
Norrkoping, Sweden  
Aktiebolaget K. I. Lihnell  
Lenkoping, Sweden  
Aktiebolaget Pratense  
Malmo, Sweden  
Ohlsens Enke A/B, J. E.  
Malmo, Sweden  
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Gerber-Kneubuhler  
Burgdorf, Switzerland  
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Basel, Switzerland  
Mauser, Emil  
Zurich, Switzerland  
Muller & Cie, E., S-A.  
Zurich, Switzerland  
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Vatter, A. G., G. R.  
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# Flower Seed Growers

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Bodger Seeds, Ltd.  
El Monte, Los Angeles Co., Calif.  
Pieters-Wheeler Seed Co. (Sweet Peas)  
Gilroy, Calif.  
Rohnert Co., Waldo (Sweet Peas)  
Gilroy, Calif.  
Waller-Franklin Seed Co.  
Guadalupe, Calif.  
Buckman, Denholm & Holden Seed Co.  
Lompoc, Calif.  
Burpee Co., W. Atlee  
Lompoc, Calif.  
Germain Seed & Plant Co.  
Los Angeles, Calif.  
Howard & Smith  
Montebello, Calif.  
Lagomarsino & Sons, F.  
Sacramento, Calif.  
Ferry-Morse Seed Co.  
San Francisco, Calif.  
Macdonald Seed Co., The Wm.  
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Standard Seed Farms Co.  
Stockton, Calif.

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Colorado Seed Co.  
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Rocky Mountain Seed Co.  
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Burrell Seeds, Inc.  
Rocky Ford, Colo.

## ILLINOIS

American Bulb Company  
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Chicago, Ill.  
Condon Bros., Seedsmen  
Rockford, Ill.

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Burgess Seed & Plant Co.  
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Minneapolis, Minn.

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Coldwater, N. Y.  
Crosman Seed Corporation  
East Rochester, N. Y.  
Page Seed Co., The  
Greene, N. Y.  
Herbst Bros.

New York, N. Y.  
Vaughan's Seed Store  
New York, N. Y.

## OHIO

Holmes Seed Co.  
Canton, Ohio  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio

## OREGON

Ellis, Mrs. Merton G. (Pansy)  
Canby, Ore.  
Harrold's Pansy Gardens (Pansy)  
Grants Pass, Ore.  
Steele's Pansy Gardens (Pansy)  
Portland, Ore.  
Hoodacres (Delphinium)  
Troutdale, Ore.

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Landreth Seed Co., D.  
Bristol, Pa.  
Burpee Co., W. Atlee  
Philadelphia, Pa.

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Nicholson Seed Co., Robt.  
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## VERMONT

Hawkins, Budd D.  
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Wood & Sons., T. W.  
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**FERRY-MORSE SEED CO.**

**DETROIT  
SAN FRANCISCO**



PETUNIA IGLOO—Bronze Medal—Grown by Joseph Harris Co., Rochester, N. Y.

**Ageratum**

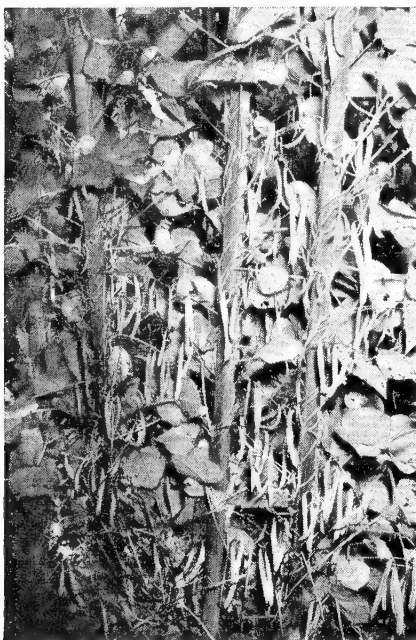
Name	Award	Year	Introducer
Midget Blue	S	1940	Waller-Franklin Seed Co.

**Anchusa**

Blue Bird	B	1935	Watkins & Simpson
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**Antirrhinum**

Celestial	B	1938	Sluis en Groot
Guinea Gold	B	1939	Hurst & Son
Psyche	M	1938	L. Daehnfeldt, Ltd.
Rosalie	B	1940	Waller-Franklin Seed Co.
Royal Rose	B	1936	Hurst & Son
Rustproof	Special Award	1935	Univ. of California
St. George	B	1936	Hurst & Son
White Spire	B	1937	Sluis en Groot



POLE SNAP BEAN POTOMAC—Bronze Medal—Grown by Associated Seed Growers, Inc., New Haven, Conn.

# 1933

# All-America

G—Gold Medal, S—Silver Medal

**Aster**

Early Giant	S	1939	Bodger Seeds, Ltd.
El Monte	B	1936	Bodger Seeds, Ltd.
Enchantress	M	1938	Bodger Seeds, Ltd.
Extra Early Giant			
Crego, Navy Blue	M	1943	W. Atlee Burpee Co.
Illusion	M	1938	Bodger Seeds, Ltd.
Los Angeles	S	1934	Bodger Seeds, Ltd.
Rose Marie	M	1940	Bodger Seeds, Ltd.
Silvery Rose	B	1934	Bodger Seeds, Ltd.
Victory Giants Mixed	M	1943	Sluis en Groot of America, Inc.
Wilt-Resistant	Special Award	1933	Bodger Seeds, Ltd.

**Calendula**

Orange Fantasy	S	1938	W. Atlee Burpee Co.
Orange Shaggy	G	1935	Waller-Franklin Seed Co. { Vaughan's Seed Store
Sunshine	G	1934	Bodger Seeds, Ltd. { W. Atlee Burpee Co.

**Calliopsis**

Golden Crown	S	1938	Hurst & Son
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**Canterbury Bell**

Angelus Bell	B	1934	Waller-Franklin Seed Co.
Annual Mixed	G	1933	Waller-Franklin Seed Co.
Liberty Bell	S	1934	Waller-Franklin Seed Co.

**Celosia**

Flame of Fire	B	1935	T. Sakata & Co.
Royal Velvet	M	1939	Livingston Seed Co.

**Chrysanthemum**

Eldorado	B	1934	Bodger Seeds, Ltd.
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**Cleome**

Pink Queen	S	1942	Ferry-Morse Seed Co.
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**Cornflower**

Jubilee Gem	S	1937	Hurst & Son
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**Cosmos**

Giant Sensation, Dazzler	M	1943	Bodger Seeds, Ltd.
Orange Flare	G	1935	Bodger Seeds, Ltd.
Sensation	S	1936	J. V. Edlund
Yellow Flare	S	1942	W. Atlee Burpee Co.

**Cynoglossum**

Firmament	B	1939	Ernst Benary
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**Delphinium**

Cambridge Blue	S	1933	Waller-Franklin Seed Co.
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**Dianthus**

Laciniatus Splendens	B	1935	Bodger Seeds, Ltd.
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**Hollyhock**

Indian Spring	S	1939	Sluis en Groot
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**Hunnemania**

Sunlite	S	1934	Bodger Seeds, Ltd.
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**Larkspur**

Blue Bell	B	1934	Bodger Seeds, Ltd.
Rosamund	G	1934	Bodger Seeds, Ltd.
White King	B	1937	Bodger Seeds, Ltd.

**Linaria**

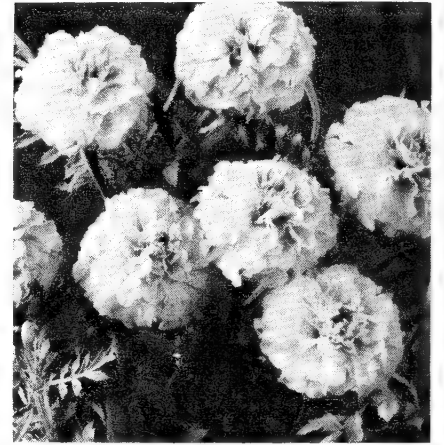
Fairy Bouquet	G	1934	Watkins & Simpson
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**Lupine**

Giant King	S	1933	Waller-Franklin Seed Co.
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**Marigold**

Butterball	B	1942	Bodger Seeds, Ltd.
Chrys'm Flowered	M	1938	Waller-Franklin Seed Co.
Crown of Gold	G	1937	W. Atlee Burpee Co. { H. G. Hastings Co.
Dixie Sunshine	S	1936	W. Atlee Burpee Co. { W. Atlee Burpee Co.
Dwarf Royal Scot	B	1937	Waller-Franklin Seed Co.
Early Sunshine	B	1939	W. Atlee Burpee Co.
Golden Beauty	B	1935	Hurst & Son
Golden Bedder	B	1942	W. Atlee Burpee Co.
Golden Glow	M	1939	W. Atlee Burpee Co.
Golden West	M	1938	W. Atlee Burpee Co.
Goldsmith	B	1941	Waller-Franklin Seed Co.
Guinea Gold	G	1933	Hurst & Son
Limelight	B	1940	W. Atlee Burpee Co.
Melody	B	1942	Ferry-Morse Seed Co.
Monarch Mixed	S	1934	Hurst & Son { Bodger Seeds, Ltd.



MARIGOLD SUNKIST—Silver Medal—Grown by Bodger Seeds, Ltd., El Monte, Calif.

Primrose Queen	B	1935	Hurst & Son
Scarlet Glow	M	1941	W. Atlee Burpee Co.
Spry	S	1941	W. Atlee Burpee Co.
Sunkist	S	1943	Bodger Seeds, Ltd.
Yellow Beauty	B	1935	Hurst & Son
Yellow Pymy	M	1940	W. Atlee Burpee Co.
Yellow Supreme	G	1935	Livingston Seed Co.
Yellowstone	M	1942	Waller-Franklin Seed Co.

**Morning Glory**

Lavender Rosette	M	1940	Sluis en Groot
Pearly Gates	S	1942	Ferry-Morse Seed Co.
Scarlett O'Hara	G	1939	Waller-Franklin Seed Co. { Dallas Seed Producing Co.

**Myositis**

Ingrid	M	1938	L. Daehnfeldt, Ltd.
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**Nasturtium**

Glorius Gleam Hybrids	S	1935	Bodger Seeds, Ltd.
Golden Gleam	G	1933	Bodger Seeds, Ltd.
Golden Globe	S	1936	Vis Brothers, Ltd. { Bodger Seeds, Ltd.
Scarlet Gleam	G	1935	Bodger Seeds, Ltd.

**Nierembergia**

Purple Robe	B	1942	Bodger Seeds, Ltd.
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**Pansy**

Coronation Gold	B	1938	Sluis en Groot
Dwarf Swiss Giants	S	1933	Vaughan's Seed Store



GIANT SENSATION COSMOS DAZZLER—Honorable Mention—Grown by Bodger Seeds, Ltd., El Monte, Calif.

# Selections

# 1943

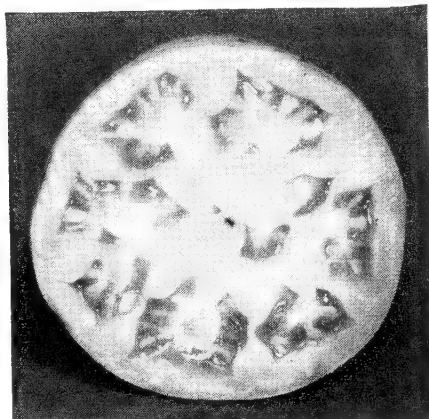
B—Bronze Medal, M—Honorable Mention



PETUNIA ALDDOUBLE AMERICA—Silver Medal—Grown by W. Atlee Burpee Co., Philadelphia.

## Petunia

Alldouble America	S	1943	W. Atlee Burpee Co.
Blue Brocade	S	1941	T. Sakata & Co.
Blue Gem	M	1938	T. Sakata & Co.
Burgundy	B	1937	W. Atlee Burpee Co.
Cream Star	S	1940	W. Atlee Burpee Co.
Dainty Lady	S	1936	Bodger Seeds, Ltd.
English Violet	M	1943	Joseph Harris Co.
First Lady	S	1941	T. Sakata & Co.
Flaming Velvet	G	1936	Sluis en Groot
Glamour	M	1942	Bodger Seeds, Ltd.
Glow	S	1940	T. Sakata & Co.
Hollywood Star	S	1939	Waller-Franklin Seed Co.
Igloo	B	1943	Joseph Harris Co.
Imp'd. Rose King	B	1936	Ferry-Morse Seed Co.
Ladybird	B	1939	Ernst Benary
Martha Washington	S	1935	Waller-Franklin Seed Co.
Pink Gem	G	1934	Waller-Franklin Seed Co.
Radiance	S	1941	Waller-Franklin Seed Co.
Rose Gem	S	1936	Waller-Franklin Seed Co.
Salmon Supreme	S	1938	W. Atlee Burpee Co.
Topaz Rose	B	1938	Waller-Franklin Seed Co.
Velvet Ball	B	1939	{ Vis Brothers, Ltd. Bodger Seeds, Ltd.
Victorious Apple Blossom	M	1939	T. Sakata & Co.
Victorious Gaiety	B	1938	T. Sakata & Co.
Victorious, Mixed	S	1934	{ T. Sakata & Co. Ferry-Morse Seed Co.
Victorious Orchid Beauty	S	1938	T. Sakata & Co.
Violet Gem	M	1941	Waller-Franklin Seed Co.



TOMATO JUBILEE—Bronze Medal—Grown by W. Atlee Burpee Co., Philadelphia, Pennsylvania.

## Phlox

Gigantea Art Shades	S	1935	Waller-Franklin Seed Co.
Red Glory	M	1942	Waller-Franklin Seed Co.
Rosy Morn	B	1941	Waller-Franklin Seed Co.
Salmon Glory	S	1939	Waller-Franklin Seed Co.

## Poppy, Iceland

Yellow Wonder	B	1937	W. Atlee Burpee Co.
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## Rudbeckia

Starlight	M	1942	Buckman, Denholm and Holden Seed Co.
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## Salvia

Royal Blue	M	1940	Hurst & Son
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## Scabiosa

Blue Moon	M	1939	Bodger Seeds, Ltd.
Giant Hybrids	B	1934	W. Atlee Burpee Co.
Heavenly Blue	B	1940	W. Atlee Burpee Co.
Peace	M	1941	W. Atlee Burpee Co.

## Stock

Rose Pink	B	1937	Waller-Franklin Seed Co.
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## Sweet Pea

Spring, Blue	B	1940	Ferry-Morse Seed Co.
Spring, Lavender	M	1940	Ferry-Morse Seed Co.
Spring, Rose Pink	S	1940	Ferry-Morse Seed Co.

## Veridium

Fastuosum	S	1933	Bodger Seeds, Ltd.
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## Verbena

Beauty of Oxford	S	1933	Waller-Franklin Seed Co.
Blue Sentinel	B	1939	W. Atlee Burpee Co.
Cerise Queen	B	1934	Waller-Franklin Seed Co.
Dannebrog	S	1934	{ L. Daehnfeldt, Ltd. Theodore Jensen
Floradale Beauty	S	1937	W. Atlee Burpee Co.
Lavender Glory	S	1933	Waller-Franklin Seed Co.
Spectrum Red	B	1934	Waller-Franklin Seed Co.
Violet Bouquet	B	1935	Waller-Franklin Seed Co.

## Zinnia

Black Ruby	B	1941	W. Atlee Burpee Co.
Fantasy, Mixture	S	1935	Bodger Seeds, Ltd.
Fantasy, Star Dust	S	1937	Bodger Seeds, Ltd.
Fantasy, White Light	M	1939	Bodger Seeds, Ltd.
Navajo, Mixed	M	1938	W. Atlee Burpee Co.
Royal Purple	M	1942	Ferry-Morse Seed Co.

## VEGETABLES

### Bean

Name	Award	Year	Introducer
Asgrow Stringless Green Pod	G	1933	Associated Seed Growers, Inc.
Bush Snap, Long Island Longpod	M	1942	William Kroemer
Bush Snap, Medal Refugee	B	1942	Associated Seed Growers, Inc.
Bush Snap, Tender Pod	B	1941	W. Atlee Burpee Co.
Granda	S	1939	Rudolph Schreiber & Sohne
Plentiful (Asgrow) Stringless	B	1939	Ferry-Morse Seed Co.
Black Valentine	S	1933	Associated Seed Growers, Inc.
Pole Snap, Decatur	S	1942	Associated Seed Growers, Inc.
Pole Snap, Potomac	B	1943	Associated Seed Growers, Inc.
The Commodore	B	1938	Zwaan & Van der Molen

### Bean, Lima

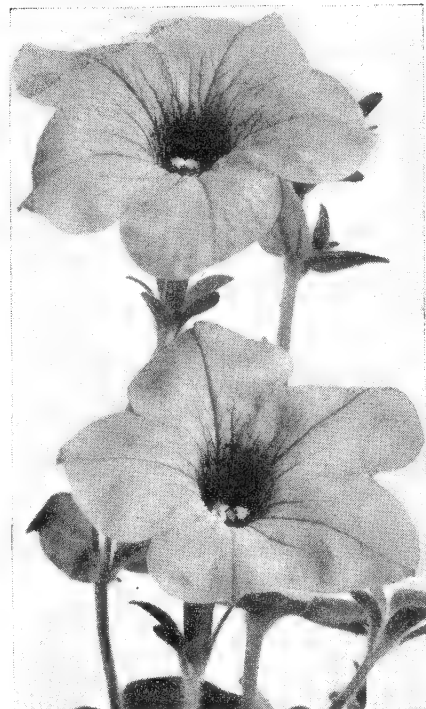
Baby Potato	S	1940	Associated Seed Growers, Inc.
Cangreen Bush	M	1943	F. H. Woodruff & Sons, Inc.

### Beet

Asgrow Canner	S	1936	Associated Seed Growers, Inc.
Asgrow Wonder	G	1934	Associated Seed Growers, Inc.
Good for All	B	1934	Ferry-Morse Seed Co.
Little Marvel	B	1934	Zwaan & Van der Molen
Ohio Canner	S	1933	{ Ohio Experiment Station J. M. Lupton & Son
Perfected Detroit	S	1934	J. M. Lupton & Son
Perfect Model	B	1938	Abraham Sluis, Ltd.

### Cabbage

Chieftan	S	1938	Ferry-Morse Seed Co.
Earliest of All (Red)	M	1937	Abraham Sluis, Ltd.
Just Right	B	1935	Sluis Bros., Ltd.
Moskow Market Pride	M	1937	Abraham Sluis, Ltd.
Penn State Ballhead	S	1934	{ Penn State College J. M. Lupton & Son
Sauerkraut King	M	1938	Abraham Sluis, Ltd.



PETUNIA ENGLISH VIOLET—Honorable Mention—Grown by Joseph Harris Co., Rochester, N. Y.

## Cantaloupe

Honey Gold	M	1941	Edward Lowden
Honey Rock	G	1933	J. C. Robinson Seed Co.
Imperial	S	1935	J. C. Robinson Seed Co.
Improved Perfecto	S	1933	Garwood & Woodside
Queen of Colorado	M	1939	J. C. Robinson Seed Co.
Wayside Market	M	1939	D. V. Burrell Co.

## Carrot

Claudia	B	1937	L. Clause, Inc.
Imperator	S	1933	Associated Seed Growers, Inc.
Morse's Bunching	G	1934	Ferry-Morse Seed Co.
Supreme Half-Long	B	1937	Ferry-Morse Seed Co.



ASTER VICTORY GIANTS MIXED—Honorable Mention—Grown by Sluis en Groot of America, Inc., Washington, N. C.



Rootone Counter Display

**Now of all Times  
YOU CAN MAKE MORE PROFITS**  
To pay your taxes and buy your bonds

from



Here is a product used and demanded in increasing volume by farmers, market growers, nurserymen, specialists, horticulturists, home gardeners, and home owners. There are no priority restrictions on it. It is an important factor in producing the increased crops that we must have.

ROOTONE is now an accepted part of cultural technique for many plants by countless professional growers. It is a hormone powder which, when dusted on seeds, hastens germination and tends to produce more and stronger seedlings. When cuttings are dipped in ROOTONE powder before setting they are stimulated to quicker root formation. The experience of growers during the past four years has shown amazing increases on a wide range of crops from the use of ROOTONE. It is one item in a fast growing line. You will find equally active sales with



This powder when dissolved in water makes a solution that stimulates plants after they have been transplanted and, thus, reduces loss from shock and wilt. It is used and endorsed by plant growers in all sections of the country.



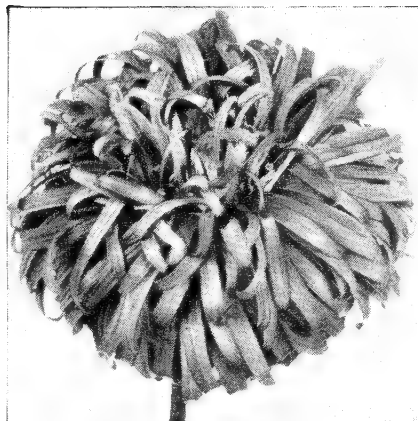
Is the product that you have heard so much about for its wide use on holding fruit on the trees until it attains full size and color. Also, the solution sprayed on ornamental shrubs such as holly, snow-berry, etc., induces a heavier and showier crop of berries.

Eight out of every ten people who come into your store are prospects for one or all of these items... and most of them have been previously convinced of their value through national advertising.

<b>ROOTONE</b>	1/4 oz. pkt. ....	25c
	2 oz. jar .....	\$1.00
	1 oz. can .....	\$5.00
<b>TRANSPLANTONE</b>	1/2 oz. pkt. ....	25c
	3 oz. can .....	\$1.00
	1 lb. can .....	\$4.00
<b>FRUITONE</b>	1/4 oz. pkt. ....	25c
	2 oz. can .....	\$1.00
	12 oz. can .....	\$5.00

Horticultural Div. Y-1

**AMERICAN CHEMICAL PAINT COMPANY**  
Ambler, Penna.



**ASTER EXTRA EARLY GIANT CREGO**  
**NAVY BLUE—Honorable Mention—Grown**  
by W. Atlee Burpee Co., Philadelphia.

**Corn, Sweet**

Allegheny, Hybrid	B	1941	Associated Seed Growers, Inc.
Aristogold Bantam No. 1	M	1939	Michael-Leonard Seed Co.
Ear Pack Bantam 12-Row	M	1939	Northrup, King & Co.
Golden Colonel	S	1936	Associated Seed Growers, Inc.
Hybrid Bantam Lincoln	S	1935	Sioux City Seed Co.
Hybrid Sweet, Top-flight Bantam	B	1942	{ Conn. Experiment Station Sleeping Giant Seed Farms
Ioana	M	1942	{ Michael-Leonard Seed Co. Iowa State College
Kingscrot Bantam	B	1934	Northrup, King & Co.
Spangcross, Hybrid Stowell's Evg.	M	1941	W. Ralph Singleton
Hybrid	B	1934	Associated Seed Growers, Inc.

**Cucumber**

Barteldes	S	1934	Barteldes Seed Co.
Clark's Special	S	1933	Associated Seed Growers, Inc.
Colorado	S	1935	J. C. Robinson Seed Co.
Marketer (Blue Ribbon)	B	1943	Associated Seed Growers, Inc.
Straight-8	G	1935	Ferry-Morse Seed Co.



**BUSH LIMA BEAN, GREEN SEEDED HENDERSON TYPE, CANGREEN—Honorable**  
**Mention—Grown by F. H. Woodruff & Sons,**  
Inc., Milford, Conn.

**Eggplant**

New Hamps. Hybrid	B	1939	N. H. Experiment Station
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**Endive**

Batavian Full Heart	S	1934	Vilmorin-Andrieux & Co.
Cos-type Batavian	M	1941	Ferry-Morse Seed Co.
Deep Heart Fringed	S	1940	Ferry-Morse Seed Co.
Prizewinner	B	1937	Sluis Brothers, Ltd.

**Kohlrabi**

Triumph of Prague	S	1937	Sluis Brothers, Ltd.
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**Lettuce**

Atlantic	B	1937	Sluis en Groot
Cosberg 600	M	1942	{ U.S. Dept. of Agriculture Northrup, King & Co.
Giant So. Curled, L.S.	G	1935	Abraham Sluis, Ltd.
L. S. White Boston	S	1935	Francis C. Stokes & Co.
New York PW55	M	1942	Pieters-Wheeler Seed Co.
Spearhead	M	1938	W. Atlee Burpee Co.

**Okra**

Clemson Spineless	S	1939	S. C. Experiment Station
La. Green Velvet	M	1941	Fruit & Truck Exp. Sta.
White Lightning	B	1939	H. G. Hastings Co.

Photographs by J. Horace McFarland Co., Harrisburg, Pa., and growers.

**Onion**

Yellow Valencia	S	1937	D. V. Burrell Co.
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**Parsley**

Evergreen	M	1940	Ferry-Morse Seed Co.
Paramount	S	1936	Ferry-Morse Seed Co.
Peerless	B	1934	Zwaan & Van der Molen

**Pea**

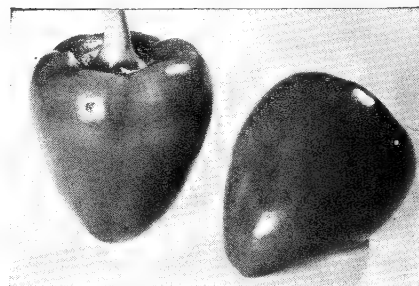
Canner King	B	1937	Associated Seed Growers Inc.
Confidence	S	1936	Zwaan & de Wiljes, Inc.
Teton	S	1937	Associated Seed Growers Inc.
Top Notch	M	1939	W. Atlee Burpee Co.

**Pepper**

Asgrow King	B	1935	Associated Seed Growers, Inc.
Early Pimiento	M	1943	W. Atlee Burpee Co.
Fordhook	B	1940	W. Atlee Burpee Co.
Rocky Ford	B	1938	D. V. Burrell Co.
Sweet Banana	B	1941	Cornell Seed Co.
Windsor A	B	1937	Conn. Experiment Station

**Radish**

Billiard Ball	M	1938	Sluis en Groot
Comet	S	1936	Zwaan & Van der Molen
Glowing Ball	G	1934	Zwaan & Van der Molen
Jewel	B	1936	Zwaan & de Wiljes, Inc.
White Pearl	B	1935	Sluis Brothers, Ltd.



**PEPPER EARLY PIMIENTO—Honorable**  
**Mention—Grown by W. Atlee Burpee Co., Philadelphia.**

**Spinach**

Bloomsdale No. 5	B	1937	Sluis Brothers, Ltd.
Darkie	B	1937	Zwaan & Van der Molen
Del Monte	M	1938	Zwaan & Van der Molen
Giant Nobel	S	1933	Zwaan & Van der Molen
Resisto	M	1937	Zwaan & de Wiljes, Inc.
Summer Savoy	B	1937	Zwaan & Van der Molen
Viking	S	1935	Sluis en Groot
Winter King	B	1937	Zwaan & Van der Molen

**Squash**

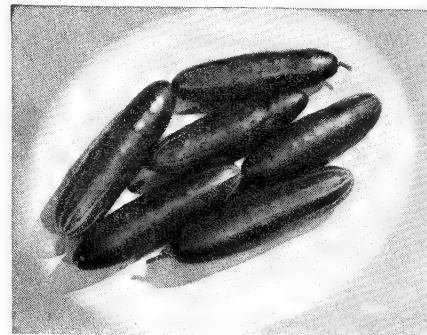
Conn. Straightneck	M	1939	Conn. Experiment Station
Ey. Prolific St'neck	S	1938	Ferry-Morse Seed Co.
Fordhook Zucchini	M	1942	W. Atlee Burpee Co.
Golden Table Queen	B	1939	J. C. Robinson Seed Co.
Yankee Hybrid	B	1941	Lawrence C. Curtis

**Tomato**

Burpee Globe	S	1936	W. Atlee Burpee Co.
Cardinal	M	1938	Associated Seed Growers, Inc.
Harkness	M	1938	McFayden Seed Co.
Jubilee	B	1943	W. Atlee Burpee Co.
Mingold	S	1940	Minn. Experiment Station
Pena State	B	1936	Walter S. Schell, Inc.
Pritchard	G	1933	U. S. Dept. of Agriculture
Scarlet Dawn	G	1935	Associated Seed Growers, Inc.
Victor	B	1941	Keith Barrons

**Watermelon**

Graystone	S	1933	H. G. Hastings Co.
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**CUCUMBER MARKETER, the Blue Ribbon**  
**vegetable winner—Bronze Medal—Grown by**  
**Associated Seed Growers, Inc., New Haven,**  
Conn.

# "Until the Lights Go On Again"

**O**UR COUNTRY is in a desperate struggle to preserve the American way of life and our Government has asked that more and more land and manpower be devoted to the production of essential food crops and the growing of vegetable seed to produce these crops. Our business is the production of flower seeds, but in support of the all-out war effort, we shall, for the coming season, allocate a large percentage of our land and devote much of our effort to the production of vegetable seed and essential food crops.

Sufficient land will be devoted to the production of flower seeds to provide our regular customers with some seed on all of the important items that they normally buy from us and to maintain our present stocks at the usual high state of perfection.

For the duration it may be necessary for us to delete from our commercial production some of the less important items of flower seeds. On these we shall, of course, make plantings of sufficient size to insure ample planting stock of high vitality and high quality to again produce the usual quantities after the war.



*Merit Flower Seed and Food Crops*

**WALLER-FRANKLIN SEED COMPANY**  
**WHOLESALE GROWERS**  
**GUADALUPE, CALIFORNIA**

### SALES OF 17 SEEDS ARE SMALLER BUT 6 ARE LARGER THAN IN 1941

WASHINGTON, D.C., August 1.—Retail sales of 17 field seeds during the past spring and early this summer were smaller than last year, while sales of 6 were larger. The total quantity of the 23 kinds sold by the 1,459 dealers reporting was 62,900,000 pounds, which is 3 percent more than was sold in 1941. If, however, sales of the larger seeds—corn, cowpeas, and soybeans—are excluded from the total, the sales of the remaining (smaller) seeds are 7 percent less than in 1941. Declines in sales ranged from 5 to 15 percent, with the sales this year compared with last year given in paren-

theses as follows: white (Dutch) clover (85), alfalfa (87), cowpeas (87), timothy (87), millet (88), sweetclover (89), crested wheatgrass (90), meadow fescue (90), orchard grass (90), Kentucky bluegrass (92), redtop (92), alsike clover (94), Korean lespedeza (94), ryegrass (94), sorgo (94), bromegrass (95), and Kobe lespedeza (95). On the other hand, sales of the following 6 seeds were 1 to 35 percent larger than in 1941: Ladino clover (135), soybeans (130), seed corn (124), red clover (103), Sudan grass (102), and rapeseed (101).

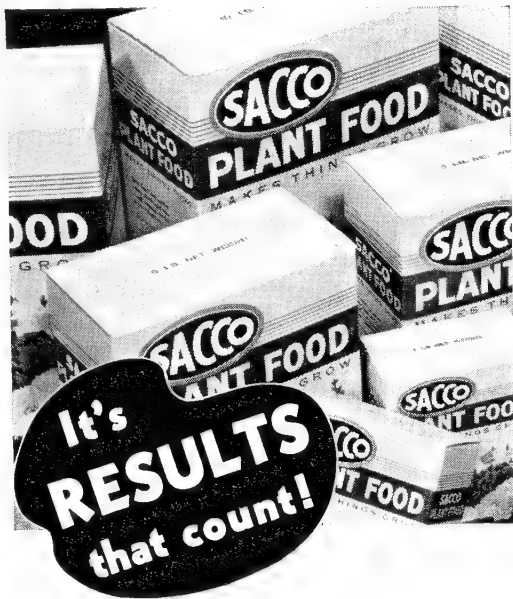
#### RETAIL SALES (TONNAGE) OF FIELD SEEDS IN SPRING, 1942, COMPARED WITH 1941

State or States	No. of reports	Alfalfa	Red clover	Alsike clover	Sweet clover	White (Dutch) clover	Ladino	Lespedeza		Cowpeas	Soybeans	Seed corn
								Kor.	Kobe			
		%	%	%	%	%	%	%	%	%	%	%
New England.....	33	95	110	95	115	50	130				140	125
New York.....	64	105	100	95	90	70	160			90	130	100
Pennsylvania.....	136	100	110	100	95	70	160	120		125	120	105
New Jersey.....	24	90	100	95	105	115	175			125	135	105
Maryland.....	24	90	135	100	95	100	165	110	90	115	170	170
Virginia.....	30	90	100	100	100	70		115	90	90	130	130
West Virginia.....	15	110	100	100				80			105	130
Southeastern.....	27	65	125	100	60	80		90	100	85	110	130
Tennessee.....	10	100	115	90	70	100		65	110	80	105	115
Kentucky.....	21	80	85	90	75	100		115		120	110	120
Ohio.....	91	100	105	90	95	105		135			145	120
Indiana.....	69	100	115	100	80	75		95		75	85	120
Illinois.....	92	95	110	105	80	80		95		80	150	115
Iowa.....	112	90	105	90	95	80		130		90	140	110
Missouri.....	57	80	75	70	100	90		65		90	115	165
Michigan.....	98	100	105	100	90	85		100		100	135	130
Wisconsin.....	100	90	95	90	80	100				110	50	125
Minnesota.....	80	65	70	80	95	50				65	145	115
North Dakota.....	39	65	80	70	95	50					185	130
South Dakota.....	26	65	70	80	95	65					185	110
Nebraska.....	47	80	105	85	80	60					105	110
Kansas.....	54	80	105	150	105	60		100		130	250	130
Oklahoma.....	27	75			95	110		125	100	110	140	175
Arkansas.....	8		100					60	90	105	150	150
Texas.....	47	75			105	95		130	110	75	130	160
New Mexico.....	6	75				100						120
Montana.....	20	90	140	100	120	75						110
Colorado.....	26	65	175	115	95	75		125			130	100
Idaho.....	12	100	100	85	95	85	100					115
Washington.....	18	85	85	90	85	60						90
Oregon.....	15	80	115	100	95	110	120					75
California.....	21	90			120	90	115			110		100
U. S. Average.....	1,459	87	103	94	89	85	135	94	95	87	130	124

State or States	Timothy	Red-top	Ky. Bluegrass	Orchard grass	Meadow Fescue	Brome-grass	Crested wheat-grass	Rye-grass	Sudan grass	Sorgo ("Cane")	Millet	Rape-seed
	%	%	%	%	%	%	%	%	%	%	%	%
New England.....	65	80	80	110				85	80		90	120
New York.....	85	75	95	150	100			90	115	95	100	130
Pennsylvania.....	100	85	100	120	110			110	110	175	70	85
New Jersey.....	95	120	110		90			95	95	160		100
Maryland.....	60	65	100					110	110	150		105
Virginia.....	85	90	100	115				110	100	105	145	85
West Virginia.....	100	120	110	90				110	140	105	105	
Southeastern.....		115	115	105				80	95	105	85	85
Tennessee.....	75	110	110	65				70	130	160	120	110
Kentucky.....	95	100	85	65				110	105	100	95	105
Ohio.....	95	100	85	125		130		130	130	110	100	120
Indiana.....	95	85	85	85	90	165		110	145	130	90	125
Illinois.....	90	90	110	115		110		110	120	135	110	110
Iowa.....	95	85	105		100	115	85	90	95	110	90	80
Missouri.....	60	90	80	105		100		90	105	110	90	75
Michigan.....	100	100	100	150	95	75		95	115	125	130	130
Wisconsin.....	90	95	80	75	100	105		120	115	95	100	105
Minnesota.....	80	80	75			55	50	75	95	105	75	75
North Dakota.....	60	85	100			70	60	110	115	70	75	130
South Dakota.....	115	120	110			80	90	100	110	100	100	70
Nebraska.....	90	100	80	100		95	115	85	105	85	90	95
Kansas.....	85	75	95	60	75	145	150	90	95	90	90	70
Oklahoma.....		100	110	100				95	105	140	110	115
Arkansas.....									110	100	100	
Texas.....								70	95	80	90	85
New Mexico.....									100	105	105	
Montana.....	100	85	100	100	105	115	160		100	60	85	
Colorado.....	90		80	90	120	110	75	100	60	70	80	
Idaho.....	95	100	100	100	90	120	100					
Washington.....	85	80	70	90	100	120	110	95	100			
Oregon.....	70	90	90	95	80	90	80	125	125			120
California.....			85	130				100	105			
U. S. Average.....	87	92	92	90	90	95	90	94	102	94	88	101





Available for  
**IMMEDIATE Delivery**  
 in ALL Sizes—1 to 100 lb. pkgs.



Victory gardens, lawns and flowers will demand more plant food than ever in 1943. Make your plans early while you can be sure there's no waiting because of transportation delays.

Sacco's high quality—Sacco's low price—and Sacco's reputation as the all purpose plant food that gets results—assure a profitable 1943 season for Sacco dealers. Beautiful, new 4-color consumer folders, newspaper electros, and other strong sales support furnished free to help you get volume.

Stock Sacco and display it in your catalog.



**THE SMITH AGRICULTURAL CHEMICAL CO.**

630 N. Champion Ave., Columbus, Ohio.



115th  
 Year

WRITE FOR PRICES  
 BEFORE PLACING YOUR ORDER  
 VEGETABLE SEEDS  
 Idaho PEAS and BEANS

RELIABLE  
 SINCE 1828

**ROBERT BUIST COMPANY**

*"Seedsman for over a Century"*

PHILADELPHIA, PA.



ATLANTA, GA.

# VERIFIED-ORIGIN ALFALFA AND RED CLOVER SEED DEALERS FOR 1943

*U. S. Seed Verification Service, Agricultural Marketing Administration,  
U.S.D.A.*

	<i>Alfalfa</i>	<i>Red Clover</i>		<i>Alfalfa</i>	<i>Red Clover</i>
<b>IDAHO</b>			<b>MONTANA</b>		
Mark Means Company, Lewistown.....	x		Michael-Leonard Seed Co., Billings.....	x	
			*The Searle Seed Co., Lewistown.....	x	
<b>ILLINOIS</b>			<b>NEBRASKA</b>		
The Albert Dickinson Company, Chicago....	x	x	N. Bonahoom Seed Co., Hastings.....	x	
Funk Bros. Seed Co., Bloomington.....	x	x	The Bowman Seed Company, Superior.....	x	
Kelly Seed Company, Peoria.....	x	x	Carberry Seed Company, Columbus.....	x	
Midwest Seed Co., Mt. Vernon.....	x	x	Carberry Seed Company, Norfolk.....	x	
			Griswold Seed & Nursery Co., Lincoln.....	x	
<b>INDIANA</b>			Kollman-Warner Co., Inc., Norfolk.....	x	x
Allied Seed Company, Inc., Fort Wayne....	x	x	Lauber Seed Company, York.....	x	
Crabbs Reynolds Taylor Co., Crawfordsville.	x	x	Nebraska Seed Co., Omaha.....	x	x
Crawfordsville Seed Co., Inc., Crawfordsville	x		Yager Seed Co., Fremont.....	x	
Davis Seed Company, Lebanon.....	x	x			
Foster-Kendall Co., Carmel.....	x	x	<b>NEW YORK</b>		
Indiana Seed Company, Indianapolis.....	x	x	Arthur R. Cone, Buffalo.....	x	x
			Craver-Dickinson Seed Co., Inc., Buffalo....	x	x
<b>IOWA</b>			The Stanford Seed Co., Inc., Buffalo.....	x	x
Davenport Seed Company, Inc., Davenport..	x		Whitney Seed Co., Inc., Buffalo.....	x	x
Dubuque Seed Co., Dubuque.....	x	x			
Hamilton Seed & Coal Co., Cedar Rapids....	x	x	<b>NORTH DAKOTA</b>		
Lynnville Seed Co., Lynnville.....	x		Goldberg Seed & Feed Company, Fargo.....	x	x
Michael-Leonard Seed Co., Sioux City.....	x		Interstate Seed & Grain Co., Fargo.....	x	
Northwestern Seed Co., Inc., Keokuk.....	x	x	Newday Seeds, Inc., Fargo.....	x	x
Ouren Seed Co., Council Bluffs.....	x				
Standard Seed Co., Des Moines.....	x		<b>OHIO</b>		
Wertz and Company, Sioux City.....	x		The Ackerman Co., Lima, Ohio.....	x	x
			Henry Hirsch & Sons, Inc., Toledo.....	x	x
<b>KANSAS</b>			The J. Chas. McCullough Seed Co., Cincinnati	x	x
The L. C. Adam Merc. Co., Cedar Vale.....	x		O. M. Scott & Sons Company, Marysville....	x	x
Assaria Hardware Co., Assaria.....	x				
The Bowman Seed Co., Concordia.....	x		<b>OKLAHOMA</b>		
Frazier's Seed Store, Coffeyville.....	x		E. O. Billingslea Grain Co., Frederick.....	x	
Hutchinson Feed & Seed Company, Hutchin- son .....	x		Hardeman-King Company, Oklahoma City..	x	
T. A. Kelley Company, Salina.....	x		W. B. Johnston Grain Company, Enid.....	x	
Salina Seed Co., Salina.....	x		Keller Seed Store, Shawnee.....	x	
Sedgwick Alfalfa Mills, Sedgwick.....	x		Oklahoma Improved Seed Co., Inc., Chickasha	x	
<b>MARYLAND</b>			<b>PENNSYLVANIA</b>		
The Belt Seed Co., Inc., Baltimore.....	x	x	A. H. Hoffman, Inc., Landisville.....	x	x
Wm. G. Scarlett & Co., Baltimore.....	x	x	E. J. Houck & Son, Bangor.....	x	x
			The Philadelphia Seed Co., Inc., Philadelphia	x	
<b>MICHIGAN</b>			Seaboard Seed Company, Philadelphia.....	x	x
H. C. King & Sons, Inc., Battle Creek.....	x	x			
McLaughlin, Ward & Co., Jackson.....	x	x	<b>SOUTH DAKOTA</b>		
Parks Seed Company, Jackson.....	x	x	Dakota Improved Seed Co., Mitchell.....	x	
			General Sales, Inc., Sioux Falls.....	x	
<b>MINNESOTA</b>			McMahon Company, Rapid City.....	x	
Cargill, Incorporated, Seed Division, Minne- apolis .....	x	x	Geo. P. Sexauer & Son, Brookings.....	x	
Farmer Seed & Nursery Co., Faribault.....	x				
Ira P. Hinman, Minneapolis.....	x	x	<b>TENNESSEE</b>		
Land O'Lakes Creameries, Inc., Thief River Falls .....	x	x	Green Brothers, Nashville.....	x	
Northern Farmers Cooperative Exchange, Williams .....	x	x	Russell-Heckle Seed Company, Memphis....	x	
Northern Field Seed Company, Winona.....	x	x			
Northrup, King & Company, Minneapolis....	x	x	<b>TEXAS</b>		
Peterson-Biddick Co., Wadena.....	x		Martin-Lane Co., Vernon.....	x	
Seldon-Watts Seed Co., St. Paul.....	x	x			
Twin City Seed Company, Minneapolis.....	x	x	<b>UTAH</b>		
			Kelly-Western Company, Salt Lake City....	x	x
<b>MISSOURI</b>			Occidental Seed Co., Salt Lake City.....	x	x
Corneli Seed Company, St. Louis.....	x	x			
Ed. F. Mangelsdorf & Bro., Inc., St. Louis....	x	x	<b>WISCONSIN</b>		
Peppard Seed Co., Kansas City.....	x		Courteen Seed Co., Milwaukee.....	x	x
Rudy-Patrick Seed Co., Kansas City.....	x		Kellogg Seed Company, Milwaukee.....	x	x
			LaCrosse Seed Company, LaCrosse.....	x	x
			L. L. Olds Seed Company, Madison.....	x	x
			Standard Seed & Feed Company, Madison...	x	
			L. Teweles Seed Co., Milwaukee.....	x	x

\* Indicates dealer not in the service in 1941-42.

# HENRY HIRSCH & SONS

INCORPORATED

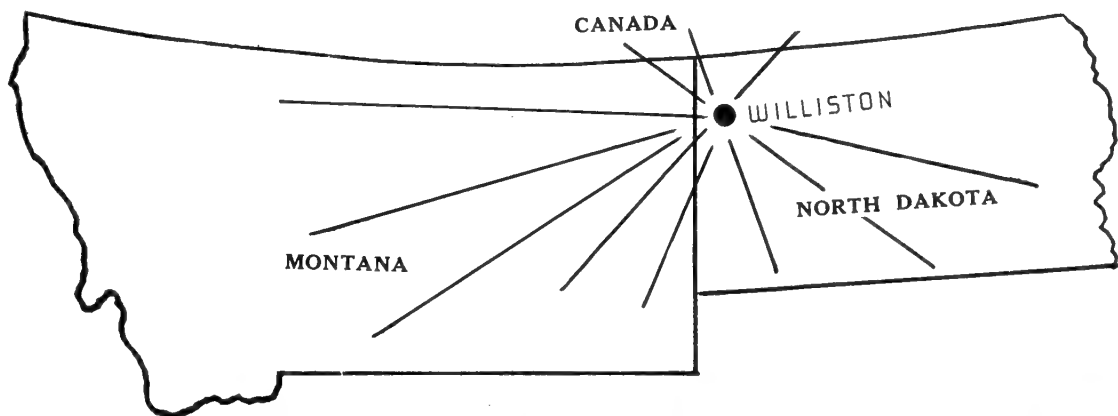
*Wholesale*

# FIELD SEEDS

*Buyers—Sellers*

**CLOVER, ALFALFA, ALSIKE & TIMOTHY**

**HENRY HIRSCH & SONS, INC. TOLEDO, O.**



## HARDY NORTHERN GROWN

BROME GRASS

ALFALFA

SWEET CLOVER

CRESTED WHEAT GRASS

**Farmers Union Grain and Supply Co.**

*JOBBERS*

*IMPORTERS*

*PROCESSORS*

*SHIPPERS*

WILLISTON

NORTH DAKOTA

# Noxious Weeds of United States

The weeds considered noxious by the states and the District of Columbia are given in the following list. There is considerable variation in the common names used for the same weeds in different parts of the country and in all cases the scientific names given do not clear up this confusion. Listed under the most commonly used names will be found the states legislating against that particular weed or species (spp.) of weeds. No effort has been made to show how the weeds are classified or legislated against by the states, this may be obtained from the State Seed Laws (see page 106 and following).

Compiled by

L. J. LA PINE

Commercial Seed Analyst

## A

- Alkali mallow (*Sida hederacea*). See Mallow, alkali.  
Alyssum, Hoary (*Berteroa incana*). See Hoary alyssum.  
Australian burnweed (*Erechtites prenanthoides*). See Burnweed, Australian.  
Austrian fieldcress (*Radicula austriaca*, *Rorippa austriaca*). See Fieldcress, Austrian.  
Austrian peaweed (*Swainsona salsula*). Wyo.

## B

- Ball cress (*Hymenophyssa pubescens*). See Hoary cress.  
Ball mustard (*Neslia paniculata*). See Mustard, ball.  
Barley, wild (*Hordeum jubatum*, *H. murinum*) Squirrel-tail grass. Ariz., Colo.  
Bassia, five-hook (*Bassia hyssopifolia*). Cal., Nev.  
Bearded darnell (*Lolium temulentum*). See Darnell, bearded.  
Bermuda grass (*Cynodon dactylon*, *Capriola dactylon*) Wire grass. Ala., Fla., Ga., La., Md., Miss., Okla., Tex., U., Va., D. C.  
Big mouse-ear (*Cerastium vulgatum*). See Chickweed, big mouse-ear.  
Bindweed, field (*Convolvulus arvensis*)  
Creeping Jennie, Morning-glory, Tievine, Wild morning-glory. Ala., Ariz., Ark., Cal., Colo., Ga. (spp), Ida., Ill., Ind., Ia., Kan., La., Me., Md., Mich., Minn., Miss., Mo., Mont., Neb., Nev., N. C., N. Dak., Okla., Ore., Pa. (spp), S. Dak., Tex. (spp), U., Wash., Wis., Wyo., D. C.  
Bindweed, hedge (*Convolvulus sepium*)  
Wild morning-glory. Ark., Ga. (spp), Ida., Okla., Pa. (spp), S. Dak., Tex. (spp), Wash.  
Bitter dock (*Rumex obtusifolius*). See Dock, bitter.  
Bitterweed (*Helenium tenuifolium*). Ga.  
Bitter wintercress (*Campe barbarea*). See Wintercress, bitter.  
Black-eye Susan (*Rudbeckia hirta*) Ox-eye daisy. La.  
Black mustard (*Brassica nigra*). See Mustard, black.  
Black nightshade (*Solanum nigrum*). See Nightshade, black.  
Black seeded plantain (*Plantago rugelii*). See Plantain, black seeded.  
Bladder campion (*Silene latifolia*). See Campion, bladder.  
Blue bur (*Lappula echinata*). See Stickseed.  
Blue flowering lettuce (*Lactuca pul-*

- chella*). See Lettuce, blue flowering.  
Blue sunflower (*Helianthus ciliaris*). See Blueweed. Texas.  
Blueweed (*Echium vulgare*). Me., Okla.  
Blueweed, Texas (*Helianthus ciliaris*)  
Blue sunflower. Ariz., Cal., Tex.  
Bottle bush plantain (*Plantago aristata*). See Plantain, bracted.  
Bracted plantain (*Plantago aristata*). See Plantain, bracted.  
Buckhorn plantain (*Plantago lanceolata*) English plantain. Ala., Ariz., Ark., Colo. (spp), Conn. (spp), Ga. (spp), Ida., Ill., Ind., Ia., Kan., Ky., Me., Mass., Minn., Miss. (spp), Mo. (spp), O. (spp), Okla., Ore., R. I., Tex., U., Wash. (spp), W. Va., Wis.  
Buckwheat, wild (*Polygonum convolvulus*). Okla.  
Buffalo bur (*Solanum rostratum*). Nev., Okla.  
Bull nettle (*Solanum carolinense*). See Horse nettle.  
Bullthistle (*Cirsium lanceolatum*). U.  
Burdock, great (*Arctium lappa*). U.  
Burdock, smaller (*Arctium minus*). U.  
Bur grass (*Cenchrus pauciflorus*). See Sand bur.  
Burnweed, Australian (*Erechtites prenanthoides*) Fireweed. Ore.  
Butterprint (*Abutilon theophrasti*). Ia.

## C

- Camelthorn (*Alhagi camelorum*). Ariz., Cal., Nev., Wash., Wyo.  
Campion, bladder (*Silene latifolia*). Me.  
Campion, white (*Lychnis alba*). Me.  
Canada thistle (*Cirsium arvense*, *Carduus arvensis*). Ala., Ariz., Cal., Colo., Conn., Del., Fla., Ga., Ida., Ill., Ind., Ia., Kan., Ky., Me., Md., Mass., Mich., Minn., Mo., Mont., Neb., Nev., N. J., N. Y., N. Dak., O., Okla., Ore., Pa., R. I., S. C., S. Dak., Tenn., U., Vt., Va., Wash., W. Va., Wis., Wyo., D. C.  
Carrot, wild (*Daucus carota*). Ill., Ind., Ia., Kan., Me., Mich., Mo., O., R. I., S. Dak., W. Va.  
Catchfly, night-flowering (*Silene noctiflora*). Me.  
Cats-ear, spotted (*Hypochaeris radicata*). Ore.  
Charlock (*Brassica arvensis*). See Mustard, wild.  
Cheat } (*Bromus secalinus*, *B. com-*  
Chess } (*tatus*). Ala., Ark., Colo., Ga. (spp), Kan. (spp), N. C., Okla., S. C., Tex.  
Chickweed, big mouse-ear (*Cerastium vulgatum*). Ore.  
Chicory, wild (*Cirrhodium intybus*). Me., O.  
Clustered dock (*Rumex conglomeratus*). See Dock, green.

- Cocklebur (*Xanthium canadense*). La.  
Cocklebur (*Xanthium commune*). Ia.  
Cocklebur (*Xanthium orientale*). U.  
Coco grass (*Cyperus rotundus*). See Nutgrass.  
Coffee weed (*Cassia tora*). Ga.  
Common plantain (*Plantago major*). See Plantain, common.  
Common ragweed (*Ambrosia artemisiifolia*). See Ragweed, common.  
Common sowthistle (*Sonchus oleraceus*). See Sowthistle, common.  
Corncockle (*Agrostemma githago*). Ala., Ark., Colo., Fla., Ga., Ida., Ind., Kan., Ky., Me., N. C., O., Okla., Ore., R. I., S. C., Tenn., Vt., Wash., W. Va.  
Cowcockle (*Saponaria vaccaria*, *Vaccaria pyramidata*) Cow-herb. Colo., Me., Ore.  
Cow-herb (*Saponaria vaccaria*). See Cowcockle.  
Crabgrass, smooth (*Digitaria ischaemum*). Cal., Colo., Nev., N. Y. (spp).  
Crabgrass (*Digitaria sanguinalis*). Cal., Colo., La., Nev., N. Y. (spp), R. I. (spp).  
Creeping Jennie (*Convolvulus arvensis*). See Bindweed, field.  
Cress, hoary (*Lepidium draba*, *L. repens*). See Hoary cress.  
Curly dock (*Rumex crispus*). See Dock, curly.

## D

- Daisy fleabane (*Erigeron ramosus*). See Fleabane, daisy.  
Daisy, oxeye (*Chrysanthemum leucanthemum*). See Oxeye daisy.  
Dandelion (*Leontodon spp*). Ore.  
Dandelion, false (*Pyrrophappus carolinianus*). La.  
Darnel (*Lolium temulentum*). Ala., Ark., Ga., Me., Tex.  
Deathweed (*Iva axillaris*). See Povertyweed.  
Devil's paintbrush (*Hieracium aurantiacum*). See Hawkweed, orange.  
Dock, bitter (*Rumex obtusifolius*).  
Large dock. Ala., Ark., Kan. (spp), La., Me., Miss. (spp), Mo. (spp), N. Y. (spp), O. (spp), R. I. (spp), Wash. (spp).  
Dock, curly (*Rumex crispus*) Sour dock, Yellow dock. Ala., Ark., Conn., Ill., Ind., Ia., Kan. (spp), Me., Miss. (spp), Mo. (spp), N. Y. (spp), O. (spp), Okla., R. I. (spp), Tex., Wash. (spp).  
Dock, green (*Rumex conglomeratus*)  
Clustered dock. Ark., Kan. (spp), Me., Miss. (spp), Mo. (spp), N. Y. (spp), O. (spp), R. I. (spp), Wash. (spp).



*Especially* **NOW**  
**BETTER CATALOGS**  
*will pay out* **BETTER**

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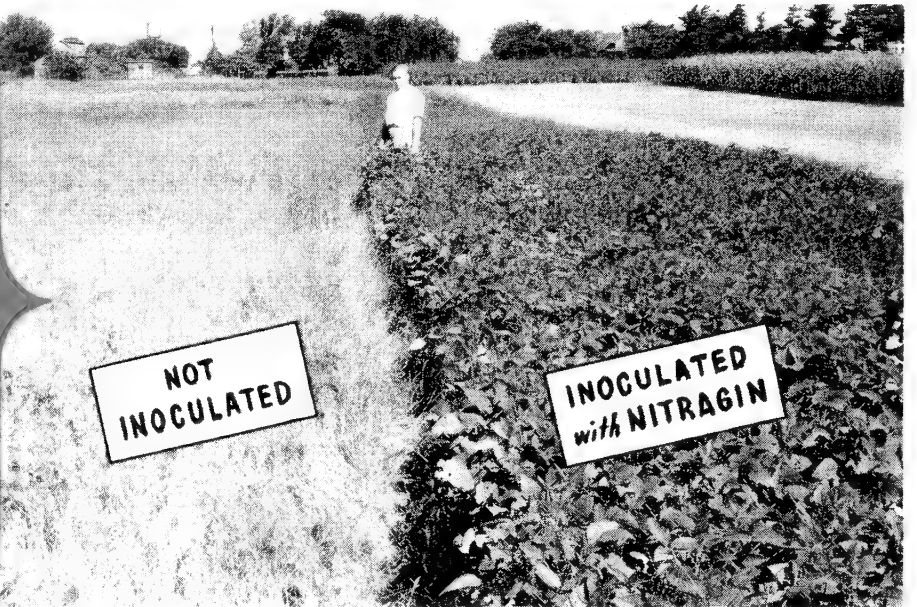
*July 22*

This photo of NITRAGIN test plots at a University Experiment Station, taken July 22, shows heavier growth and darker color due to good inoculation. Weeds are gaining rapidly on the thin, less vigorous stand of uninoculated soybeans.



*35 days later*

By September 1, weeds had completely smothered the nitrogen-hungry crop that was *not* inoculated. NITRAGIN that cost 12c an acre made this difference. On fertile land, uninoculated legumes may look about as good as an inoculated crop—but remember, legumes without inoculating bacteria must get their nitrogen by robbing the soil; inoculated legumes get theirs from the air.



**One Way to Help Farmers Produce for Victory**

**Sell more NITRAGIN**

Four-fifths of the air is nitrogen . . . vital element needed now to increase crop production. The one practical way to make this nitrogen available for plant growth is through legumes inoculated with effective strains of nitrogen-fixing bacteria. An acre of well-inoculated sweet clover, it is estimated, can gather as much nitrogen as is contained in 1,000 or more pounds of common mixed fertilizer.

This important ability of clover, alfalfa, peas, soybeans and other legumes depends on the presence of the *right* legume bacteria. That's why it is important that every planting of legumes be inoculated with NITRAGIN. NITRAGIN contains only selected, tested strains of bacteria produced in the largest, most complete laboratory of its kind in the world.



**Your Protection!**

The name NITRAGIN is a registered trade name. It identifies the oldest, most widely used brand of inoculation. When customers ask for NITRAGIN, be sure to supply them with NITRAGIN—do not confuse it with other inoculants.

THE NITRAGIN CO., INC.,

3830 N. Booth St.,

MILWAUKEE, WIS.

- Dock, smooth (*Rumex altissimus*). Ia., Kan. (spp), Miss. (spp), Mo. (spp), N. Y. (spp), O. (spp), R. I. (spp), Wash. (spp).
- Dock, sour (*Rumex acetosa*). Ark., Kan. (spp), Miss. (spp), Mo. (spp), N. Y. (spp), O. (spp), R. I. (spp), Wash. (spp).
- Dock, yellow (*Rumex crispus*). See Dock, curly.
- Dodder (*Cuscuta spp*). Ala., Ariz., Ark., Cal., Colo., Conn., Del., Fla., Ga., Ida., Ill., Ind., Ia., Kan., Ky., La., Me., Md., Mass., Mich., Minn., Miss., Mo., Mont., Neb., Nev., N. J., N. M., N. Y., N. C., N. Dak. (except coryli), O., Okla., Ore., Pa., R. I., S. C., S. Dak. (except coryli), Tenn., Tex., U., Vt., Va., Wash., W. Va., Wis.
- Dogbane (*Apocynum cannabinum*). Cal.
- Dogbane, spreading (*Apocynum androsaemifolium*). Wyo.
- E
- English plantain (*Plantago lanceolata*). See Buckhorn.
- English charlock (*Brassica arvensis*). See Mustard, wild.
- Ergot (*Claviceps spp*). Vt.
- F
- False flax (*Camelina sativa*). Me.
- False flax, small-seeded (*Camelina microcarpa*). Me.
- Fanweed (*Thlaspi arvense*). See Pennycress, field.
- Fieldcress, Austrian (*Rorippa austriaca*, *Radicula austriaca*). Cal., Minn., Nev., Ore., Wash., Wyo.
- Field madder (*Sherardia arvensis*). Ore.
- Field pennycress (*Thlaspi arvense*). See Pennycress, field.
- Field peppergrass (*Lepidium campestris*). See Peppergrass, field.
- Fireweed (*Erechtites prenanthoides*). See Burnweed, Australian.
- Five-hook Bassia (*Bassia hyssopifolia*). See Bassia, five-hook.
- Fleabane, daisy (*Erigeron ramosus*, *E. strigosus*) White top. Me.
- Flowering spurge (*Euphorbia corollata*). See Spurge, flowering.
- Foxtail, water (*Alopecurus geniculatus*). La.
- Franseria povertyweed (*Franseria tenuifolia*). See Povertyweed, franseria.
- Franseria, whiteleaved (*Franseria discolor*). See Povertyweed, silverleaf.
- Frenchweed (*Thlaspi arvense*). See Pennycress, field.
- G
- Galinsoga (*Ginsoga parviflora*). W. Va.
- Garlic, wild (*Allium vineale*). See Onion, wild.
- Gaura, scarlet (*Gaura coccinea*). Cal.
- Gaura, wavy-leaved (*Gaura sinuata*). Cal.
- Globe podded ball cress (*Hymenophyssa pubescens*). See Hoary cress.
- Goat weed (*Hypericum perforatum*). See St. Johnswort.
- Great burdock (*Arctium lappa*). See Burdock, great.
- Great ragweed (*Ambrosia trifida*). See Ragweed, great.
- Groundcherry, perennial (*Physalis subglabrata*). Ida., Wash.
- Groundcherry, perennial (*Physalis longifolia*). U.
- Groundcherry (*Physalis Heterophylla*) Nightshade. U.
- H
- Hare's-ear-mustard (*Conringia orientalis*). Me.
- Hawkweed, orange (*Hieracium aurantiacum*) Devil's paintbrush. Conn. (spp), Del., Me., Miss., Pa., Va. (spp), W. Va. (spp).
- Hedge bindweed (*Convolvulus sepium*). See Bindweed, hedge.
- Hemlock, poison (*Conium maculatum*). See Poison hemlock.
- Hemlock, water (*Cicuta maculata*). U.
- Hoary alyssum (*Berteroa incana*). Mich.
- Hoary cress (*Lepidium draba*, *L. repens*) Perennial peppergrass, White top. Ariz., Cal., Ida., Ill., Ia., Kan., Minn., Mont., Neb., Nev., N. Dak., Ore., S. Dak., U., Wash., Wyo.
- Hoary cress (*Hymenophyssa pubescens*) Ball cress, Globe podded ball cress, White top. Ariz., Cal., Ida., Mont., Nev., N. Dak., Ore., Wash.
- Hop clover (*Trifolium procumbens*). Colo.
- Horsenettle (*Solanum carolinense*) Bull nettle. Ariz. Cal., Ill., Ind., Ia., Kan., Minn., Nev., N. J., Okla., Pa., S. D., Wyo.
- Horsenettle, white (*Solanum elaeagnifolium*). Ariz., Cal., Nev.
- I
- Iberian star-thistle (*Centaurea iberica*). See Star-thistle, Iberian.
- Indian mustard (*Brassica juncea*). See Mustard, Indian.
- Ivy leaved morning-glory (*Ipomoea hederacea*). See Morning-glory, ivy leaved.
- Italian thistle (*Carduus pycnocephalus*). See Thistle, Italian.
- J
- Johnson grass (*Sorghum halepense*). Ala., Ariz., Ark., Cal., Fla., Ga., Ill., Ind., Kan., Ky., La., Md., Miss., Mo., N. C., Okla., Ore., S. C., Tenn., Tex., Va., W. Va.
- K
- King devil weed (*Hieracium pratense*). Conn. (spp), Me., Miss. (spp), Pa. (spp), Va. (spp), W. Va. (spp).
- Klamath-weed (*Hypericum perforatum*). See St. Johnswort.
- Knapweed, Russian (*Centurea picris*, *C. repens*). Ariz., Cal., Ida., Ill., Ia., Mont., Neb., Nev., N. J., N. Dak., Ore., S. Dak., U., Wash., Wyo.
- L
- Lanceleaved sage (*Salvia lanceolata*). See Sage, lanceleaved.
- Large dock (*Rumex obtusifolius*). See Dock, bitter.
- Larkspur (*Delphinium menziesii*, *D. cuculatum*). U.
- Leafy spurge (*Euphorbia esula*). See Spurge, leafy.
- Lettuce, blue flowering (*Lactuca pulchella*). Mont., Ore., U., Wash.
- M
- Madder, field (*Sherardia arvensis*). See Field madder.
- Mallow, alkali (*Sida hederacea*). Ariz., Cal., Ore., Wash.
- Malta star thistle (*Centaurea melitensis*). See Star thistle, Malta.
- Milkweed, poison (*Asclepias galioides*). See Poison milkweed.
- Milkweed, whorled (*Asclepias galioides*). See Poison Milkweed.
- Morning-glory, Wild (*Convolvulus arvensis*). See Bindweed, field.
- Morning-glory (*Ipomoea purpurea*). Ark., Kan. (spp).
- Morning-glory, ivy leaved (*Ipomoea hederacea*). Kan. (spp), S. Dak.
- Mustard, ball (*Neslia paniculata*). Me.
- Mustard, black (*Brassica nigra*). Ariz., Colo. (spp), Conn. (spp), Ga. (spp), Ida. (spp), Ill. (spp), Ia. (spp), Kan. (spp), Me., Mass. (spp), Mich. (spp), N. M., N. Y. (spp), R. I. (spp), S. C., S. Dak., Vt. (spp), Wash. (spp).
- Mustard, Indian (*Brassica juncea*). Ariz., Colo. (spp), Conn. (spp), Ga. (spp), Ida. (spp), Ill. (spp), Ia. (spp), Kan. (spp), Me., Mass. (spp), Mich. (spp), N. M., N. Y. (spp), R. I. (spp), S. C., S. Dak., Vt. (spp), Wash. (spp), W. Va., Wis.
- Mustard, tumble (*Sisymbrium altissimum*). Ariz., Me.
- Mustard, wild (*Brassica arvensis*, *B. kabber*). Charlock, English charlock. Ariz., Colo. (spp), Conn., Del., Ga. (spp), Ida. (spp), Ill. (spp), Ind., Ia. (spp), Kan. (spp), La., Me., Mass. (spp), Mich. (spp), Mont., Neb., Nev., N. M., N. Y. (spp), Okla., R. I., S. C., S. Dak., Tex., Vt. (spp), Wash. (spp), W. Va., Wis.
- N
- Night-flowering catchfly (*Silene noctiflora*). See Catchfly, night-flowering.
- Nightshade (*Physalis heterophylla*). See Groundcherry.
- Nightshade, black (*Solanum nigrum*). Cal.
- Nightshade, perennial black (*Solanum douglasii*). Cal.
- Nightshade, purple (*Solanum elaeagnifolium*). Tex.
- Nutgrass (*Cyperus esculentus*). Ariz., Cal. (spp), Fla. (spp), Miss.
- Nutgrass (*Cyperus rotundus*), Coco grass. Ala., Ariz., Ark., Cal. (spp), Fla. (spp), Ga., La., Miss., Okla., S. C., Wyo.
- O
- Oats, wild (*Avena fatua*). Ariz., Colo., Del., Ida., Kan., Me., Mont., Neb., N. M., Okla., S. C., S. Dak., Tex.
- Onion, wild (*Allium vineale*, *A. canadense*). Wild garlic. Ala., Ark. (spp), Fla., Ga., Ill. (spp), Ind., Kan. (spp), Ky., Md., Miss., Mo., N. C., O., Okla., Ore., Pa. (spp), S. C. (spp), Tenn., Va., W. Va., D. C.
- Orange hawkweed (*Hieracium aurantiacum*). See Hawkweed, orange.
- Oxeye daisy (*Chrysanthemum leucanthemum*). Ill., Ind., Kan., Ky., Me., Minn., Mo., O., Ore., Tenn., W. Va., Wis., Wyo.
- Oxeye daisy (*Rudbeckia hirta*). See Black-eye Susan.
- P
- Peaweed, Austrian (*Swainsona salsula*). See Austrian peaweed.
- Pennycress, field (*Thlaspi arvense*). Frenchweed, Fanweed, Ida., Kan., Me., Mont., Nev., N. M., S. Dak., Wash.
- Pepper cress, perennial (*Lepidium latifolium*). Cal., Wash.
- Peppergrass, field (*Lepidium campestris*). Ind.
- Peppergrass, perennial (*Lepidium draba*, *L. repens*). See Hoarv cress . . .
- Peppergrass, perennial (*Lepidium latifolium*). See Peppergrass, perennial.
- Perennial black nightshade (*Solanum douglasii*). See Nightshade, perennial black.
- Perennial groundcherry (*Physalis longifolia*). See Groundcherry, perennial.
- Perennial ragweed (*Ambrosia Psilostachya*). See Ragweed, Western.
- Perennial sowthistle (*Sonchus arvensis*). See Sowthistle, perennial.
- Pigweed, rough (*Amaranthus retroflexus*). See Rough pigweed.
- Plantain, black seeded (*Plantago rugelii*). Colo. (spp), Conn. (spp), Ga. (spp), Ind., Miss. (spp), Mo. (spp), O. (spp), Wash. (spp).
- Plantain, bottlebush (*Plantago aristata*). See Plantain, bracted.

Plantain, bracted (*Plantago aristata*).  
 Bottle bush plantain. Ala. (spp),  
 Ark., Colo. (spp), Conn. (spp), Ga.  
 (spp), Ind., Miss. (spp), Mo. (spp),  
 O. (spp), Okla., Wash. (spp).  
 Plantain, buckhorn (*Plantago lanceolata*).  
 See Buckhorn, plantain.  
 Plantain, common (*Plantago major*).  
 Rippleseed Plantain. Colo. (spp),  
 Conn. (spp), Ga. (spp), Ind., Miss.  
 (spp), Mo. (spp), O. (spp), Ore.,  
 Wash. (spp).  
 Poison hemlock (*Conium maculatum*).  
 Vt.  
 Poison milkweed (*Asclepias galioides*).  
 Whorled milkweed. Ariz., U.  
 Povertyweed (*Iva axillaris*). Death-  
 weed, Sumpweed. Ariz., Cal., Colo.  
 (spp), Ore. U., Wash.  
 Povertyweed, Franseria. (*Franseria*  
*tenuifolia*). Ariz., Cal., Colo.  
 Povertyweed, silverleaf (*Franseria dis-*  
*color*). Whiteleaved Franseria. Ariz.,  
 Colo., Wyo.  
 Prickly sowthistle (*Sonchus asper*). See  
 Sowthistle, prickly.  
 Puncture-vine (*Tribulus terrestris*).  
 Ariz., Cal., Ida., Neb., Nev., Ore., U.  
 Purple nightshade (*Solanum elaeagni-*  
*folium*). See Nightshade, purple.  
 Purple star thistle (*Centaurea calci-*  
*trapa*). See Star thistle, purple.

Q

Quackgrass (*Agropyron repens*). Witch-  
 grass. Ala., Cal., Conn., Del., Fla., Ga.,  
 Ida., Ill., Ind., Ia., Kan., Ky., Me., Md.,  
 Mass., Mich., Minn., Mo., Mont., Neb.,  
 N. J., N. M., N. Y., N. Dak., O., Ore.,  
 Pa., R. I., S. Dak., Tenn., U., Vt., Va.,  
 Wash., W. Va., Wis., Wyo., D. C.

R

Radish, wild (*Raphanus raphanistrum*).  
 Me.  
 Ragweed, common (*Ambrosia artemisiifolia*).  
 Me.  
 Ragweed, great (*Ambrosia trifida*). Me.  
 Ragweed, perennial (*Ambrosia psilos-*  
*tachya*). See Ragweed, western.  
 Ragweed, western (*Ambrosia psilos-*  
*tachya*). Perennial ragweed. Ariz.,  
 Cal., Me., U., Wyo.  
 Ragweed, white (*Franseria discolor*).  
 See Povertyweed, silverleaf.  
 Red rice (*Oryza sativa*). Ark., Cal.  
 Red sorrel (*Rumex acetosella*). See  
 Sheep sorrel.  
 Ribgrass (*Plantago lanceolata*). See  
 Buckhorn.  
 Rippleseed plantain (*Plantago major*).  
 See Plantain, common.  
 Rough pigweed (*Amaranthus retroflex-*  
*us*). Ga.  
 Rutabaga (*Brassica campestris*). Me.  
 Russian Knapweed (*Centurea picris*, *C.*  
*repens*). See Knapweed, Russian.  
 Russian thistle (*Salsola kali*). Ariz.,  
 Cal., Mo., Okla., Tex.

S

Sage, lanceleaved (*Salvia lanceolata*).  
 Wyo.  
 Sandbur (*Cenchrus pauciflorus*). Bur  
 grass. (Ariz., Cal., Ga., Nev., S. C.  
 Scabious, sweet (*Erigeron annuus*). See  
 Sweet scabious.  
 Scarlet Gaura (*Gaura coccinea*). See  
 Gaura, scarlet.  
 Sheep sorrel (*Rumex acetosella*). Red  
 sorrel. Ala., Ark., Ind., Ia., Kan., Ky.,  
 (spp), Miss. (spp), Mo., O., Okla., R. I.  
 (spp), Wash. (spp).  
 Silverleaf povertyweed (*Franseria dis-*  
*color*). See Povertyweed, silverleaf.  
 Smaller burdock (*Arctium minus*). See  
 Burdock, smaller.  
 Small-seeded false flax (*Camelina mi-*  
*crocarpa*). See False flax, small-seed-  
 ed.  
 Sorrel, red and sheep (*Rumex aceto-*  
*sella*). See Sheep sorrel.  
 Sowthistle, common (*Sonchus olera-*  
*ceus*). La. (spp), Me., W. Va. (spp).  
 Sowthistle, perennial (*Sonchus arven-*  
*sis*). Field sowthistle. Ariz., Cal.,  
 Colo., Ida., Ill., Ind., Ia., La. (spp),  
 Me., Mich., Minn., Mont., Nev., N.  
 Dak., Okla., Ore., Pa., S. Dak., U.,  
 Wash., W. Va. (spp), Wis., Wyo.  
 Sowthistle, prickly (*Sonchus asper*).  
 Spiny-leaved sowthistle. La. (spp),  
 Me., W. Va. (spp).  
 Sowthistle, spiny-leaved (*Sonchus as-*  
*per*). See Sowthistle, prickly.  
 Spotted cats-ear (*Hypochaeris radi-*  
*cata*). See Cats-ear, spotted.  
 Spreading dogbane (*Apocynum andro-*  
*saemifolium*). See Dogbane, spread-  
 ing.  
 Spurge, flowering (*Euphorbia corol-*  
*lata*). Ida. (spp), Wyo.  
 Spurge, leafy (*Euphorbia esula*). Ariz.,  
 Cal., Ida. (spp), Ill., Ia., Minn., Mont.,  
 Neb., Nev., N. Dak., Ore., S. Dak., U.,  
 Wash., Wis., Wyo.  
 Squirrel-tail grass (*Hordeum jubatum*).  
 See Barley wild.  
 Star-thistle, Iberian (*Centaurea iber-*  
*ica*). Cal., Nev., Ore.  
 Star-thistle, Malta (*Centaurea meliten-*  
*sis*). Ore.  
 Star-thistle, purple (*Centaurea calci-*  
*trapa*). Cal., Nev.  
 Star-thistle, yellow (*Centaurea solsti-*  
*tialis*). Cal., Nev., Ore., W. Va.  
 Stickseed (*Lappula echinata*). Blue bur.  
 Me.  
 St. Johnswort (*Hypericum perforatum*).  
 Goatweed, Klamath-weed. Cal., Nev.,  
 Ore., Wash., Wyo.  
 Sumpweed (*Iva axillaris*). See Pover-  
 tyweed.  
 Sweet scabious (*Erigeron annus*). Me.

T

Tansy Mustard (*Sisymbrium irio*, *S.*  
*sophia*). See Mustard, tansy.  
 Texas blueweed (*Helianthus ciliaris*).  
 See Blueweed, Texas.

Tie-vine (*Convolvulus arvensis*). See  
 Bindweed, field.  
 Thistle, bull (*Cirsium lanceolatum*).  
 See Bull thistle.  
 Thistle, Canada (*Cirsium arvense*). See  
 Canada thistle.  
 Thistle, Italian (*Carduus pycnoceph-*  
*alus*). Cal.  
 Thistle, Russian (*Salsola Kali*). See  
 Russian thistle.  
 Toadflax, yellow (*Linaria vulgaris*).  
 Ida., Ore., Wash.  
 Tumble mustard (*Sisymbrium altissi-*  
*imum*). See Mustard, tumble.

W

Waterhemlock (*Cicuta maculata*). U.  
 Wavy-leaved Gaura (*Gaura sinuata*).  
 See Gaura, wavy-leaved.  
 Western ragweed (*Ambrosia psilostach-*  
*ya*). See Ragweed, western.  
 Whorled milkweed (*Asclepias gali-*  
*oides*). See Poison milkweed.  
 White campion (*Lychnis alba*). See  
 Campion, white.  
 White horenettle (*Solanum elaeagni-*  
*folium*). See Horenettle, white.  
 Whiteleaved Franseria (*Franseria dis-*  
*color*). See Povertyweed, silverleaf.  
 White top (*Hymenophyssa pubescens*).  
 See Hoary cress.  
 White top (*lepidium draba*, *L. repens*).  
 See Hoary cress.  
 Wild Barley (*Hordeum jubatum*). See  
 Barley, wild.  
 Wild buckwheat (*Polygonum convolvu-*  
*lus*). See Buckwheat, wild.  
 Wild carrot (*Daucus carota*). See Car-  
 rot, wild.  
 Wild Chicory (*Cirrhodium intybus*). See  
 Chicory, wild.  
 Wild Garlic (*Allium vineale*). See  
 Onion, wild.  
 Wild morning-glory (*Convolvulus ar-*  
*vensis*). See Bindweed, field.  
 Wild morning-glory (*Convolvulus sepi-*  
*um*). See Bindweed, hedge.  
 Wild oats (*Avena fatua*). See Oats, wild.  
 Wild onion (*Allium vineale*). See Onion,  
 wild.  
 Wild mustard (*Brassica arvensis*). See  
 Mustard, wild.  
 Wild radish (*Raphanus raphanistrum*).  
 See Radish, wild.  
 Wintercress, bitter (*Campe barbarea*).  
 Ind.  
 Wire grass (*Cynodon dactylon and ca-*  
*priola dactylon*). See Burmuda grass.  
 Wire grass (*Paspalum distichum*). Tex.  
 Witchgrass (*Agropyron repens*). See  
 Quackgrass.

Y

Yarrow (*Achillea millefolium*). Ore.  
 Yellow cress (*Rorippa sylvestris*). Wyo.  
 Yellow dock (*Rumex crispus*). See  
 Dock, curly.  
 Yellow toadflax (*Linaria vulgaris*). See  
 Toadflax yellow.  
 Yellow star-thistle (*Centaurea solsti-*  
*tialis*). See Star-thistle, yellow.

RED CLOVER  
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 SWEET CLOVER  
 BLUE GRASS

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| White Clover  | Wheat Grass    | Seed Corn     |
| Other Clovers | Other Grasses  | Hybrid Corn   |
| Bermuda Grass | Soybeans       | Rape          |
| Lawn Grass    | Cowpeas        | Canary        |
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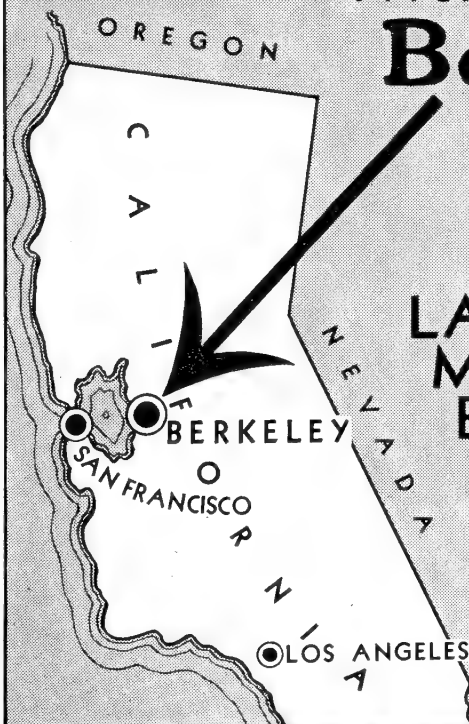
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NUTRIENT	BEST SOURCES OF NUTRIENTS		SOME CONDITIONS* WHICH HAVE BEEN CAUSED BY LACK OF NUTRIENT OR CURED BY FEEDING NUTRIENT	
	Plant Sources	Animal Sources		
<b>Vitamin A</b>	Wild greens Leaf lettuce Green cabbage Sweet potatoes Mustard, turnip, and beet leaves	Escarole Spinach Collards Tomatoes Squash Kale	Liver Egg yolk Butter Cream Milk, whole	Night blindness, sensitivity of eyes to bright light. Dryness and scaliness of skin. "Goose-pimple" skin, ingrown hair.
<b>Thiamin (vitamin B<sub>1</sub>)</b>	Whole-grain products—bread, flour, cereals Bran Wheat germ Beans—soy, navy, and lima Peas	Pork, lean Liver Kidney Heart Muscle meats Fish Eggs Milk	Poor appetite, constipation. Tiredness, low capacity to do work. Neuralgia, tingling in feet and hands; nervousness. Some types of heart trouble. Dropsy, sleeplessness, delirium tremens.	
<b>Riboflavin</b>	(None comparable to animal sources)	Milk Liver Kidney Heart Muscle meats Eggs	Eyes that burn, itch, tire easily or are sensitive to bright light; pink tinge surrounding iris. Blackheads and "whiteheads," oily skin, tiny blood vessels visible on face. Sore lips with cracks at corners. Purplish color of tongue. Decreased resistance to infections.	
<b>Nicotinic acid</b>	Spinach Kale Collards Leaf lettuce Green cabbage	Liver Kidney Muscle meats Fish Milk Eggs	Sore mouth and tongue, burning of throat, alternate constipation and diarrhea, pain in the region of the breast bone. Rough, chapped skin particularly in winter. Sleeplessness, emotional instability, hysteria, delirium. Decreased resistance to infections.	
<b>Pyridoxin (vitamin B<sub>6</sub>)</b>	Whole-grain products—bread, flour, cereals Bran Wheat germ Beans and peas	Muscle meats Fish	Some types of shaking palsy, rigidity of muscles, lack of facial expression. Sleeplessness, nervousness, poor appetite. Weakness.	
<b>Ascorbic acid (vitamin C)</b>	Oranges Grapefruit Strawberries Tomatoes Sprouted beans Raw vegetables Potatoes, white	(None comparable to plant sources)	Tiredness, decreased capacity to do work, laziness, skin hemorrhages, spongy, bleeding gums. Poor healing of cuts and wounds. Serious after-effects of disease.	
<b>Tocopherol (vitamin E)</b>	Oils from seeds, corn, cottonseed Green leafy vegetables Whole-grain products Beans and peas	Egg yolk	Muscle weakness, some types of muscle paralysis. Sterility.	
<b>Vitamin K</b>	Spinach Kale Collards Green cabbage Tomatoes	(None comparable to plant sources)	Slow clotting of blood, particularly in first ten days of life and in obstructive jaundice. Excessive loss of blood at childbirth. Hemorrhages following operations.	
<b>Unsaturated fatty acids</b>	Oils from seeds	Lard Liver Fat pork Egg yolk	Eczema. Scaliness of skin.	
<b>Protein</b>	Dried peas and beans, particularly soybeans Corn, wheat, and oat products	Milk Cheese Eggs Liver Kidney Muscle meats	Tiredness, general weakness, laziness, anemia, dropsy. Serious after-effects of disease.	
<b>Calcium</b>	(None comparable to milk or cheese)	Milk and cheese	Poorly calcified bones and teeth.	
<b>Iron</b>	Whole-grain products Bran Green leafy vegetables	Liver Eggs Muscle meats	Tiredness, general weakness, laziness. Anemia. Slow progress in school and mental dullness.	

\* Many of these conditions can be caused by other means than faulty food habits.

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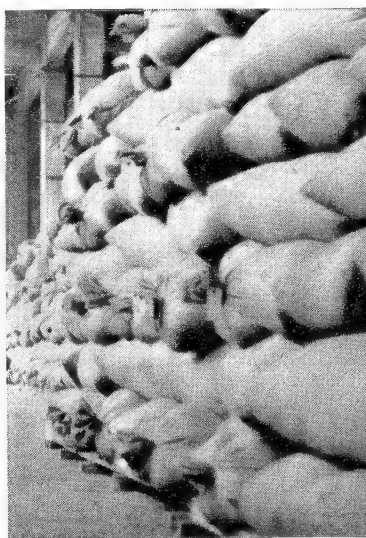
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# VITAMIN C IN VEGETABLES

AVERAGE SERVINGS

MUSTARD GREENS

CABBAGE

TURNIP-White

TOMATO-Red

ONIONS-Green, Young

WATER CRESS

RADISHES

LETTUCE

CUCUMBER

Vegetable	Amount	Wt. in Grams	Milligrams of Ascorbic Acid Reported	Figure Used
Mustard greens	1/2 cup chopped	50	43	63
Sprouts, bean, mung	1/2 cup	50	45-115	
Pepper, green	1/2 empty shell	50	45-75	
Kale	1/2 cup chopped	50	25-50	35
‡ Cabbage, head or leaf	1/2 cup chopped	50	25-45	25
Turnip, white	1 large	100	20-30	23
Tomato, red	1 medium	100	21-24	
Rutabaga	1 large	100	20	
Cabbage, Chinese	1/2 cup chopped	50	20	
Turnip greens	1/2 cup chopped	50	10-30	
Spinach	1/2-3/4 cup chopped	50	7-25	
Parsley	10 sprigs	10	10	
Potato, white, cooked	1 medium	150	27-15	7
Onions, green, young	5, 5/8" long, 1/2" diameter	50	7	
Onions, mature	2-3 small	100	7-11	
Water cress	10 sprigs	10	4.3-66	5.5
Radishes, red	3 small	30	3.6-6.0	4.8
Carrot	1 large	100	3-5	
Escarole	2-3 large leaves	50	3-5	
Celery	2 stalks or hearts	50	3-4	
Romaine	3 large leaves or 6 small	30	3	
Lettuce, green or iceberg	3 large leaves or 6 small	30	1.8-6.3	4.1
Cucumber	8 slices, peeled	50	1-6.5	3.8
Sauerkraut	1/2 cup	50	0-5	

## RECOMMENDED DAILY ALLOWANCES FOR ASCORBIC ACID

Adults	70-75 milligrams
Pregnancy	100 milligrams
Lactation	150 milligrams
Children	30-100 milligrams

\* After deducting 50% loss for cooking.  
 † The size of serving is one which many people could enjoy if the vegetable were eaten raw, the best way to retain ascorbic acid in vegetables. Therefore potatoes, which are a good source of vitamin C even after cooking losses, are the only vegetable listed in cooked form.  
 ‡ Ascorbic acid is more seriously affected by temperature, oxidation, solubility, the presence of alkalies and storage than other known vitamins. Thin, leafy, raw vegetables as spinach may lose 50% of their vitamin C content and standing two or three days. Cooking and shredding vegetables also causes rapid loss. Serve immediately, if possible, after chopping or shredding.

# PROTEIN IN VEGETABLES

AVERAGE SERVINGS

BEANS-Soy, Dried

PEAS-Split, Dried

BEANS-Navy, Dried

BEANS-Lima, Dried

PEAS-Fresh

CORN-Dried

KALE

CORN-Fresh

POTATO-White

Vegetable	Amount	Wt. in Grams	Grams of Protein**
Beans, soy, dried	3/4-1 cup cooked	250	17.5
Beans, soy, fresh	1/2 cup cooked	100	12.5
Lentils, dried, whole	3/4-1 cup cooked	250	12.4
Peas, dried, split	3/4-1 cup cooked	250	12.3
Beans, mung, dried	3/4-1 cup cooked	250	12.2
Lentils, dried, split	3/4-1 cup cooked	250	12.0
Peas, dried, whole	3/4-1 cup cooked	250	11.9
Beans, navy, pinto, red kidney or pea beans	3/4-1 cup cooked	250	11.0
Beans, lima, dried	3/4-1 cup cooked	250	10.4
Beans, lima, fresh	1/2 cup cooked	100	7.5
Peas, fresh	1/2 cup cooked	100	6.7
Corn, dried	3/4-1 cup cooked	250	6.4
Kale	1/2 cup cooked	100	3.0
Collards	1/2 cup cooked	100	3.9
Lambquarters	1/2 cup cooked	100	3.8
Corn, fresh	1 ear	100	3.7
Peas, canned	1/2 cup cooked	100	3.3
Potato, white	1 medium	150	3.0
Turnip greens, fresh	1/2 cup cooked	100	2.9
Potato, sweet	1 medium	150	2.7
Beans, snap or string, fresh	1/2 cup cooked	100	2.4
Beets	1/2 cup cooked	100	1.6
Onions, mature	2-3 small	100	1.4
Turnips, white	1/2 cup cubed	100	1.1
Tomato, fresh or canned	1 medium	100	1.0

## RECOMMENDED DAILY ALLOWANCES FOR PROTEIN

Adults	60-70 grams
Pregnancy	85 grams
Lactation	100 grams
Children	30-100 grams

\* Dry weight before cooking.  
 \*\* These figures are for fresh, raw or dried vegetables before cooking. To retain all the protein in fresh vegetables, avoid soaking in water before cooking. If boiled in water, use all the protein in dried vegetables, wash thoroughly in several waters before soaking. Soak for several hours or overnight in water and cook the vegetable in the same water in which it has soaked. This water contains soluble proteins as well as minerals and vitamins.  
 † Data from Proximate Composition of American Food Materials, Chatfield and Adams, June, 1940, United States Department of Agriculture.

This and following charts prepared and copyrighted by Philadelphia Child Health Society

# CALCIUM IN VEGETABLES

# PHOSPHORUS IN VEGETABLES

BUYERS GUIDE

AVERAGE SERVINGS

TURNIP GREENS

MUSTARD GREENS

COLLARDS

KALE

BROCCOLI

ONIONS - Green, Young

DANDELION

CABBAGE

CARROT

Vegetable	Amount	Wt. in Grams	Grams of Calcium**
‡ Cabbage, loose outer leaves	¼ cup cooked	100	.429
Broccoli leaves	½ cup scant, cooked	100	.314
Turnip greens	½ cup cooked	100	.254
Mustard greens	½ cup cooked	100	.250
Collards	½ cup cooked	100	.202
Kale	½ cup cooked	100	.181
Broccoli	½ cup scant, cooked	100	.146
Onions, young, green	5, 5¼" long, ½" diameter	50	.135
Dandelion greens	½ cup cooked	100	.113
Beans, dried	½-1 cup cooked	250	.074
Rutabaga	½ cup cooked	100	.065
Beans, snap or string	½ cup cooked	100	.065
Leeks	3-4, 5" long, raw	100	.058
Parsnip	½ large	100	.057
Cabbage, headed	½ cup cooked	100	.045
Carrot	1 large, ¾ cup cubes	100	.042
Escarole	2 large leaves	50	.037
Endive	15 inner leaves	50	.037
Celery stalks	2 stalks or hearts, raw	50	.036
Cabbage, headed	½-¾ cup, chopped, raw	50	.022
Potato, white	1 medium large	150	.020
Cauliflower	4 rounded tablespoons	70	.015
Lettuces, green	3 large leaves	30	.015
Lettuces, iceberg	3 large leaves	30	.006

**RECOMMENDED DAILY ALLOWANCES FOR CALCIUM**  
 National Research Council, May, 1941  
 Adults ..... 0.8 grams  
 Pregnancy ..... 1.5 grams  
 Lactation ..... 2.0 grams  
 Children ..... 1.0-1.4 grams

# Dry weight before cooking.  
 \* Recent research indicates that the calcium in spinach, New Zealand spinach, beet greens, swiss chard, dock and sorrel is either nutritionally not available or of doubtful availability. Therefore, these vegetables have not been included on this chart as sources of calcium.  
 \*\* These figures are for edible portion of fresh or dried vegetables before cooking. Allowances of 10% to 35% loss should be made if vegetables are allowed to soak or stand in water or if cooked in water and the cooking water is discarded.  
 † Green cabbage leaves outside of the head are much higher in minerals and vitamins than are the blanched leaves within the head. Consumers should be certain, however, that arsenical insecticides have not been applied to them in the course of their growth.  
 ‡ Data from Food Values of Portions Commonly Used, Bowes and Church, 4th edition, 1942.

BEANS - Dried

PEAS - Fresh

CORN - Fresh

POTATO - White

BROCCOLI

KALE

MUSTARD GREENS

TURNIP GREENS

CELERY

Vegetable	Amount	Wt. in Grams	Grams of Phosphorus**
Beans, dried	½-1 cup cooked	250	.232
Peas, dried	½-1 cup cooked	250	.199
Beans, dried, lima	½-1 cup cooked	250	.190
Peas, fresh, shelled	½ cup scant	100	.122
Corn, sweet, fresh	1 medium ear	100	.120
Potato, white	1 medium	150	.080
Broccoli	½ cup scant, cooked	100	.072
‡ Cabbage, outer leaves	½ cup cooked	100	.067
Kale	½ cup cooked	100	.066
Mustard greens	½ cup cooked	100	.058
Turnip greens	½ cup cooked	100	.048
Spinach, fresh	½ cup cooked	100	.048
Peas, canned	½ cup scant	100	.046
Onions, mature	2-3 small, 1 large	100	.044
Dandelion greens	½ cup cooked	100	.041
Carrot, fresh	1 large, ¾ cup cubes	100	.040
Beets, fresh	½-¾ cup diced	100	.039
Cabbage, headed	¾ cup cooked	100	.028
Asparagus	4-5 stalks, 4" long	50	.026
Onions, young, green	5, 5¼" long, ½" diameter	50	.023
Celery, fresh, raw	2 stalks or hearts	50	.019
Escarole	2 large leaves	50	.019
Romaine	3 large leaves or 6 small	30	.015
Lettuces, iceberg	3 large leaves	30	.012
Lettuces, leaf	3 large leaves	30	.009

**TENTATIVE DAILY ALLOWANCES FOR PHOSPHORUS**  
 Bureau of Home Economics, U. S. Department of Agriculture, March, 1941  
 Adults ..... 1.32 grams  
 Children ..... 1.0-1.32 grams

# Dry weight before cooking.  
 \*\* These figures are for edible portion of fresh or dried vegetables before cooking. Allowances of 10% to 35% loss should be made if vegetables are allowed to soak or stand in water or if cooked in water and the cooking water is discarded.  
 † Green cabbage leaves outside of the head are much higher in minerals and vitamins than are the blanched leaves within the head. Consumers should be certain, however, that arsenical insecticides have not been applied to them in the course of their growth.  
 ‡ Data from Food Values of Portions Commonly Used, Bowes and Church, 4th edition, 1942.

# VITAMIN A IN VEGETABLES

AVERAGE SERVINGS

Vegetable	Amount	Wt. in Grams	International Units ** Reported	International Units ** Used
Spinach	1/2 cup cooked	100	10,000-25,000	16,100
Beet greens	1/2 cup cooked	100	15,000	15,250
Beet greens	1/2 cup cooked	100	10,000-15,700	12,850
Dandelion greens	1/2 cup cooked	100	9,000-12,000	10,200
Mustard greens	1/2 cup cooked	100	10,000	7,500
Broccoli	2 large leaves	50	3,000-9,000	6,050
Fennel	1 large	100	2,100-10,000	3,000
Collards	10 sprigs	10	2,000-6,000	2,000-4,000
Onions, young, green	1/2 cup cooked	100	1,800	1,800
Peas, fresh	5, 5 1/2" long 1/2" diameter	50	1,200	1,200
Pepper, green	3 large leaves or 6 small	30	1,000-1,300	1,200
Beans, string, fresh	1/2 cup, scant	100	875-5,000	1,200
Endive or chicory, curled	1/2 cup cooked	100	600-1,800	963
Tomato, fresh, red	10 small leaves	25	550-1,150	500
Corn, sweet, yellow	1 medium ear	100	200-400	300-300
Squash, summer	1/2 cup cooked	100	100	100
Water cress	10 average sprigs	10	30	30
Beets, fresh	1/2-3/4 cup, diced	100	30	30
Lettuce, iceberg	3 large leaves	30		

**RECOMMENDED DAILY ALLOWANCES FOR VITAMIN A**  
 National Research Council, May, 1941  
 Adults ..... 5,000 I. U.  
 Pregnancy ..... 6,000 I. U.  
 Lactation ..... 8,000 I. U.  
 Children ..... 1,500-6,000 I. U.

\* Vitamin A does not occur in plants. The vitamin A value of plants is due to certain orange yellow substances called carotenoids or "precursors" of vitamin A. Of the four known precursors its own beta-carotene yields approximately its own weight of vitamin A. Each of the other three precursors has only one half as much vitamin A value as has beta-carotene.

\*\* These figures are for fresh, raw vegetable. Vitamin A is not soluble in water. Boiling, steaming or canning of vegetables causes little loss of vitamin A. Freezing causes little loss even during storage for 11 months if the vegetable is held at a very low temperature -40° F.

Data from Food Values of Portions Commonly Used, Bowes and Church, 4th edition, 1942.

# VITAMIN B<sub>2</sub> IN VEGETABLES

AVERAGE SERVINGS

Vegetable	Amount	Wt. in Grams	Micrograms of Riboflavin ** Reported	Micrograms of Riboflavin ** Used
Turnip greens	1/2 cup cooked	100	750	750
Beet greens	1/2 cup cooked	100	625	625
Kale	1/2 cup cooked	100	400-600	500
Beans, lima, dried	3/4-1 cup cooked	250	385	385
Mustard greens	1/2 cup cooked	100	375	375
Spinach	1/2 cup cooked	100	300-400	350
Peas - Fresh	1/2 cup cooked	100	250	250
Turnip - White	1/2 cup cooked	100	225	225
Tomato - Red	1/2 cup cooked	100	200-500	225

**RECOMMENDED DAILY DIETARY ALLOWANCES OF RIBOFLAVIN**  
 National Research Council, May, 1941  
 Adults ..... 1,800-3,300 micrograms (1.8-3.3 mg.)  
 Pregnancy ..... 2,500 micrograms (2.5 mg.)  
 Lactation ..... 3,000 micrograms (3.0 mg.)  
 Children ..... 600-3,000 micrograms (0.6-3.0 mg.)

# Dry weight before cooking.  
 \*\* These figures are for the edible portion of fresh or dried vegetables before cooking. Riboflavin or vitamin B<sub>2</sub> is soluble in water. Soaking fresh vegetables in water and cooking in water cause considerable losses but less than for vitamin B<sub>1</sub>. The cooking water should be saved and used.  
 In preparing dried vegetables, wash thoroughly in several waters before soaking.  
 Soak overnight. Cook in the same water in which the vegetable has soaked to prevent loss through solubility.  
 Canning and storage do not seem to reduce riboflavin to any marked extent.

Data from Food Values of Portions Commonly Used, Bowes and Church, 4th edition, 1942.

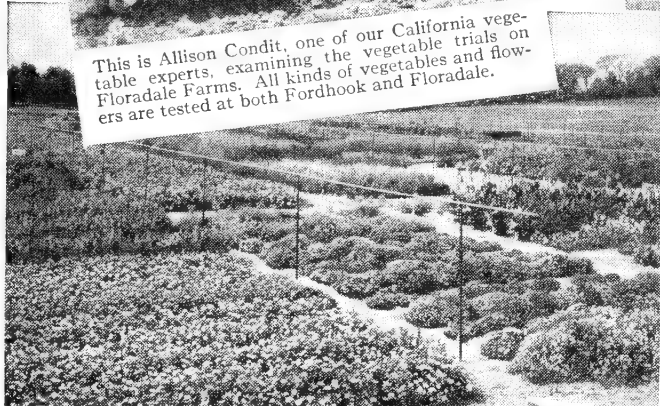
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This is Allison Condit, one of our California vegetable experts, examining the vegetable trials on Floradale Farms. All kinds of vegetables and flowers are tested at both Fordhook and Floradale.



All kinds of flowers that grow from seed are tested each year for both germination and purity. The above picture shows only a small section of the Fordhook trials.



Our vegetable experts, Condit and Pride, are carefully examining and making notes of the table beet trials on Burpee's Floradale Farms in California.

Burpee's Fordhook Farms in Pennsylvania are the most famous seed-breeding and testing farms in the world; they were founded by W. Atlee Burpee before the U. S. Government had any experiment stations. Many leading vegetables bear the name of Burpee or Fordhook.

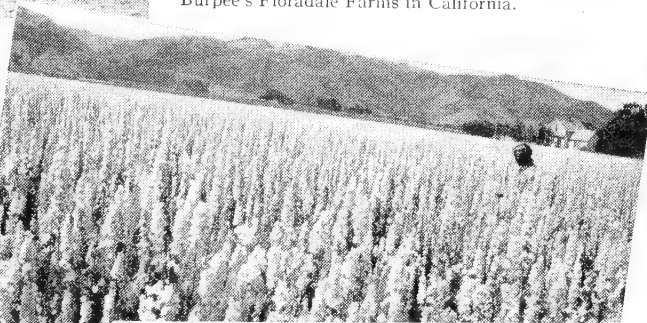
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Many years ago we were convinced that Germany planned another war for world conquest. To do our part we started in to train women to raise vegetable seeds on Floradale. These women are harvesting leek seed.

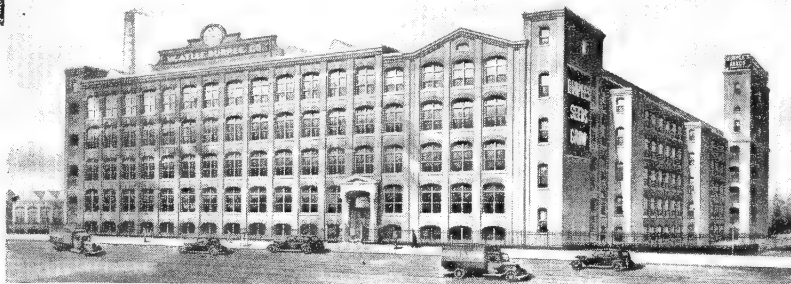
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Tall giant larkspur growing for seed in Floradale Seed Farms. Floradale still produces the finest flower seeds, though much of the acreage is now devoted to vegetables.

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PHILADELPHIA, Pennsylvania

U. S. A.

# VITAMIN B<sub>1</sub> IN VEGETABLES

AVERAGE SERVINGS

Vegetable	Amount	Wt. in Grams	Micrograms of Thiamin** Reported	Figure Used
BEANS—Soy, Fresh	1/2-1 cup cooked	250	600	525
PEAS—Fresh	3/4-1 cup cooked	100	525	383
BEANS—Lima, Fresh	1/2 cup cooked	100	270-495	300
BEANS—Navy, Dried	1/2 cup cooked	100	250-350	
PEAS—Dried	3/4-1 cup cooked	250	225-300	
POTATO—White	1/2 cup cooked	250	200-300	250
TURNIP GREENS	1/2 cup cooked	250	150-310	230
CABBAGE	1/2 cup cooked	100	150-250	
TOMATO—Red	1/2 cup cooked	100	150-225	
	1 medium	150	143-248	196
	1 medium	150	138-180	159
	1 cup cooked	150	135-203	
	1 large	100	120-190	
	1 medium ear	100	120-150	
	1 cup cooked	100	138	
	1/2 cup cooked	100	95-155	
	1/2 cup cooked	100	80-100	
	1/2 cup cooked	100	70-140	105
	1 medium	100	70-115	93
	1 cup cooked	100	65-95	
	1 medium	100	60-140	
	2-3 small	100	25-100	
	3/4 cup diced	100	25-95	
	3 large leaves	50	15-38	
	2 stalks or hearts	30	10-25	

Vegetable	Amount	Wt. in Grams	Micrograms of Thiamin** Reported	Figure Used
Beans, soy, dried	1/2-1 cup cooked	250	600	525
Beans, soy, fresh	3/4-1 cup cooked	100	525	383
Beans, lima, fresh	1/2 cup cooked	100	270-495	300
Beans, lima, dried	1/2 cup cooked	100	250-350	
Beans, dried, navy, kidney, pinto and others	3/4-1 cup cooked	250	225-300	
Peas, dried	1/2 cup cooked	250	200-300	250
Collards	1/2 cup cooked	250	150-310	230
Dandelion greens	1/2 cup cooked	100	150-250	
Potato, white	1/2 cup cooked	100	150-225	
Turnip greens	1 medium	150	143-248	196
Potato, sweet	1 medium	150	138-180	159
Kale	1 cup cooked	150	135-203	
Farsnip	1 large	100	120-190	
Corn, sweet, yellow	1 medium ear	100	120-150	
Mustard greens	1/2 cup cooked	100	138	
Broccoli	1/2 cup cooked	100	95-155	
Cabbage, headed	1/2 cup cooked	100	80-100	
Tomato, red	1/2 cup cooked	100	70-140	105
Turnips, white	1 medium	100	70-115	93
Carrot	1 cup cooked	100	65-95	
Onions, mature	1 medium	100	60-140	
Beets, fresh	2-3 small	100	25-100	
Lettuce, green or iceberg	3/4 cup diced	100	25-95	
Celery	3 large leaves	50	15-38	
	2 stalks or hearts	30	10-25	

**RECOMMENDED DAILY ALLOWANCES FOR B<sub>1</sub> OR THIAMIN**  
 Adults . . . . . 1,200-2,300 micrograms (1.2-2.3 mg.)  
 Pregnancy . . . . . 1,800 micrograms (1.8 mg.)  
 Lactation . . . . . 2,300 micrograms (2.3 mg.)  
 Children . . . . . 400-2,000 micrograms (0.4-2.0 mg.)

\* Dry weight before cooking.  
 \*\* These figures are for edible portion of fresh or dried vegetables before cooking. Thiamin is soluble in water. Soaking of fresh vegetables in water may cause considerable loss. In boiling vegetables, 50% of the original content of thiamin has been reported in the cooking water. If this water is used in the cooking water, the use of soda in the cooking water causes extensive destruction of B<sub>1</sub>.

To retain thiamin in dried vegetables, wash thoroughly in several waters before soaking. Soak for several hours or overnight and cook in the same water.  
 Freezing causes little or no loss. Canning causes various losses.

Data from Food Values of Portions Commonly Used, Bowes and Church, 4th edition, 1942.

# IRON IN VEGETABLES

AVERAGE SERVINGS

Vegetable	Amount	Wt. in Grams	Milligrams of Iron**
MUSTARD GREENS	1/2 cup cooked	100	5.6
BEANS—Dried	3/4-1 cup cooked	250	5.2
SPINACH	1/2 cup cooked	100	3.5
BEEF GREENS	1/2 cup cooked	100	3.4
SWISS CHARD	1/2 cup cooked	100	3.2
DANDELION	1/2 cup cooked	100	3.1
KALE	1/2 cup cooked	100	3.0
POTATO—White	1/2 cup cooked	100	2.5
BEANS—String or Snap	1 medium large	150	1.8
	1/2 cup, scant, cooked	100	1.7
	5/8, 5/8" long	50	1.4
	10-15 inner leaves	50	1.2
	2-3 large leaves	50	0.9
	1 large, 3/4 cup cubes	100	0.9
	1/2-3/4 cup, diced	100	0.7
	3-4, 5" long	50	0.6
	2-3 stalks, 4" long	100	0.5
	2 stalks or hearts	100	0.4
	3 large leaves or 6 small	50	0.35
	3 large leaves or 6 small	30	0.3

Vegetable	Amount	Wt. in Grams	Milligrams of Iron**
Mustard greens	1/2 cup cooked	100	5.6
Beans, dried	3/4-1 cup cooked	250	5.2
Turnip greens	1/2 cup cooked	100	3.5
Spinach	1/2 cup cooked	100	3.4
Beef greens	1/2 cup cooked	100	3.2
Swiss chard	1/2 cup cooked	100	3.1
Dandelion greens	1/2 cup cooked	100	3.0
Kale	1/2 cup cooked	100	2.5
† Potato, sweet	1/2 cup cooked	100	1.8
† Potato, white	1 medium large	150	1.7
Broccoli	1/2 cup, scant, cooked	100	1.4
Onions, young, green	5/8, 5/8" long	50	1.2
Onions, snap or string	10-15 inner leaves	50	1.1
Endive, curled	2-3 large leaves	50	0.9
Escarole	1 large, 3/4 cup cubes	100	0.9
Beets, fresh	1/2-3/4 cup, diced	100	0.7
Carrot	3-4, 5" long	50	0.6
Leeks	2-3 stalks, 4" long	100	0.5
Asparagus	2 stalks or hearts	100	0.4
Onions, mature	3 large leaves or 6 small	50	0.35
Cabbage, headed	3 large leaves or 6 small	30	0.3
Celery	3/4 cup diced	100	0.15
Lettuce, green	3 large leaves or 6 small	50	0.15
Lettuce, iceberg	3 large leaves or 6 small	30	0.15

**RECOMMENDED DAILY ALLOWANCES FOR IRON**  
 Adults . . . . . 12 milligrams  
 Pregnancy . . . . . 15 milligrams  
 Lactation . . . . . 15 milligrams  
 Children . . . . . 6-15 milligrams

\* Dry weight before cooking.  
 \*\* These figures are for edible portion of fresh or dried vegetables before cooking. Allowances of 25% to 50% loss should be made if vegetables are allowed to soak or stand in water or if cooked in water and the cooking water is discarded.  
 † Potatoes retain practically all their iron if cooked and eaten with the skin. If peeled thickly, practically all the iron is lost.

† Green cabbage leaves outside of the head are much higher in minerals and vitamins than are the blanched leaves within the head. Consumers should be certain, however, that arsenical insecticides have not been applied to them in the course of their growth.  
 Data from Food Values of Portions Commonly Used, Bowes and Church, 4th edition, 1942.



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# A Digest of Little Known Crops

Compiled by S. H. YARNELL  
Chief, Texas Division of Horticulture



**T**HERE has been an increasing interest in recent months in a miscellaneous group of plants—those for the most part whose import has been restricted, or substitutes for these. The herbs, spices and drug plants make up the bulk of the group, but inquiries have also been received in regard to fiber and oil plants, rubber crops and others. A good many of these are strictly tropical and for this reason unsuited to commercial production. Many of the herbs are well adapted to our conditions and might be grown commercially.

Three important limiting factors in the production of these crops are degree of adaptability, market de-

mand, and availability of propagating material. Growing conditions vary considerably. Information in the last four columns should indicate the chance of success in any particular region. The column giving data on recent imports gives an idea of the crop's market importance. With a few exceptions, such as tung oil and guayule, the market demand for most of the crops that can be grown in this country could be satisfied with a relatively small acreage. This means that only the most favored localities should attempt such crops commercially. As the commercial production of many of them has heretofore been outside of this country, seed and other

propagating materials are usually very scarce or unavailable.

The scientific name and type of plant have been included to help identify the crop. These will be found useful in securing further information on any crop that may seem promising. The scientific name consists of two parts. In some cases, where the first part (genus name) is the same as the common name, its initial letter is used alone. The second part (species name) is always written out. The drugs are listed alphabetically by common name in Table 1. The herbs and spices, which are somewhat hard to distinguish are presented in Table 2. Table 3 includes many crops.

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**Table 1. Drug Crops**

Common Name	Scientific Name	Imports (Pounds)*	Commercial Areas	Type Plant	Soils	Culture	Notes
Aconite	<i>Aconitum napellus</i>	10,000 to 12,000	Europe	Herbaceous perennial	Well drained gravelly loam	Seed or divisions	Cool climate. Not promising
Agar	( <i>Marine algae</i> )	451,399	East coast Asia	Sea weed		Collected and dried	Culture medium, laxative, etc.
Aloe	<i>A. vera</i> <i>A. Perryi</i> <i>A. ferox</i>	882,399	W. Indies, W. and S. Africa	Perennial	Well drained light soil; lime	Sun. Juice from leaves evaporated	<i>A. vera</i> grows wild in South Texas
Belladonna	<i>Atropa Belladonna</i>	207,694	Italy, Russia, S. Calif. 1918	Perennial to 3 feet	Deep, moist loam	Set plants 20"x30"	Temperature under 80° F. best
Buchu	<i>Barosma betulina</i> , <i>other sp.</i>	138,938	South Africa	Heath-like shrub	Dry gravelly	Mature wood cuttings	Native to hot dry mountains of S. Africa
Chamomile	<i>Matricaria chamomilla</i>	139,440	Eastern U. S.	Daisy-like annual	"Garden" soil	Wild in East	Flower heads contain an essential oil
Derris	<i>D. elliptica</i> <i>D. trifoliata</i>	226,598	East Indies Philippines	Climbing shrub			Tropical
Digitalis	<i>D. purpurea</i>	50,200	Eu.; Pacific Northwest	Biennial	Well drained loam	Set plants 12"x36"	Red spider bad in Southwest. Not promising
Ephedrine	<i>Ephedra sinica</i> , <i>others</i>	1,948,011	China	Leafless shrub	Dry, sandy	Seed or suckers	Four species in W. Texas. Promising
Gentian	<i>Gentiana lutea</i>	351,806	Europe	Perennial	Well drained light loam	Seed in coldframe in fall	Not very promising. Hard to transplant
Henbane	<i>Hyoscyamus niger</i>	102,529	Egypt, Russia, Calif. 1918	Annual or biennial	Deep moist loam	Set plants 15"x30"	Seed scarce in 1942. Potato beetle bad
Hoarhound	<i>Marrubium vulgare</i>	92,375	Europe	Herbaceous perennial	Sandy, fairly dry, sun	Divisions or seeds, 12"x18"	Widely naturalized
Hops	<i>Humulus Lupulus</i>	5,248,208	Northern U. S., England, Germany	Climbing herb	Loam	Cuttings and from seed	Wild in North and mts. south to Fla. and Arizona
Licorice	<i>Glycyrrhiza glabra</i>	59,731,292	Spain, Italy, Turkey	Perennial herb	Deep, moist, mellow, rich	Uncultivated after 1st yr.	Grow some in California
Mayapple	<i>Podophyllum peltatum</i>		Native to Texas	Herbaceous perennial	Deep, moist loam	Collected	Market limited. Drug from dried roots
Menthol	<i>Mentha arvensis</i> <i>var. piperascens</i>		Northern Japan and U. S.	Perennial	Rich, moist loam	Rootstocks, 2-3 crops yearly	
Nux vomica	<i>Strychnos Nux-vomica</i>	2,888,450	India, Australia	Tree			Tropical. Seeds contain strychnine
Orris	<i>Iris florentina</i>	486,208	S. Europe, Persia, India	Perennial	Rather dry, gravelly	Divisions, 12"x36"	Insects bad in storage
Psyllium	<i>Plantago Psyllium</i>	2,158,375	France, Spain	Annual to 8 inches	Loam	2 crops per year	Laxative, 18 species in Texas mostly weeds
Puccoon	<i>Lithospermum officinale</i>			Herbaceous perennial	Not particular	Divisions or seeds	Grows wild in Texas

\*1935 or a recent average—crude drug.

**Table 2. Herbs, Spices, Etc.**

Common Name	Scientific Name	Imports (Pounds)*	Commercial Areas	Type Plant	Soils	Culture	Notes
Allspice	<i>Pimenta officinalis</i>	4,127,822	W. Indies, S. America	Evergreen tree	Too common to cultivate		Tropical
Ambrosia	<i>Chenopodium Botrys</i>			Annual to 2 feet	Loam	Seed. Not difficult	Jerusalem-Oak Feather Geranium
Angelica	<i>A. archangelica</i>			Biennial or perennial	Low ground	Seed in fall, plants in spring	Set plants 3x3 feet in full sun. Herb
Anise	<i>Pimpinella Anisum</i>	490,627	Europe, India, South America	Annual long season	Light to medium loam	Seed in field 6"x30"	Successful in Lower valley
Basil Sweet Bush	<i>ocimum basilicum</i> <i>O. minum</i>			Annual to 2 feet To 1 foot	Light, medium fertile, well drained	Set plants 12"x18", sun	Widely adapted An ornamental
Bergamot Bee Balm Horsemint	<i>Monarda didyma</i> <i>M. fistulosa</i>			Perennial	Any moist sandy soil	Seeds or divisions. 12"x18"	Herb. Leaves used in drinks
Borage	<i>Borago officinalis</i>			Annual to 2 feet	Light, "dry" med. fertility	Set plants 12"x15", sun	Herb. Leaves used in salad
Capsicum	<i>C. annuum</i> , <i>other species</i>	1,611,654	Eu., Asia, America	Annual	Widely adapted	Set plants 12"x30"	Includes the garden peppers
Caraway	<i>Carum Carvi</i>	6,168,202	Europe	Annual or biennial	Light, "dry" soil	Seed in spring	Second year. Fruit is used
Cassia	<i>Cinnamomum Cassia</i> , <i>other species</i>	10,093,196	India, East Indies, China	Evergreen tree	Moist, rich soil	From seed in China	Subtropical. Bark stripped from trees 6-10 years old

\*1935 or a recent average—crude product.

**Table 2. Herbs, Spices, Etc. (Continued)**

Common Name	Scientific Name	Imports (Pounds)*	Commercial Areas	Type Plant	Soils	Culture	Notes
Catnip	<i>Nepeta Cataria</i>			Perennial to 3 feet	Not particular	Seed 18"x24" sun	Herb. Sometimes used in tea
Chamomile	<i>Anthemis nobilis</i>			Perennial to 8 inches	Any soil	Full sun	Dried flower heads used for tea
Chervil	<i>Anthriscus cerefolium</i>			Annual to 2 feet	Light loam	Reseeds, 3"x18" shade	Needs cool weather. Herb
Chives	<i>Allium schoenoprasum</i>			Perennial to 2 feet	Rich loam	Divisions in fall or early spring	Milder than onion. Used in salad, soup, dressing
Cinnamon Saigon C.	<i>Cinnamomum zeylanicum</i> <i>C. Loureirii</i>	850,356	E. and W. Indies, Cochin China, S. America	Tree		Cut back twice a year	Tropical
Clary	<i>Salvia Sclarea</i>			Biennial to 4 feet	Well drained loam, sun	Seed or cuttings, 10"x20"	Leaves used as seasoning
Clove	<i>Eugenia aromatica</i>	3,744,555	Zanzibar	Evergreen tree			Tropical. Unopened flower buds
Coriander	<i>Coriandrum sativum</i>	1,618,322	Europe, India, Morocco	Perennial to 3 feet	Good garden soil, sun	Seed, 6"x15" annual	Fruits are dried
Cudweed	<i>Artemisia Purshiana</i>			Perennial to 3 feet	Not particular	Seed, full sun	For winter bouquets
Cumin	<i>Cuminum cyminum</i>	986,283	Southern Europe	Small annual	Well drained, med. fertile	Seed, 18"x36", sun	Seeds used in bread, cheese, liquor, etc.
Dill	<i>Anethum graveolens</i>			Annual or longer	Sandy garden soil	Seed 9"x18", full sun	Seeds sometimes shatter. Herb
Dittany	<i>Dictamnus albus</i>			Perennial to 3 feet	Light loam	Full sun	Flowers ornamental. Herb
Fennel Sweet	<i>Foeniculum vulgare</i> <i>F. dulce</i>	310,989	Widely cultivated	Tall perennial. Annual	Not particular. Rich, moist	Annual, seed sun, 18"x24". 6"x12"	May become a pest in pastures
Fenugreek	<i>Trigonella Foenum-graecum</i>	511,732	Southern Europe, Asia	Annual legume	Well drained loam	Seed in field	Grown for seeds, also forage; ornamental
Germander Small-leaved Large-leaved	<i>Teucrium Chamaedrys</i> <i>T. flavum</i>			Perennial to 1 foot to 2 feet	Light loam	Set plants, sun	An edging plant. Can be clipped
Ginger	<i>Zingiber officinale</i>	3,404,069	China, Japan, Jamaica	Perennial to 3 feet	Rich, moist soil, shade	Divide rhizomes	Tropical
Hoarhound	See Table 1						
Hyssop	<i>Hyssopus officinalis</i>			Perennial to 2 feet	Well drained, mod. fertile	Seed, this to 6"x18" shade	For soups. Herb
Lavender	<i>Lavandula vera</i> <i>L. spica</i>			Small shrub	Well drained, sandy	Seeds, divisions, cutting set 18"x36"	Harvest blooms 2nd, 3rd and 4th years. Distil without drying
Lemon Balm	<i>Melissa officinalis</i>			Herbaceous perennial	Well drained mod. fertile	Seeds, cuttings set 12"x18"	Cut in full flower, dry. Only flowers distilled
Mace	<i>Myristica fragrans</i>	702,627 4,420,911	Tropics (nutmeg)	Evergreen tree to 60 feet	Moist, rich loam	Hot, moist climate	Tropical. Seed yields nutmeg
Marjoram Sweet Dittany of Crete	<i>Majorana hortensis</i> <i>Origanum Dictamnus</i>			Perennial to 2 feet Perennial to 1 foot	Well drained loam Light loam	Annual, seed 12"x18" sun Seed or Division in fall	For flavoring stews, etc.
Mint Peppermint Pennyroyal Spearment Horsement	<i>Mentha piperita</i> <i>M. Pulegium</i> <i>M. Spicata</i> <i>M. sylvestris</i>		Mich., Ind., New York	Perennial	Moist soils high in organic matter muck	Cuttings or divisions, keep free of weeds	Mow when in bloom, haul to distillery when dry. Fresh leaves used in drinks
Mustard White Black	<i>Brassica hirta</i> <i>B. nigra</i>	7,770,861 1,025,580	(seeds) Europe (ground m.)	Annual to 6 feet	Not particular	Seed in rows	Leaves used as greens, seed as condiment, oil
Pepper	<i>Piper nigrum</i>	33,085,593 4,748,307	(black) East (white) Indies	Climbing shrub	Not particular, moist	Seeds, cuttings pruned at 2', bears at 3 years	Tropical. Black from unripe, white from nearly ripe fruit
Pyrethrum	<i>Chrysanthemum cinerariaefolium</i> , other species	15,811,329	Austria, Japan, U. S. (experiment)	Perennial	Deep, rich loam	Seeds, harvest flowers	Cool growing season needed. Not promising
Quassia Jamaican Surinam	<i>Picraena excelsa</i> <i>Quassia amara</i>	625,151	West Indies W. Indies, Tropical America	Tree Tree			Drug made from chips, tropical Tropical
Quinine	<i>Cinchona Ledgertana</i> , other species	1,618,252	Java, India, Jamaica	Evergreen tree			Tropical
Rosemary	<i>Rosmarinus officinalis</i>			Perennial to 4 feet	Well drained light soils	Cuttings, divisions, seed	18"x24", sun. Perfumes, preserves. Herb
Santonin	<i>Artemisia Cina</i>		Turkestan	Semi-shrubby perennial	Dry, poor soil	Divisions	Dried unopened flowers used for worms

\*1935 or a recent average—crude product.

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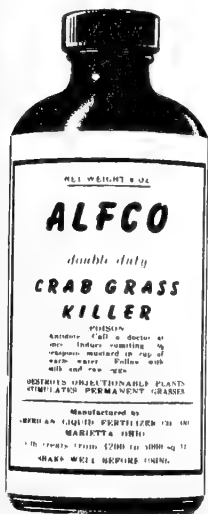
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**Table 2. Herbs, Spices, Etc. (Continued)**

Common Name	Scientific Name	Imports (Pounds)*	Commercial Areas	Type Plant	Soils	Culture	Notes
Sage	<i>Salvia officinalis</i>	1,446,143	Southern Europe	Shrub-like herb	Well drained, rich loam	Seed, cuttings 12"x24"	Cut before blooming. Adapted
Savory Summer Winter	<i>Satureia hortensis</i> <i>S. montana</i>			Annual to 18 inches Perennial	Light, rich loam Poor, dry	Seeds, sun Seed, cuttings	Cut at beginning of bloom and dry in shade
Senna Alexandrain Indian	<i>Cassia acutifolia</i> <i>C. angustifolia</i>	2,304,312	India	Perennial	Loam	Divisions and seeds Sun	Leaflets and pods dried in sun Cathartic
Sorrel	<i>Rumex sp.</i>			Perennial	Any soil	Divisions	May become a pest
Southernwood	<i>Artemisia abrotanum</i>			Small shrub	Sandy soil.	Sun	Old man. Lad's love
Stramonium	<i>Datura Stramonium</i>	404,219	U. S., Europe	Annual	Not particular, moist	Seed direct in field	Leaves and flowers dried
Tansy	<i>Tanacetum vulgare</i>		Michigan	Perennial	Not particular	Seeds, roots, 18"x36", sun	Cut plants in full flower, dry in shade
Tarragon	<i>Artemisia Dracunculus</i>			Perennial to 3 feet	Well drained, sandy soils	Division, sun or shade	Leaves used for seasoning. Herb
Thyme	<i>Thymus vulgaris</i>			Shrub-like perennial	Well drained, sandy soils	Seed, cuttings 18"x36"	English, French, Norwegian best
Tonka bean	<i>Dipteryx odorata</i>	514,741	South America	Large tree		Tropical	Substitute for vanilla
Vanilla	<i>V. planifolia</i>	828,625	East and West Indies	Climbing vine		Tropical	Greenripe fruits cured
Verbena Lemon	<i>Lippia citriodora</i>		Tropics	Perennial to 10 feet	Not particular	Sun	Tropical. Never less than 55° F.
Wormseed American	<i>Chenopodium ambrosioides</i>		Maryland, Illinois	Annual	Not particular	Seed 18"x48" on low ridge, cut tops	
Wormwood	<i>Artemisia absinthium</i>		Wisconsin, Michigan	Herbaceous perennial	Not particular	Seed fall, plants spring	Cut plants in full bloom and distil. Not very promising
Wormwood	<i>Artemisia sp.</i>	See Table 1					

**Table 3. Miscellaneous Crops**

Common Name	Scientific Name	Imports (Pounds)*	Commercial Areas	Type Plant	Soils	Culture	Notes
Acacia Huisache	<i>A. Farnesiana</i>			Shrub	Not particular	Grows wild.	N. Texas. Flowers used for perfume
Camphor	<i>Cinnamomum Camphora</i>	1,541,936 1,256,278 1,181,631	(crude) China (refined) (oil) Japan	Evergreen tree	Well drained sandy loam	Hardy along Gulf Coast. Ornamental	Wood and leaves ground and distilled
Candelilla	<i>Euphorbia antisiphilitica</i> <i>Pedilanthus Pavonis</i>	10,420,568	Mexico	Leafless shrub	Well drained loam	Wild in West Texas	Wax on stems removed by hot water
Castor bean	<i>Ricinus communis</i>	77,048,961 258,343	(beans) (oil)	Annual or longer	Not particular	Seed in field	Difficult to harvest. Oil from seed
Chicle	<i>Achras Sapota</i>	7,775,221	Mexico, British Honduras	Evergreen tree	Rich, sandy loam, lime	Tropical	Source of chewing gum. Fruit is Sapodilla
Citronella	<i>Cymbopogon Nardus</i>	1,682,574	Java, Ceylon	Grass		Tropical	Lemon grass is <i>C. citratus</i>
Damar	<i>Balanocarpus Heimi</i> Other plants	15,004,904	East Indies	Trees			Tropical. Varnish
Devil's Shoe String	<i>Tephrosia virginiana</i>		Native to E. and N. Texas	Herbaceous perennial	Rather widely adapted	Collected, could be cultivated	A promising source of rotenone. Selections made by Station
Gum arabic	<i>Acacia Senegal</i>	7,954,840	Sudan	Shrub	Well drained loam	Tropical	Trees are tapped when fruit is ripe
Gum tragacanth	<i>Astragalus gummifer</i>	2,473,524	Persia	Shrub	Light, porous soil	Full sun	Mesquite gum a good substitute
Guayule	<i>Parthenium argentatum</i>	1,028,400	Mexico	Low shrubby perennial	Well drained loam, lime	Cultivation just starting	Native to SW. Texas. Prog. Rept. 771
Kapok	<i>Ceiba pentandra</i>	12,385	Tropics of Amer. Asia	Large tree			Tropical. Fiber from fruit; oil from seeds
Lacquer	<i>Rhus verniciflua</i>	7,483,575	Japan	Tree to 60 feet	Poor, dry soil	Seeds or cuttings	Tree is tapped. Hardy. Foliage poisonous
Mesquite gum	<i>Prosopis chilensis</i>			Shrub or small tree	Widely adapted	Native in Texas	Method of collection to be studied
Olive	<i>Olea europaea</i>	53,540,670	Most subtropics, California	Evergreen tree	Well drained, fertile soil	Cuttings or grafted	Minimum temp. 14° F. Low humidity. Mission

\*1935 or a recent average—crude product.

**Table 3. Miscellaneous Crops (Continued)**

Common Name	Scientific Name	Imports (Pounds)*	Commercial Areas	Type Plant	Soils	Culture	Notes
Palm oil	<i>Elaeis guineensis</i>	297,579,208 50,592,641	Sumatra, Java, West Africa	Tree			Tropical. Nut oil and kernel oil different
Rape	<i>Brassica Napus</i> <i>Other sp.</i>	8,039,719 gallons oil	Eu., India, China, U. S.	Annual	Not particular	Seed in field Turnip, rutabaga	Edible oil from seed. Other parts eaten
Rose oil	<i>Rosa damascena</i> and <i>R. Centifolia</i>	38,810 oz. essence	Bulgaria	Shrub	Well drained loam	Set plants 2x3 feet	
Sansevieria	<i>S. longifolia</i> <i>other species</i>		Africa, India	Herbaceous perennial	Well drained loam	Moderate light needed	Bowstring hemp. Tender house plant
Sisal Yucatan	<i>Agave sisalana</i> , <i>A. fourcroydes</i> <i>Other species</i>	125,931 tons	E. and W. Indies, Africa, Hawaii	Shrubby perennial	Well drained gravelly, lime	Little cultivation required	Tender. 12 species native lechequilla dominant in W. Texas
Sumac	<i>Rhus copallina</i>			Large shrub	Not particular	Collected	Tanning material extracted from leaves
Tallow tree	<i>Sapium sebiferum</i>		China	Deciduous tree	Well drained sandy loam	Seeds or cuttings	Wax on seeds, oil within seeds. Adapted
Tung-oil	<i>Aleurites fordii</i> <i>A. montana</i>	120,058,817	China	Deciduous tree	Well drained sandy loam	Seed or cuttings	Oil from seeds. Adapted to SE Texas
Waxmyrtle Southern	<i>Myrica cerifera</i>			Shrub or tree to 40 feet	Moist, sandy loam	Mostly uncultivated	Wax from berries. Bark of root for drug
Yucca and related plants	<i>Y. Treculeana</i> <i>Y. Schottii</i> , <i>Y. australis</i> <i>Samuela</i> <i>Carnerosana</i> <i>Hesperaloe junifera</i> <i>Hesperoyucca spp.</i>		Mexico	Shrubby perennial	Well drained, sandy, gravelly loam, lime	Little cultivated except as ornamental	13 species native to Texas. Fiber hard to remove, clean

\*1935 or a recent average—crude product.

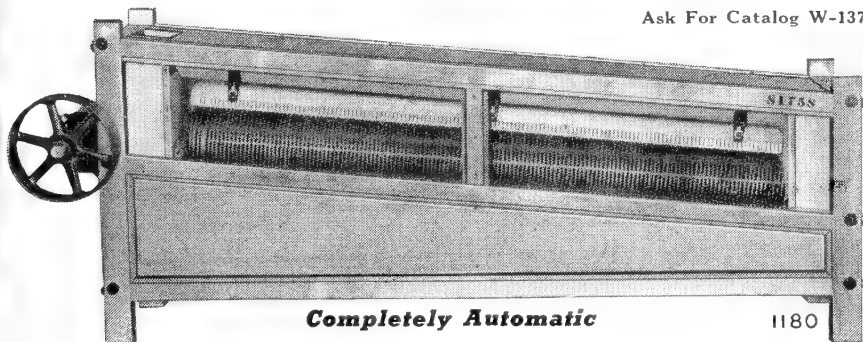
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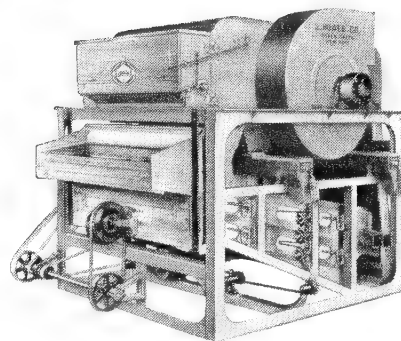
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## BEANS

Variety	Season	Plant	Pod		Seed Color
			Shape	Color	
Asgrow Stringless	Early	Bush, large	Straight, round		Mottled purple
Tendergreen					Med. green
Black Valentine	Early	Bush, large	Straight, oval		Black
Stringless					Deep green
Blue Lake	Mid	Pole, large	Round, straight		Ivory white
Bountiful	Early	Bush, medium	Straight, flat		Straw
Burpee's Stringless	Early	Bush, medium	Curved, round		Coffee-brown
Cornfield	Late	Pole, large	Straight, round		Mottled buff
Decatur	Early	Pole, large	Near straight		Ivory white
French's Hort.	Late	Bush, medium	Straight, broad		Green and carmine
Full Measure	Early	Bush, large	Straight, round		Mottled red
					Med. dark green
Giant Stringless	Early	Bush, medium	Sl. curved, round		Mottled brown
Golden Wax	Early	Bush, medium	Straight, oval		Yellowish brown
Ideal Market	Early	Pole, medium	Curved, round		Mottled white
Kentucky Wonder	Mid	Pole, large	Curved, round		Black
Kidney Wax	Mid	Bush, medium	Curved, oval		Buff
Lazy Wife	Late	Pole, medium	Clusters, oval		White, black eye
London Hort.	Late	Pole, large	Curved, thick		White
					Dark green splashed
McCaslan	Mid	Pole, large	Curved, thick flat		Mottled Red
Pencil Pod	2nd Early	Bush, medium	Curved, round		Ivory
Plentiful	Early	Bush, medium	Straight, flat		Black
Rd. Pod Kid. Wax	Mid	Bush, large	Sl. curved, round		Black
Red Valentine	2nd Early	Bush, medium	Curved, round		White, black eye
Refugee Stringless	Late	Bush, large	Straight, round		Mottled buff
Sure Crop	2nd Early	Bush, large	Straight, thick		Mottled purple
Tenn. Green Pod	Early	Bush, medium	Very large, stringy		Black
Webber Wax	Early	Bush, dwarf	Straight, flat		Med. brown
Wht. Creaseback	Mid	Pole, medium	Sl. curved, round		Yellowish buff
					Ivory

## GARDEN CORN

Variety	Season	Ears				Stalk in Feet
		Color	Length Inches	Rows	Type	
Adams Extra Early	Early	White	6	12-14	Roasting	5
Alameda	Main	White	7	12-16	Sweet	5
Bantam Evergreen	Late	Yellow	8	14-18	Sweet	7
Black Mexican	Main	White	8	8	V. sweet	7
Charlevoix	Main	Yellow	6½	10-12	Sweet	5½
Country Gentleman	Late	White	7½	Zig-zag	Sweet	7
Early Evergreen	Late	White	7½	16-20	Sweet	7
Early Market	Early	White	6	10-12	Sweet	4½
Golden Bantam	Main	Yellow	6	8	Sweet	5
Golden Bantam Improved	Main	Yellow	7	10-14	Sweet	5½
Golden Cross Bantam*	Main	Yellow	8	12-14	Sweet	6½
Golden Early Market	Early	Yellow	7	10-14	Sweet	4½
Honey June	Late	White	8	12-16	Semi-sweet	8
Howling Mob	Main	White	7½	12-16	Sweet	7
Ioana*	Main	Yellow	7½	12-14	Sweet	7
Marcross*	Early	Yellow	7	12-16	Sweet	5
Mossheart	Late	Yellow	8	14-18	Near sweet	8
Oregon Evergreen	Late	White	8	12-14	Sweet	7
Spancross*	Early	Yellow	6½	10-14	Sweet	5½
Stowell's Evergreen	Late	White	9	16-18	Sweet	8
Surcropper	Late	White	7	10-14	Semi-sweet	7
Tendergold*	Main	Yellow	7½	12-14	Sweet	6
Truckers' Favorite	Main	White	7½	12-16	Roasting	6
Whipple's Early Yellow	Main	Yellow	7	12-16	Sweet	6

\*—A hybrid variety.

## GARDEN PEAS

Variety	Season	Wilt*	Plant		Pod			Seed	Similar Strains
			Inches	Color	Shape	Color	Inches		
Alaska	1st Early	w. r.	28	Light	Blunt	Light	2½	Smooth	
Alderman	Main	w. r.	50	Dark	Pointed	Dark	4½	Wrinkled	Telephone
Amer. Wonder	Early		12	Dark	Blunt	Light	2½	Wrinkled	
Bountiful	1st Early	w. r.	30	Med.	Pointed	Med.	3	Dimpled	Ameer
Champion of Eng.	Late		50	Med.	Blunt	Light	3	Wrinkled	
Dwf. Telephone	Late	w. r.	24	Light	Pointed	Light	4½	Wrinkled	
Everbearing	Late	w. r.	28	Dark	Blunt	Light	3	Wrinkled	
Giant Stride	Late	w. r.	26	Dark	Pointed	Dark	4¾	Wrinkled	{No. 40. Icer.
Gilbo	Main	w. r.	26	Dark	Pointed	Dark	4½	Wrinkled	{Wy. Wonder.
Gradus	Early		32	Med.	Pointed	Med.	4	Wrinkled	
Hundredfold	Early		20	Dark	Pointed	Dark	4	Wrinkled	
Laxtonian	Early		16	Dark	Pointed	Dark	4½	Wrinkled	
Lax's. Progress	Early		15	Dark	Pointed	Dark	4½	Wrinkled	
Lax's. Superb	Early		17	Light	Pointed	Dark	4½	Wrinkled	
Little Marvel	Early		18	Dark	Pointed	Med.	4	Dimpled	arly Bird
Marrowfat Wh.	Late	w. r.	50	Med.	Blunt	Dark	3	Wrinkled	
Morse's Market	Main		26	Med.	Pointed	Light	3	Smooth	
Nott's Excelsior	Early		15	Dark	Pointed	Dark	4½	Wrinkled	
Onward	Main		26	Dark	Blunt	Light	2¾	Wrinkled	
Pedigree Ex. Ey.	1st Early	w. r.	26	Light	Blunt	Dark	2¾	Wrinkled	
Pilot	Early		30	Med.	Pointed	Light	2½	Smooth	First & Best
Premium Gem	Early	w. r.	22	Dark	Blunt	Med.	3½	Smooth	
Stratagem	Late		26	Dark	Blunt	Light	2¾	Wrinkled	
Teton	Main	w. r.	32	Dark	Pointed	Dark	4½	Wrinkled	
Thomas Laxton	Early		34	Dark	Blunt	Dark	3¾	Wrinkled	
World's Record	Early		24	Light	Pointed	Med.	3½	Wrinkled	

\*w. r.—Resistant to Fusarium wilt.



## CABBAGE

Variety	Season	Shape	Diam. Inches	Weight in lbs.	Yellows-resistant Strain
All Head	Mid	Med. flat	9	6	All Head Select
All Season	Mid	Flat globe	9	8	Wisc. All Season
Amer. Drumhead	Late	Flat	12	11	
Charleston Wakefield	Early	Conical	6½	4	(Racine Market
Copenhagen Market	Early	Globe	6	3½	Marion Market
Early Flat Dutch	Mid	Flat	11	10	
Early Round Dutch	Mid	Globe	7½	4½	
Glory of Enkhuizen	Mid	Globe	8	6	
Golden Acre	Early	Globe	6	3	Improved Globe
Green Acre	Early	Globe	6	3	Resist. Gold Acre
Hollander	Late	Globe	7½	6½	
Jersey Wakefield	Early	Conical	5	2½	Wisc. Hollander
Mammoth Red Rock	Late	Globe	7	7	Jersey Queen
Midseason Market	Mid	Globe	8	6	Red Hollander
Penn. State	Late	Flat globe	7½	5½	
Prem. Late Dutch	Late	Flat	10	8	
Red Dutch	Late	Globe	7	7	
Savoy Perfection	Mid	Globe	7	6	
Succession	Mid	Flat globe	10	8	
Winningstadt	Mid	Conical	6	3½	

## LETTUCE

Variety	Season	Type	Size	Outer Color	Seed	Use
Big Boston	Mid	Butter head	Medium	Dark green	White	Local
Brown Dutch	Mid	Butter head	Medium	Dark green	Black	Home
Chicken	Mid	Non-heading	Very tall	Dark green	White	Chickens
Dark Green Cos	Mid	Cos	Med. large	Dark green	White	Home
Grand Rapids	Early	Loose	Large	Light green	Black	Forcing
Hanson	Mid	Cabbage	Large	Yellow green	White	Local
Iceberg	Late	Cabbage	Large	Light green	White	Local
Imperial F	Late	Cabbage	Medium	Bright green	White	Shipping
Imperial D	Late	Cabbage	Medium	Bright green	White	Shipping
Imperial 44	Late	Cabbage	Med. large	Light green	White	Shipping
Imperial 152	Late	Cabbage	Med. large	Light green	White	Shipping
Imperial 847	Late	Cabbage	Med. large	Med. light green	Black	Shipping
Imperial 850	Late	Cabbage	Med. large	Med. light green	White	Shipping
May Queen	Early	Cabbage	Med. large	Light green	White	Forcing
New York	Late	Cabbage	Large	Bright green	White	Shipping
New York 12	Mid	Cabbage	Large	Lighter than N.Y.	White	Shipping
New York 515	Mid	Cabbage	Med. large	Brighter than 12	White	Shipping
Prize Head	Early	Loose	Medium	Tinged brown	White	Home
Salamander	Mid	Butter globe	Medium	Med. green	Black	Local
Simpson b. s.	Early	Loose	Large	Light green	Black	Local
Simpson Ey. Curled	Early	Loose	Med. large	Yellow-green	White	Local
Tennisball	Mid	Butter globe	Medium	Med. green	White	Local
White Boston	Mid	Butter head	Medium	Med. green	White	Local
White Paris	Mid	Cos	Med. large	Med. dark green	White	Local

## ONIONS

	Season	Shape	Exterior Color	Notes
Australian Brown	Mid	Flat globe	Brown	Strong flavor
Brigham Yellow Globe	Mid	Globe	Yellow	Good keeper
Crystal Wax	Early	Flat	White	For S. W. shippers
Early Yellow Globe	Early	Globe	Rich yellow	Good keeper
Ebenezer	Mid	Deep flat	Dk. yellow	For good sets
Golden Globe	Late	Long globe	Rich yellow	Good for sets
Nebuka	Perennial	Bunching	White	Does not bulb
Prizetaker	Mid	Large globe	Lt. yellow	Thin skin
Red Wethersfield	Late Mid	Deep flat	Purple red	For sets & storage
Southport Red Globe	Late Mid	Globe	Purple red	The best red
Southport White Globe	Late Mid	Globe	White	The best white
Southport Yellow Globe	Late Mid	Globe	Orange yellow	Good keeper
Sweet Spanish White	Late Mid	Globe	White	Large size
Sweet Spanish Yellow	Late Mid	Globe	Amber gold	Large size
White Portugal	Mid	Thick flat	White	Pickles & bunching
Yellow Danvers Globe	Mid	Globe	Med. yellow	Standard variety
Yellow Strasburg	Mid	Flat	Yellow	Hardy, keeps well

## MELONS

Variety	Season	Shape	Size Inches	Exterior	Wt. lb.	Flesh	Use, etc.
Banana	Main	Long	20x4	Lemon	7	Salmon	Home
Bender's Surprise	Main	Oval	8x7	Deep furrows	7	Salmon	Local
Burrell's Gem	Main	Long Oval	7x5	Heavy net	3½	Pink	Shipping
Cassaba	Late	Round	8x7	Yellow	6	White	Calif. Shipping
Eden Gem	Early	Globe	5½x5	Thick net	3	Green	Shipping
Emerald Gem	Early	Round	4½x5	Smooth ribs	2¼	Salmon	Home
Fordhook	Early	Oblate	4x5	Netted ribs	2	Salmon-yl.	Home
Hackensack	Early	Round	5x6	Deep furrows	3	Green	Home
Hale's Best	Early	Oval	6x5	Heavy net	4	Salmon	Shipping
Hearts of Gold	Main	Globe	6x6	Netted ribs	2½	Pink	Shipping
Honey Ball	Late	Globe	5x5	Nr. smooth	3½	Green	All-Purpose
Honey Dew	Late	Round	7½x7	Smooth	6	Green	Shipping
Honey Rock	Early	Globe	5½x5	Coarse net	3½	Salmon	Local
Milwaukee Mkt.	Early	Round	7x6	Shallow ribs	5½	Deep Pink	Home
Montreal Mkt.	Main	Round	7x8	Deep ribs	7½	Green	Home
Netted Gem (Rocky Ford)	Main	Round	5½x5	Heavy net	2½	Green	Local
No. 45	Main	Oval	6x5	Heavy net	4	Salmon	Shipping
Osage	Main	Oval	7x6	Dark green	5	Salmon	Home
Perfecto, Impd.	Main	Round	6x5	Medium net	3	Orange	Shipping
Pollock 10-25	Main	Globe	6x5½	Thick net	2½	Salmon	Shipping
Pride of Wisc.	Main	Round	6x5½	Sparse net	3½	Orange	Local
Queen of Colo.	Main	Round	6½x6	Coarse net	4	Orange	Local
Tip Top	Main	Oval	7x6	Slight ribs	6	Salmon	Local

\*—Mildew-resistant

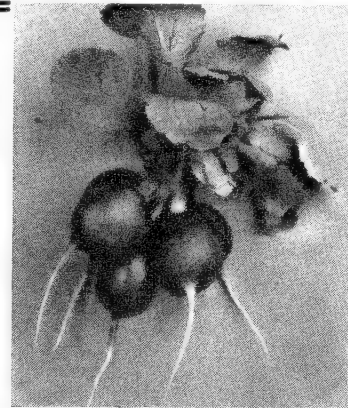


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## PEPPERS

Variety	Season	Flavor	Length Inches	Diam. Inches	Color		Shape
					Young	Mature	
Bell	Early	Sweet; hot ribs	3	2 3/4	Green	Red	Blocky
California Wonder	Mid	Sweet	4 1/2	3 1/2	Green	Crimson	Oblong
Cayenne	Mid	Very hot	5	3/4	Green	Red	Oblong pointed
Chinese Giant	Late	Sweet	4 1/2	4 1/2	Green	Scarlet	Square
Early Giant	Early	Sweet	4 1/2	3 1/2	Green	Red	Nr. square
Hungarian	Early	Pungent	6	1 1/2	Yellow	Crimson	Long pointed
Paprika	Mid	Mostly sweet	4	1 1/4	Green	Dk. red	Tapered
Pimento	Mid	Sweet	3 1/4	2 1/4	Green	Crimson	Heart
Red Chili	Late	Very hot	2	1/2	Green	Dk. red	Tapered
Ruby King	2nd Early	Sweet	5	3	Green	Red	Tapered
Squash (Tomato)	Late	Sweet	1 1/2	2 1/4	Green	Red	Tomato
Tabasco	Late	Hot	1	1/2	Yel-green	Red	Tapered
World Beater	Mid	Sweet	5	3 1/2	Green	Red	Oblong

## RADISHES

Variety	Season	Days	Outer Color	Shape
Cavalier	Summer	24	Scarlet	Olive
China Rose	Winter	55	Bright red	Oblong, 5" long
China White	Winter	60	White	Oblong, 8" long
Crimson Giant	Summer	30	Deep crimson	Turnip, 1 1/2" diam.
Early Scarlet Globe	Summer	24	Scarlet	Olive to globe
French Breakfast	Summer	25	Scarlet, white tip	Oblong, 1 1/2" long
Icicle	Summer	30	White	Tapered, 5" long
Long Scarlet	Summer	28	Deep scarlet	Tapered, 5" long
Scarlet Turnip white-tipped	Summer	27	Scarlet, white tip	Turnip, 1" diam.
Spanish Long	Winter	56	Black	Cylindrical, 8" long
Spanish Round	Winter	56	Black	Turnip, 3" diam.
Sparkler	Summer	27	Scarlet, white tip	Near globe, 1 1/2" diam.
White Strasburg	Summer	40	White	Tapered, 5" long

## TOMATOES

Variety	Season	Plant	Fruit		
			Shape	Color	Size
Bonny Best	Main	Medium	Oblate	Red	Med. large
Break o' Day	Early	*Medium	Globe	Red	Medium
Cardinal	Main	Strong	Semi-globe	Red	V. large
Chalk's Jewel	Main	Medium	Fl. globe	Red	Medium
Clark's Early	Early	Prolific	Oblate	Red	Medium
Cooper's Special	Main	Short	Globe	Pink	Medium
Earliana	Early	Short	Fl. globe	Red	Medium
Golden Queen	Late	Medium	Deep flat	Yellow	Large
Greater Baltimore	Main	Large	Flat	Red	Large
Grothen's Globe	Early	*Medium heavy	Globe	Red	Medium
Gulf State Mkt.	Main	Medium	Globe	Pink	Med. large
June Pink	Early	Short	Fl. globe	Pink	Medium
Livingston's Globe	Main	Strong	Globe	Pink	Large
Marglobe	Main	*Large	Globe	Red	Med. large
Oxheart	Main	Medium	Globe	Yellow	Med. large
Ponderosa	Late	Sprawling	Heart	Pink	Large
Pritchard	Late	Large	Flat	Pink	V. large
Rutgers	Main	*Self-Topping	Nr. globe	Red	Medium
Scarlet Dawn	Early	*Large	Globe	Red	Medium
Stokesdale	Early	Medium large	Globe	Red	Med. large
Stone	Late	Large	Globe	Red	Med. large
			Deep flat	Red	Large

\*Varieties so marked are in greater or less degree resistant to disease.

## WATERMELONS

Variety	Season	Color	Shape	Wt., lbs.	Seed	Use, etc.
Ala. Sweet	Mid	Green, striped	Oblong	25	White, mottled	Shipping
Chilean	Mid	Med. gn., striped	Thick oval	18	Black	Shipping
Cole's Early	Early	Dr. gn., striped	Thick oval	20	Black	Home
Dixie Queen	Mid	Lt. gn., striped	Thick oval	30	White	Shipping
Early Kansas	Mid	Dk. gn., striped	Thick oval	40	Brown	Local
Fla. Favorite	Early	Med. gn., striped	Long oval	30	White	Local
Fla. Giant	Late	Dark green	Round	50	Black	Shipping
Ga. Rattlesnake	Mid	Lt. gn., mottled	Oblong	30	White, bl. tip	Shipping
Golden Honey	Mid	Dark green; flesh yellow	Thick oval	20	Brown	Home
Graystone	Mid	Gray-green	Thick oval	35	White	Local
Halbert's Honey	2nd Early	Dark green	Cylindrical	30	White, bl. tip	Local
Hawkesbury (Grey Shipper)	Mid	Gray, veined	Oblong	35	Dark brown	Shipping, w.r.*
Irish Gray	Late	Light green	Oblong	30	White	Shipping
King & Queen	Mid	Cream, striped	Round	12	Black	Storing
Kleckley's Sweet	Mid	Dark green	Oblong cyl.	30	White, br. tip	Kleckley No. 6 is w.r.*
Klondike	2nd Early	Dark green	Thick oblong	25	Black	Klondike R 7 is w.r.*
Striped do	2nd Early	Green, mottled	Thick oblong	25	Bl. mottled	Shipping
Leesburg	Mid	Deep green	Oblong	30	White	Shipping, w.r.*
Northern Sweet	Early	Gn., thin stripes	Short oval	12	Brown, dk. edge	Home
Peerless	Late	Med. green	Short oblong	20	White	Home
Schochler	Late	Gn., faint stripes	Large, long	45	Brown	Shipping
Stone Mountain	Mid	Med. dk. green	Round-oval	40	White, bl.	Stone Mt. No. 5 is w.r.*
Thurmond Grey	Late	Gray-green	Long, cyl.	35	Brown	Shipping
Tom Watson	Late	Deep green	Cylindrical	35	Br., mottled	Shipping
Wondermelon	Mid	Dark green	Large oblong	35	White	Local

\*w.r.—resistant to Fusarium wilt.

## CUCUMBERS

	Use	Season	Spines	Length Inches	Diam. Inches	Color	Shape
A & C	Slicing	Mid	White	8½	2¼	Dark green	Cylindrical
Arlington	Slicing	Early	White	7½	2½	Med. green	Semi-blunt
Boston Pickling	Pickling	Early	Black	6	2¼	Med. green	Slight taper
Chicago Pickling	Pickling	Early	Black	6½	2¼	Med. green	Blunt ended
Clark's Special	Slicing	2nd Early	White	8	2½	Dark green	Tapered, blocky
Colorado	Slicing	Mid	White	8½	2¼	Very dark	Cylindrical
Davis Perfect	Slicing	2nd Early	White	9	2¼	Dark green	Tapered
Early Fortune	Slicing	2nd Early	White	8	2½	Dark green	Slight taper
Gherkin	Pickling	Early	Green	2½	1	Light green	Oval
Long Green, Imp'd.	Slicing	Mid	Black	11	2½	Dark green	Straight, warted
Lemon	Slicing	Mid	Black	3	2½	Lemon	Oval
Longfellow	Slicing	Late	White	12	2½	Very dark	Straight, blunt
Nat. Assn. Pickle	Pickling	Early	Black	6	2½	Dark green	Straight
Snow's Perfection	Pickling	Early	Black	5½	2¼	Dark green	Blunt ended
Stays Green	Slicing	Early	White	7	2¼	Dark green	V. slight taper
Straight-8	Slicing	Mid	White	8	2	Dark green	Cylindrical
Woodruff	Slicing	2nd Early	White	8	2½	Dark green	Taper to ends

## LIMA BEANS

Variety	Plant	Pod			Seeds		
		Length Inches	Width Inches	Seeds Per Pod	Size	Shape	Color
Baby Potato	Bush	2¾	¾	3-4	Small	Thick	Bright green
Burpee Imp'd.	Bush, large	5	1¼	4	Large	Thick, flat	Greenish white
Challenger	Pole	4½	1¼	4	Large	Thick	Pale green
Clark's Bush	Bush, small	2¾	¾	3-4	Small	Oval, flat	Green
Dreer's	Bush, large	3¼	1	3-4	Large	Thick, oval	Greenish white
Florida Butter	Pole	3¼	¾	3	Small	Oval	Buff, speckled
Fordhook	Bush, large	4	1	3-4	Large	Thick, oval	White
Henderson's	Bush, small	2¾	¾	3-4	Small	Oval, flat	White
Jackson Wonder	Bush	3	¾	3-4	Small	Flat	Buff, mottled
King of Garden	Pole	6	1¼	4-5	Large	Thick, flat	White
Large White	Pole	4½	1¼	4	Large	Squarish	White
Seibert's Early	Pole	4½	1¼	4	Large	Squarish	White
Sieva	Pole	3¼	¾	3-4	Small	Flat	White
Small White	Pole	3¼	¾	3-4	Small	Flat, oval	White
Wood's Prolific	Bush	3¼	¾	3-4	Small	Flat, oval	White
Yopp's Prolific	Pole	3½	¾	3-4	Medium	Flat	White

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# NAMES OF VEGETABLES IN FOREIGN LANGUAGES

English	French	German	Spanish	Italian
Anise.....	Anis Vert.....	Anis.....	Anis.....	Anise.....
Artichoke.....	Artichaut.....	Artischoke.....	Alcaucil.....	Carciofo.....
Asparagus.....	Asperge.....	Spargel.....	Esparrago.....	Asparagi.....
Balm.....	Citronnelle.....	Citronenmelisse.....	Toronjil.....	Melissa.....
Basil.....	Basilic.....	Basilikum.....	Albohaca.....	Basilico.....
Bean.....	Haricot.....	Bohne.....	Poroto.....	Fagioli.....
Broad Bean.....	Fèves.....	Gartenbohnen.....	Haba.....	Fava.....
Beet.....	Betterave.....	Roterrüben.....	Remolacha.....	Barbabietole.....
Borage.....	Bourrache.....	Boretsch.....	Borrajá.....	Borrano.....
Broccoli.....	Chou-Brocoli.....	Broccoli.....	Broculi.....	Cavolo Broccolo.....
Brussels Sprouts.....	Choux de Bruxelles.....	Rosenkohl.....	Col de Bruselas.....	Cavolo di Bruxelles.....
Cabbage.....	Choux.....	Kopfkohl.....	Repollo.....	Cavolo.....
Cabbage, Chinese.....	Chou de Chine.....	Chineser-Kohl.....	.....	Cavolo Chinese.....
Cabbage, Savoy.....	Chou de Milan.....	Wirsing.....	Repollo Crispo.....	Cavolo Verza.....
Caraway.....	Cumin des Prés.....	Kummel.....	Acaravea.....	Comino.....
Cardoon.....	Cardon.....	Cardonen.....	Cardo.....	Cardo.....
Carrot.....	Carotte.....	Karotten.....	Zanahoria.....	Carota.....
Cauliflower.....	Chou-fleur.....	Blumenkohl.....	Coliflor.....	Cavoli Fiori.....
Celery.....	Céleri.....	Sellerie.....	Apio.....	Sedano.....
Celery, Celeriac.....	Céleri Rave.....	Knollen-Sellerie.....	Apio-rabo.....	Sedano-rapa.....
Chervil.....	Cerfeuil.....	Kerbel.....	Perifolio.....	Cerfoglio.....
Chicory.....	Chicorée.....	Chichorienwurzel.....	Achicoria.....	Cichoria.....
Chicory, Kaffee.....	.....	Kaffee.....	.....	.....
Large Rooted.....	Chicorée a café.....	cichorienwurzel.....	Achicoria de raiz.....	Cichoria a cafe.....
Chives.....	Ciboulette.....	Schnittlauch.....	Cebollino.....	Cipollina.....
Collard.....	Chou.....	Junge-Kohl.....	Especie de Berza.....	Cavolo Verzatte.....
Coriander.....	Coriandre.....	Koriander.....	Coriandro.....	Coriandro.....
Corn Salad.....	Mâche.....	Feldsalat.....	Canonigo.....	Valentiana.....
Corn.....	Mais.....	Mais.....	Maiz.....	Mais.....
Corn, Sweet.....	Mais suevo.....	Zucker mais.....	Maiz dulce.....	Gran turco dolce.....
Cress.....	Cresson.....	Kresse.....	Lepidio.....	Crescione.....
Cress, Water.....	Cresson de fontaine.....	Brunnenkresse.....	Berro.....	Crescione delle fontane.....
Cucumber.....	Concombre.....	Gurke.....	Pepino.....	Cetriolo.....
Dandelion.....	Pissenlit.....	Lowenzahn.....	Amargon.....	Dente di Leone.....
Dill.....	Aneth.....	Dill.....	Eneldo.....	Aneto.....
Eggplant.....	Aubergine.....	Eierfruchte.....	Berenjena.....	Melanzana.....
Endive, Curled.....	Chicorée Frisée.....	Endivien.....	Endivia.....	Indivie ruccia.....
Endive, Broadleaf.....	Chicorée-Scarole.....	Eskariol.....	Escarola.....	Cicoria scarola.....
Fennel.....	Fenouil.....	Fenchel.....	Hinojo.....	Finocchio.....
Garlic.....	Ail.....	Knoblauch.....	Ajo.....	Aglio.....
Gourd.....	Couge a Manger.....	Speise-Kurbisse.....	Calabaza.....	Marrubio.....
Horehound.....	Marrube Blanc.....	Andorn.....	.....	.....
Horse Radish.....	Cochlearia rustique.....	Mecrettich.....	Taramayo.....	Raphano.....
Hyssop.....	Hyssope.....	Isop.....	Hisopo.....	Issopo.....
Kale.....	Chou Frisés d'hiver.....	Blatterkohl.....	Col que no repolla.....	Cavola senza testa.....
Kohlrabi.....	Chou Rave.....	Kohlrabi.....	Col Rabano.....	Cavola Rapa.....
Lavender.....	Lavande.....	Lavandel.....	Espiego.....	Lavanda.....
Leek.....	Poireau.....	Porree Oder Lauch.....	Puerro.....	Porro.....
Lentil.....	Lenille.....	Linse.....	Lenteja.....	Lentisschia.....
Lettuce.....	Laitues Pommées.....	Kopfsalat.....	Lechuga.....	Lattuga.....
Mangel Wurzel.....	Betterave fourragère.....	Runkeln.....	Remolacha forrajera.....	Barbabietola da forragio.....
Marjoram.....	Majoraine.....	Majoran.....	Majorana.....	Maggiorana.....
Mint.....	Menthe.....	Minze.....	Menta.....	Menta.....
Musk Melon.....	Melon brode.....	Melonen.....	Melon de Castilla.....	Melone Moscato.....
Mushroom.....	Champignon.....	Schwamm.....	Hongo.....	Fungo.....
Mustard.....	Moutarde.....	Senf.....	Mostaza.....	Commestibile.....
Okra.....	Gombo.....	Ocher.....	Quimbombo.....	Senapa.....
Onion.....	Oignons.....	Zwiebeln.....	Cebolla.....	Isisco.....
Orache.....	Arroche.....	Gartenmelde.....	Arnuelle.....	Cipolle.....
Parsley.....	Persil.....	Petersilie.....	Perejil.....	Atreplica.....
Parsnip.....	Panais.....	Pastinaken.....	Chirivía.....	Prezemolo.....
Pea.....	Pois.....	Erbsen.....	Arveja.....	Pastinaca.....
Peanut.....	Arachide.....	Erdnuss.....	Cacahue.....	Pisello.....
Pepper.....	Poivre.....	Pfeffer.....	Pimiento.....	Ceci de terra.....
Potato.....	Pomme de terre.....	Kartoffel.....	Papa.....	Peperone.....
Pumpkin.....	Potiron.....	Melonen Kurbiss.....	Calabaza.....	Patata.....
Radish.....	Radis.....	Radies.....	Rabano.....	Zucca.....
Rhubarb.....	Rhubarbe.....	Rhabarber.....	Ruibarbo.....	Ravanello.....
Rocket.....	Roquette.....	Rauke.....	Oruga, Jaramago.....	Rabarbaro.....
Rosemary.....	Rosmarin.....	Rosmarin.....	Romero.....	Rucola.....
Rue.....	Rue.....	Weinraute.....	Ruda.....	Rosemarino.....
Rutabaga.....	Chou-navet.....	Kohlrübe.....	Colinabo.....	Ruta.....
Saffron.....	Safran.....	Safran.....	Azafran.....	Cavalo navone.....
Sage.....	Sauge.....	Salbei.....	Salvia.....	Zafferano.....
Salsify.....	Salsifis.....	Salsitis.....	Salsifi.....	Salvia.....
Sorrel.....	Oseille.....	Sauerampfer.....	Acedera.....	Scorzabianca.....
Spinach.....	Epinards.....	Spinat.....	Espinaca.....	Acetosa.....
Spinach, New Zealand.....	Tetragone.....	Neuseelaudischer Spinat.....	Espinaca de Nueva Zealandia.....	Spinaci.....
Squash.....	Ecraser.....	Kurbiss.....	Zapallo.....	Tetragona.....
Sweet Potato.....	Potatè douce.....	Susse-Batata.....	Batata.....	Zucca.....
Swiss Chard.....	Poirée ou Bette.....	Beete (Mangold).....	Aelga.....	Patata dolce.....
Thyme.....	Thym.....	Thymian.....	Tomillo.....	Bista.....
Tomato.....	Tomates.....	Tomaten.....	Tomate.....	Timo.....
Turnip, Garden.....	Navets Potagers.....	Speise-Rüben.....	Nabo.....	Pomodoro.....
Turnip, Field.....	Navet Fourragers.....	Fitterrüben.....	Nabo Forrajero.....	Papa di cucina.....
Watermelon.....	Melon d'eau.....	Wasser-Melonen.....	Sandia.....	Rapa di forragio.....
.....	.....	.....	.....	Moschata.....

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SPINACH	RADISH
RUTABAGA	TURNIP
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# Vegetable Planting Chart

Vegetable	Depth to Cover (inches)	Space Between Rows	Space to Set Plants or Thin Out Seedlings	Time Required to Produce Crop Ready for Use	Approximate Yield per 20 ft. of Row	Seed Required to Sow One Acre	Time to Plant in Open Ground	
							South	North
Asparagus	Seeds, 1 in. Plants, 4 in.	3 to 4 ft.	12 in.	Seeds 4 years Plants 2 years	50 bunches of 1 doz. each for entire patch	4 lbs.	Autumn or early spring	Early spring
Beans (Limas, see below)	Bush	2 ft.	4 in.	60 to 90 days	8 qts.	50 lbs.	Late spring	May and June
	Pole	3 ft.	3 ft.	90 to 120 days	10 qts.	30 to 50 lbs.		
Beet	1/2 in.	18 in.	2 to 3 in.	60 to 80 days	5 doz. roots	8 to 14 lbs.	Feb. to April— Aug. to Sept.	April to Aug.
Broccoli	1 in.	2 1/2 ft.	24 in.	120 days	20 heads	4 ozs.		
Brussels Sprouts	1 in.	2 1/2 ft.	24 in.	120 days	20 qts.	4 ozs.	Jan. to July	May and June
Cabbage		2 1/2 ft.	18 to 24 in.	100 to 150 days	10 heads	4 ozs.	Oct. to Dec.— June and July	Mar. to June
Chinese Cabbage	1/2 in.	2 1/2 ft.	12 in.	80 to 100 days	20 heads			
Carrot	1 1/8 in.	2 ft.	2 to 4 in.	45 to 60 days	5 doz. roots	3 to 4 lbs.	Mar. and Apr.—Sept.	April to June
Cauliflower		2 to 3 ft.	24 in.	120 to 150 days	8 to 10 heads	4 ozs.	Jan. and Feb.—June	April to June
Celery		3 ft.	6 in.	100 to 120 days	2 doz. stalks	4 ozs.	Aug. and Oct.	May and June
Corn, Sweet	2 in.	3 ft.	12 in.	80 to 120 days	40 ears	8 to 10 lbs.	Feb. to April	May to July
Cucumber	1 1/4 in.	4 ft.	3 to hill	60 to 80 days	20 to 30 pickles	3 to 4 lbs.	Feb. and Mar.—Sept.	April to July
Eggplant		2 1/2 ft.	24 in.	100 to 120 days	30 to 40 fruits	5 to 6 ozs.	Feb. to April	April and May
Endive	1 1/4 in.	2 ft.	10 to 12 in.	60 to 80 days	30 to 40 plants	4 to 5 lbs.	Feb. to April	April and July
Kale	1 1/8 in.	2 1/2 ft.	12 in.	80 to 100 days	20 plants	4 to 5 lbs.	Oct. to Feb.	Aug. to Sept.— Mar. and Apr.
Leek	1/2 1/8 in.	2 ft.	4 in.	100 days	60 plants	4 lbs.	May to Sept.	Mar. to May
Lettuce	1/2 1/8 in.	2 ft.	10 to 12 in.	45 to 60 days	20 heads	1 1/2 to 2 lbs.	Sept. to Mar.	Mar. to Sept.
Melon, Musk	1/2 1/4 in.	4 ft.	3 to hill	100 to 120 days	30 fruits	3 to 4 lbs.	Feb. to April	April to June
Beans, Limas	Bush	3 ft.	24 in.	100 days	4 qts.	30 to 50 lbs.		
	Pole	4 ft.	3 ft.	120 days	5 to 6 qts.			
Onions	1/2 1/8 in.	18 in.	4 in.	80 to 110 days	80 onions 10 to 20 lbs. per row	3 to 4 lbs.	Oct. to Mar.	April to May
Onion Sets	1 in.	18 in.	2 in.	30 to 60 days	120 scallions	60 to 85 lbs.	Early spring	Autumn— Feb. to May
Peas	2 in.	2 1/2 ft.	1 in.	60 to 100 days	10 to 20 qts. of pods	90 to 180 lbs.	Sept. to April	Mar. to June
Pepper		3 ft.	2 ft.	100 days	10 doz. peppers	1/2 to 1 lb.	Early spring	May and June
Potatoes	4 in.	3 ft.	6 in.	100 days	10 to 15 lbs.		Jan. to April	Mar. to June
Potatoes, Sweet	3 in.	3 1/2 ft.	2 ft.	5 mos.			April and May	May and June
Pumpkin	2 1/2 in.	4 to 6 ft.	3 to hill	100 to 120 days	5 to 10 fruits	3 to 4 lbs.	April and May	May and July
Radish	1/2 in.	18 in.	1 to 4 in.	30 to 60 days	10 to 15 doz.	10 to 12 lbs.	Sept. to April	Mar. to Sept.
Rhubarb	1 in.	3 ft.	3 ft.	60 days	6 doz. stalks	3 lbs.		Early spring
Rutabaga	1/2 1/8 in.	2 ft.	6 in.	90 to 100 days	50 to 60 roots	2 to 4 lbs.	Aug. and Sept.	May and June
Spinach	1/2 1/4 in.	18 in.	4 in.	60 days	50 to 60 plants	15 to 20 lbs.	Sept. to Feb.	Sept. or very early spring
Spinach, N. Zealand	1 in.	18 in.	3 in.	2 mos.				
Squash	2 1/8 in.	4 to 6 ft.	3 to hill	100 to 120 days	2 doz. fruits, bushvar.	4 to 6 lbs.	Spring	April to July
Swiss Chard	1/2 in.	2 ft.	12 in.	90 to 100 days	20 plants	6 to 10 ozs.		
Tomato		3 to 4 ft.	3 ft.	100 to 120 days	15 to 20 lbs. per plant during season	2 ozs.	Dec. to Mar.	May to June
Turnip	1/2 1/8 in.	2 ft.	4 in.	60 to 80 days	60 to 80 roots	2 to 3 lbs.	Aug. to Oct.	April to Aug.
Watermelon	1/2 in.	6 ft.	4 to 6 ft.	3 to 4 mos.				

The time requirements for crops to reach edible size varies, of course, according to the seasons and varieties. Different soils also have a profound influence. A tomato, for instance, which in Southern New Jersey will mature in 90 days, may require from 100 to 110 days in sections further north having heavy clay soils. Allowance also must be made for the relative estimate of the yields, due to climatic and soil conditions. But the averages will be found to be fairly accurate on the basis of many years of observation.

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# Important SPRAYING Information



Manufacturers of insecticides and fungicides have scientifically prepared many sprays and dusts that have proved effective in the control and eradication of the numerous insects and fungus diseases that attack growing crops. These products are sold by the manufacturers under various trade names. In order to make it easier for the users of this Guide to ascertain which insecticides or fungicides to use in combating or controlling a certain pest or disease, the following table is arranged, giving the names of products that have been found effective.

American Cyanamid & Chemical Corp., 30 Rockefeller Plaza, New York, N. Y.

"Cyanogas"  
"Cyanogas G-Fumigant"

Bayer-Semesan Company (Inc.), Wilmington, Del.

New Improved "Ceresan"  
2% "Ceresan"  
"Semesan Jr."  
"Semesan Bel"  
"Semesan"  
"Nu-Green"  
Special "Semesan"

The A. S. Boyle Co., Jersey City, N. J.

"Ridz Garden Spray"  
"Ded Nicotine Spray"

California Spray-Chemical Corp., Richmond, Calif., Elizabeth, N. J.

"Ortho"  
"Extrax"  
"Greenol"  
"Nursery Volck"  
"Garden Volck"  
"Triox"

Hammond Paint & Chemical Co., Beacon, N. Y.

"B-B Dust"  
"Copper Solution"

"Formacide"  
"Grape & Rose Dust"  
"Liquid Slug Shot"  
"Naptoside"  
"Pyrethrum Powder"  
"Slug Shot Dust"  
"Sodium Oleate"  
"Stabilized Rotenone Dust"  
"Thrip Juice Spray"  
"Triad"  
"Whale Oil Soap"

Dow Chemical Co., Midland, Mich.  
The Dow Line

Kay-Fries Chemicals, Inc., New York, N. Y.

"Nicotrol"  
"Penetrol" — (spreader for arsenicals, Bordeaux and ground Derris)

The McCormick Sales Co., Baltimore, Md.

"Red Arrow Garden Spray"  
"Special Red Arrow Garden Spray"  
"Black Arrow No. 5000"  
"McCormick Rotenone Dust"  
"Rotenone Greenhouse Spray"

"Bee Brand Derris Powder"  
"Bee Brand Flea Powder"  
"Bee Brand Insecticidal Shampoo"  
"Bee Brand Disinfectant"

"Bee Brand Household Insect Spray"  
"Bee Brand Insect Powder"  
"Bee Brand Canary Lice Powder"

Mechling Bros. Chemicals, Div. General Chemical Co., Philadelphia, Pa.

"Filmfast"  
"Hydroxide"  
"Japtox"  
"Mechling's Scale Oil"  
"Mechling's Arsenate of Lead"  
"Mechling's Arsenate Calcium"  
"Mechling's Bordeaux Mixture"  
"Mechling's Dritomic Sulphur"  
"Mechling's Lime Sulfur Solution"  
"Mechling's Paris Green"  
"Nicotine Sulphate"  
"Pyrote"

B. G. Pratt Company, New York, N. Y.

"D-X"  
"Scalecide"  
"Sulfocide"

Tobacco By-Products & Chemical Corp., Louisville, Ky.

"Black Leaf 40"  
"Nico-Fume Liquid"

	Disease or Insect	What to Use
Apple and Pear	Codling Moth	Black Leaf 40; D-X combined with arsenate of lead; Mechling's Arsenate of Lead; Slug Shot Dust; Dow; Protex Colloidalized Arsenate of Lead.
	San Jose Scale	Mechling's Scale Oil; Nicotrol; Scalecide; Dow; Semesan.
	Scab	Mechling's Lime Sulfur Solution; Mechling's Dritomic Wetttable Sulfur; Dow; Semesan.
	Wooly Aphis	Black Leaf 40; D-X; Liquid Slug Shot; Mechling's Nicotine Sulfate; Nicotrol; Pyrote; Penetrol; Thrip Juice Spray; Triad; Dow; Ridz Garden Spray; Ded Nicotine Spray; Protex Colloidalized Rotenone and Sulphur.
Asparagus	Asparagus Beetle	D-X; Liquid Slug Shot; One-Spot; Mechling's Rotenone 400; Pyrote; Slug Shot Dust; Red Arrow Garden Spray; Stabilized Rotenone Dust; Dow; Protex Colloidalized Sulphur and Rotenone; Protex Rotenone; McCormick Rotenone Dust. Calif. Spray Products.
	Rust	Copper Solution; Dow; Protex Colloidalized Red Copper Oxide.
Aster	Aphis	Black Leaf 40; D-X; Liquid Slug Shot; Mechling's Nicotine Sulfate; Nicotrol; Red Arrow Garden Spray; McCormick Rotenone Dust; Nicotrol; O.K. Plant Spray; One-Spot; Pyrolid; Penetrol; Pyrote; Thrip Juice Spray; Triad; Dow; Ridz Garden Spray; Ded Nicotine Spray; Protex Colloidalized Sulphur and Rotenone; Protex Rotenone.
	Aster Beetle	D-X; Liquid Slug Shot; Mechling's Arsenate of Lead; Mechling's Nicotine Sulfate; One Spot; Red Arrow Garden Spray; Pyrote; Slug Shot Dust; Stabilized Rotenone Dust; Dow; Protex Colloidalized Sulphur and Rotenone; McCormick Rotenone Dust.
	Rust Leafspot	Dritomic Wetttable Sulfur; Sulfocide; Dow; Semesan.
Beans	Aphis	Black Leaf 40; D-X; Liquid Slug Shot; Nicotrol; One-Spot; Penetrol; Pyrote; Red Arrow Garden Spray; Sulrote; Thrip Juice Spray; Triad; Dow; Ridz Garden Spray; Ded Nicotine Spray; Protex Colloidalized Sulphur and Rotenone; Protex Rotenone. Calif. Spray Products.
	Mexican Bean Beetle	B-B Dust; D-X; Liquid Slug Shot; One-Spot; Pyrote; Slug Shot; Sulrote; Dow; Ridz Garden Spray; Protex Colloidalized Sulphur and Rotenone; Red Arrow Garden Spray; McCormick Rotenone Dust. Calif. Spray Products.
	Anthraco-nose, Powdery Mildew	Sulrote; Mechling's Bordeaux Mixture; Mechling's No. 20 Blight Dust; Sulfocide; Dow; Semesan. Calif. Spray Products.



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	Disease or Insect	What to Use
Beets	Leaf Spot	Sulrote; Dritomic Wettable Sulfur; Sulfocide; Dow; Semesan.
	Beet Leaf Hopper	D-X; Liquid Slug Shot; Sulrote; Pyrote; Dow; Ridz Garden Spray; Ded Nicotine Spray; Protex Colloidalized Sulphur and Rotenone; Protex Rotenone; McCormick Rotenone Dust; Black Arrow No. 5000. Calif. Spray Products.
Cabbage, Cauliflower, Brussels Sprouts, Turnip	Cabbage Worm	D-X; One-Spot; Penetrol; Pyrote; Slug Shot Dust; Mechling's Arsenate Calcium; Mechling's Rotenone 400; Stabilized Rotenone Dust; Sulrote; Dow; Ridz Garden Spray; Protex Colloidalized Sulphur and Colloidalized Rotenone; McCormick Rotenone Dust; Black Arrow No. 5000; Red Arrow Garden Spray. Calif. Spray Products.
Carrot Parsnip	Web Worm	Mechling's Arsenate of Lead; Dow; Protex Colloidalized Arsenate of Lead. Calif. Spray Products.
Carnation	Thrips	Black Leaf 40; D-X; Liquid Slug Shot; Nico-Fume Liquid; Nicotrol; Penetrol; Mechling's Nicotine Sulphate; Red Arrow Garden Spray; Black Arrow No. 5000; Pyrote; Sulrote; Thrip Juice Spray; Dow; Ridz Garden Spray; Ded Nicotine Spray; Protex Colloidalized Sulphur and Rotenone; Protex Rotenone.
	Aphis	Black Leaf 40; D-X; Liquid Slug Shot; Mechling's Nicotine Sulfate; Nico-Fume Liquid; Red Arrow Garden Spray; One-Spot; Pyrote; Thrip Juice Spray; Triad; Dow; Ridz Garden Spray; Ded Nicotine Spray; Protex Colloidalized Sulphur and Rotenone; Protex Rotenone.
	Caterpillars	D-X and Arsenate of Lead; One-Spot; Mechling's Arsenate of Lead; Pyrote; Dow; Ridz Garden Spray; Protex Colloidalized Arsenate of Lead; Red Arrow Garden Spray. Cyanogas.
Celery	Blight	Copper Solution; Grape & Rose Dust; Hydroxide; Mechling's Bordeaux Mixture; Triad; Dow; Semesan. Calif. Spray Products.
	Tarnished Plant Bug	D-X; Mechling's Nicotine Sulfate; Pyrote; Dow; Protex Colloidalized Sulphur & Rotenone; Protex Rotenone; Red Arrow Garden Spray. Calif. Spray Products.
Cherry	Rot	Dritomic Wettable Sulfur; Sulfocide; Dow; Semesan.
	Curculio	D-X and Arsenate of Lead; Mechling's Arsenate of Lead; Penetrol; Dow; Protex Colloidalized Arsenate of Lead. Calif. Spray Products.
Chrysanthemum	Aphis	Black Leaf 40; D-X; Killogen; Liquid Slug Shot; Mechling's Nicotine Sulfate; Nico-Fume Liquid; Nicotrol; One-Spot; Penetrol; Pyrote; Thrip Juice Spray; Triad; Dow; Ridz Garden Spray; Ded Nicotine Spray; Protex Rotenone; Red Arrow Garden Spray. Cyanogas.
	Red Spider	D-X; One-Spot; Pyrote; Dow; Ridz Garden Spray; Protex Colloidalized Rotenone; Protex Colloidalized Sulphur & Rotenone; Rotenone Greenhouse Spray.
	Leaf Hopper	D-X; Mechling's Nicotine Sulfate; One-Spot; Pyrote; Dow; Ridz Garden Spray; Ded Nicotine Spray; McCormick Rotenone Dust.
	Thrips	Black Leaf 40; D-X; Liquid Slug Shot; Mechling's Nicotine Sulfate; Nico-Fume Liquid; McCormick Rotenone Dust; Nicotrol; Penetrol; Pyrote; Thrip Juice Spray; Dow; Ridz Garden Spray; Ded Nicotine Spray; Protex Colloidalized Sulphur; Protex Colloidalized Sulphur & Rotenone. Cyanogas.
	Wilt Mildew, Leaf Spot	Mechling's Dritomic Wettable Sulfur; Sulfocide; Dow; Protex Colloidalized Sulphur; Semesan.
Corn—Sweet	Ear Worm	D-X; Mechling's Arsenate of Lead; Slug Shot Dust; Dow; Protex Colloidalized Arsenate of Lead; Red Arrow Garden Spray; McCormick Rotenone Dust. Calif. Spray Products.
Cucumber	Striped Beetle	D-X; Liquid Slug Shot; Mechling's Arsenate Calcium; One-Spot; Pyrote; Slug Shot Dust; Stabilized Rotenone Dust; Sulrote; Dow; Protex Rotenone; Protex Colloidalized Sulphur & Rotenone; McCormick Rotenone Dust; Red Arrow Garden Spray. Calif. Spray Products.
	Aphis	Black Leaf 40; D-X; Liquid Slug Shot; Nicotrol; One-Spot; Penetrol; Pyrote; McCormick Rotenone Dust; Thrip Juice Spray; Triad; Dow; Ridz Garden Spray; Ded Nicotine Spray; Protex Rotenone; Protex Colloidalized Sulphur & Rotenone; Red Arrow Garden Spray.
	Anthraxnose, Dewy Mildew, Melon Rust	Mechling's Bordeaux Mixture; Sulfocide; Dow; Semesan. Calif. Spray Products.
Currant	San Jose Scale	Mechling's Lime Sulfur Solution; Penetrol; Scalecide; Dow; Semesan.
	Worm	Black Leaf 40; D-X; Mechling's Rotenone 400; Slug Shot Dust; Dow; Protex Colloidalized Arsenate of Lead; Protex Rotenone.
Dahlia	Aphis	Black Leaf 40; D-X; Liquid Slug Shot; Mechling's Nicotine Sulfate; Nico-Fume Liquid; Protex Rotenone; Protex Colloidalized Sulphur & Rotenone; Nicotrol; One-Spot; Penetrol; Pyrote; Thrip Juice Spray; Triad; Dow; Ridz Garden Spray; Ded Nicotine Spray; Red Arrow Garden Spray.
	Beetles	D-X; Mechling's Arsenate of Lead; Mechling's Rotenone 400; Dow; Protex Rotenone; Protex Colloidalized Sulphur & Rotenone; Red Arrow Garden Spray.
	Tarnished Plant Bug	D-X; Liquid Slug Shot; Mechling's Nicotine Sulfate; Pyrote; Slug Shot Dust; Dow; Protex Rotenone; Protex Colloidalized Sulphur & Rotenone; Red Arrow Garden Spray.
	Red Spider	D-X; Pyrote; Dow; Ridz Garden Spray; Protex Rotenone; Protex Colloidalized Sulphur & Rotenone; McCormick Rotenone Dust; Rotenone Greenhouse Spray.
	Leaf Hopper	Mechling's Nicotine Sulfate; Pyrote; Dow; Ridz Garden Spray; Ded Nicotine Spray; Protex Rotenone; Protex Colloidalized Sulphur & Rotenone; Red Arrow Garden Spray.
	Thrips	Black Leaf 40; D-X; Liquid Slug Shot; Mechling's Nicotine Sulfate; Nicotrol; Penetrol; Pyrote; Thrip Juice Spray; Dow; Ridz Garden Spray; Ded Nicotine Spray; Protex Rotenone; Protex Colloidalized Sulphur & Rotenone; Red Arrow Garden Spray.
	Mildew	Dritomic Wettable Sulfur; Sulfocide; Dow; Protex Colloidalized Sulphur; Semesan.
Ferns	Mealy Bug	D-X; Liquid Slug Shot; Nicotrol; One-Spot; Pyrote; Dow; Ridz Garden Spray; Protex Rotenone; Protex Colloidalized Sulphur & Rotenone; Red Arrow Garden Spray. Cyanogas.
	White Fly	D-X; Pyrote; Thrip Juice Spray; Dow; Ridz Garden Spray; Protex Rotenone; Protex Colloidalized Sulphur & Rotenone; Protex Colloidalized Sulphur; Red Arrow Garden Spray; Black Arrow No. 5000. Cyanogas.
	Aphis	Black Leaf 40; D-X; Liquid Slug Shot; Mechling's Nicotine Sulfate; Nico-Fume Liquid; Red Arrow Garden Spray; Nicotrol; One-Spot; Penetrol; Pyrote; Thrip Juice Spray; Triad; Dow; Ridz Garden Spray; Ded Nicotine Spray; Protex Rotenone; Protex Colloidalized Sulphur & Rotenone. Cyanogas.
Gooseberry	Mildew	Copper Solution; Dritomic Wettable Sulfur; Grape & Rose Dust; Sulfocide; Triad; Dow; Semesan.
	Worm	D-X and Arsenate of Lead; Slug Shot Dust; Mechling's Rotenone 400; Dow; Protex Rotenone; Protex Colloidalized Arsenate of Lead.
Lettuce	Aphids	D-X; Liquid Slug Shot; Nico-Fume Liquid; Nicotrol; One-Spot; Penetrol; Pyrote; Thrip Juice Spray; McCormick Rotenone Dust; Triad; Dow; Ridz Garden Spray; Ded Nicotine Spray; Protex Rotenone; Protex Colloidalized Sulphur & Rotenone. Calif. Spray Products.
	Mildew	Copper Solution; Grape & Rose Dust; Hydroxide; Liquid Slug Shot; Triad; Dow; Semesan. Calif. Spray Products.
	Gray Mould	Hydroxide; Dow; Protex Colloidalized Red Copper Oxide; Semesan.

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	Disease or Insect	What to Use
Nasturtium	Aphis	Black Leaf 40; D-X; Liquid Slug Shot; Mechling's Nicotine Sulfate; Nico-Fume Liquid; Red Arrow Garden Spray; McCormick Rotenone Dust; Nicotrol; One-Spot; Penetrol; Pyrote; Thrip Juice Spray; Triad; Dow; Protex Rotenone; Protex Colloidalized Sulphur & Rotenone. Cyanogas.
Onion	Thrips	Black Leaf 40; D-X; Mechling's Nicotine Sulfate; Naptoside; Nico-Fume Liquid; Nicotrol; Penetrol; Pyrote; Dow; Protex Rotenone; Protex Colloidalized Sulphur & Rotenone; Bee Brand Derris Powder. Calif. Spray Products.
Peas	Blight	Copper Solution; Grape & Rose Dust; Mechling's Bordeaux Mixture; Triad; Dow; Semesan. Calif. Spray Products.
	Aphids	Black Leaf 40; D-X; Liquid Slug Shot; Mechling's Rotenone 400; Nico-Fume Liquid; Nicotrol; One-Spot; Penetrol; Pyrote; Thrip Juice Spray; Triad; Dow; Protex Rotenone; Bee Brand Derris Powder. Calif. Spray Products.
Plum	Rot	Dritomic Wettable Sulfur; Sulfocide; Dow; Semesan.
	Curculio	D-X and Arsenate of Lead; Mechling's Arsenate of Lead; Penetrol; Dow; Protex Colloidalized Arsenate of Lead.
Potato	Early Blight	Copper Solution; Grape & Rose Dust; Hydroxide; Triad; Dow; Semesan. Calif. Spray Products.
	Late Blight	Copper Solution; Grape & Rose Dust; Hydroxide; Dow; Semesan.
	Potato Bugs	Hydroxide; Insectogen; Mechling's Paris Green; One-Spot; Penetrol; Slug Shot Dust; Dow; Protex Colloidalized Sulphur & Rotenone. Calif. Spray Products.
Radish	Cabbage Worm	D-X; Liquid Slug Shot; Mechling's Arsenate Calcium; One-Spot; Penetrol; Pyrote; Slug Shot Dust; Dow; Protex Colloidalized Arsenate of Lead; McCormick Rotenone Dust; Black Arrow No. 5000; Red Arrow Garden Spray. Calif. Spray Products.
	Harlequin Bug	D-X; Liquid Slug Shot; Mechling's Nicotine Sulfate; Dow; Protex Colloidalized Sulphur & Rotenone; McCormick Rotenone Dust; Black Arrow No. 5000; Red Arrow Garden Spray.
	Aphids	Black Leaf 40; D-X; Liquid Slug Shot; Nico-Fume Liquid; Nicotrol; One-Spot; Penetrol; McCormick Rotenone Dust; Black Arrow No. 5000; Red Arrow Garden Spray; Pyrote; Thrip Juice Spray; Triad; Dow; Protex Rotenone; Protex Colloidalized Sulphur & Rotenone. Calif. Spray Products.
Roses	Red Spider	Dritomic Wettable Sulfur; D-X; Liquid Slug Shot; One-Spot; Pyrote; Thrip Juice Spray; Red Arrow Garden Spray; Bee Brand Derris Powder; Rotenone Greenhouse Spray; Dow; Protex Rotenone; Protex Colloidalized Sulphur & Rotenone. Calif. Spray Products.
	Aphis	Black Leaf 40; D-X; Liquid Slug Shot; Mechling's Nicotine Sulfate; Nico-Fume Liquid; Red Arrow Garden Spray; Nicotrol; One-Spot; Penetrol; Pyrote; Thrip Juice Spray; Triad; Dow; Protex Rotenone; Protex Colloidalized Sulphur & Rotenone.
	Brown Canker Black Spot Mildew	Mechling's Bordeaux Mixture; Scalecide; Sulfocide; Dow; Semesan. Calif. Spray Products.
	Leaf Roller	Liquid Slug Shot; Mechling's Rotenone 400; Thrip Juice Spray; Dow; Protex Colloidalized Sulphur & Rotenone; Special Red Arrow. Calif. Spray Products.
	Beetles	D-X and Arsenate of Lead; Liquid Slug Shot; Mechling's Arsenate Lead; One-Spot; Red Arrow Garden Spray; Pyrote; Slug Shot Dust; Stabilized Rotenone Dust; Dow; Protex Colloidalized Arsenate of Lead; Protex Colloidalized Sulphur & Rotenone.
	Slugs	D-X; Pyrote; Dow; Protex Colloidalized Sulphur & Rotenone; Protex Rotenone; Red Arrow Garden Spray; Black Arrow No. 5000. Calif. Spray Products.
Spinach	Flea Beetle	D-X; Mechling's Rotenone 400; One-Spot; Slug Shot; Stabilized Rotenone Dust; Dow; Protex Rotenone. Calif. Spray Products.
	Aphids	D-X; Liquid Slug Shot; Nico-Fume Liquid; Nicotrol; One-Spot; Penetrol; Pyrote; Thrip Juice Spray; Dow; Protex Colloidalized Sulphur & Rotenone; Protex Rotenone.
	Leaf Miner	Liquid Slug Shot; Mechling's Nicotine Sulfate; Dow; Protex Colloidalized Sulphur & Rotenone. Calif. Spray Products.
Squash	Striped Cucumber Beetle	D-X; Liquid Slug Shot; Mechling's Rotenone 400; One-Spot; Slug Shot Dust; Stabilized Rotenone Dust; Red Arrow Garden Spray; McCormick Rotenone Dust; Dow; Protex Colloidalized Sulphur & Rotenone; Protex Rotenone; Protex Colloidalized Sulphur.
	Squash Bug	D-X; Liquid Slug Shot; One-Spot; Pyrote; Dow; Protex Colloidalized Sulphur & Rotenone; Protex Rotenone; Protex Colloidalized Sulphur; Red Arrow Garden Spray; McCormick Rotenone Dust. Calif. Spray Products. Cyanogas.
	Squash Vine Borer	Black Leaf 40; Liquid Slug Shot; Dow; Protex Colloidalized Sulphur & Rotenone; Protex Rotenone; Protex Colloidalized Sulphur; McCormick Rotenone Dust. Calif. Spray Products.
Sweet Pea	Aphis	Black Leaf 40; D-X; Liquid Slug Shot; Nico-Fume Liquid; Nicotrol; Red Arrow Garden Spray; Bee Brand Derris Powder; McCormick Rotenone Dust; One-Spot; Penetrol; Pyrote; Thrip Juice Spray; Triad; Dow; Protex Colloidalized Sulphur; Protex Colloidalized Sulphur and Rotenone. Calif. Spray Products.
	Mildew Blight	Mechling's Bordeaux Mixture; Dow; Semesan. Calif. Spray Products.
Tomato	Anthracnose	Mechling's Bordeaux Mixture; Thrip Juice; Dow; Semesan.
	Flea Beetle	Mechling's Bordeaux Mixture; Dow; Protex Colloidalized Red Copper Oxide; McCormick Rotenone Dust. Calif. Spray Products.
	Horn Worm	D-X and Arsenate of Lead; Mechling's Arsenate Lead; Dow; Protex Colloidalized Arsenate of Lead. Calif. Spray Products.
	Leaf Spot	Copper Solution; Mechling's Bordeaux Mixture; Sulfocide; Dow; Protex Colloidalized Red Copper Oxide. Calif. Spray Products.
	Tomato Worm	D-X and Arsenate of Lead; Liquid Slug Shot; Mechling's Arsenate Calcium; Slug Shot Dust; Red Arrow Garden Spray; McCormick Rotenone Dust; Sulrote; Dow; Protex Colloidalized Arsenate of Lead; Protex Colloidalized Sulphur & Rotenone. Calif. Spray Products.
Watermelon and Muskmelon	Aphis	Black Leaf 40; D-X; Liquid Slug Shot; Mechling's Nicotine Sulfate; Nicotrol; McCormick Rotenone Dust; Red Arrow Garden Spray; Penetrol; Pyrote; Thrip Juice Spray; Triad; Dow; Protex Rotenone; Protex Colloidalized Sulphur & Rotenone. Calif. Spray Products.
	Beetles	One-Spot; Pyrote; Slug Shot Dust; Stabilized Rotenone Dust; Dow; Protex Colloidalized Sulphur & Rotenone; Protex Rotenone; McCormick Rotenone Dust. Calif. Spray Products.
	Anthracnose	Liquid Slug Shot; Mechling's Bordeaux Mixture; Thrip Juice; Dow; Semesan. Calif. Spray Products.



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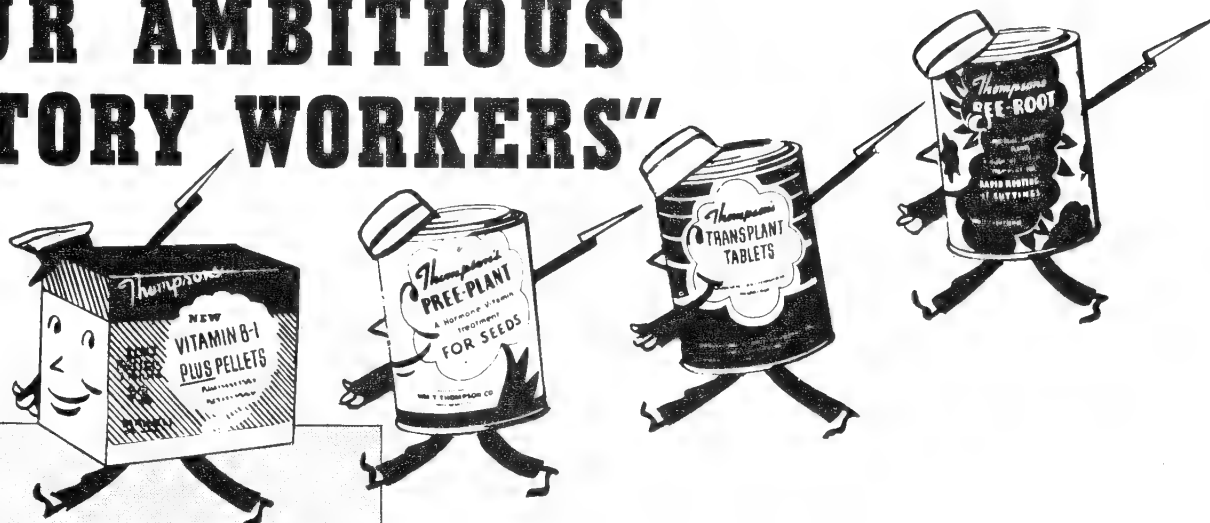
# FIELD AND GRASS SEED INFORMATION

This information is made possible through the courtesy of Joe Bohl, Manager, The Chas. H. Lilly Co., Seattle, Washington, who has spent much time in its gathering and assembly.

CROP	Botanical Name	Principal Uses	Average Height Inches	Soil Adaptations	Life	General Information
ALFALFA	Medicago sativa	Seed, Hay, Pasture	20 to 30	Fertile, deep, well drained loam	Long-lived perennial	Best if seeded without nurse crop. Needs firm, fine seedbed. Cut for hay when 1/4 to 1/2 in bloom. Keep free of weeds.
ARTICHOKES, Jerusalem	Helianthus tuberosus	Winter succulence	72 to 96	Fertile bottom lands	Annual	Plant during April or early May, 5 inches deep in rows 36 to 42 inches apart, with plants 18 to 24 inches apart.
BENT GRASSES—						
ASTORIA	Agrostis tenuis, Astoriana	Seed, Lawn, Pasture	16 to 24	Moist, fertile, heavy soils	Long-lived perennial	More versatile than Seaside Bent. Thrives better on uplands but must have firm soil and abundant moisture
DOMESTIC Mixed	Agrostis spp.	Lawn, Pasture	16 to 20	Moist, fertile, heavy soils	Long-lived perennial	Best of the Bents for farm use. Adapted to varied soil conditions and cheapest in price.
HIGHLAND	Agrostis tenuis, Oregonensis	Seed, Lawn, Pasture	10 to 18	Widely adapted	Long-lived perennial	Grows well on poor, thin soil. Withstands long periods of water submersion and drought.
COLONIAL (Rhode Island)	Agrostis tenuis	Lawn, Pasture	16 to 24	Moist, heavy, slightly acid soils	Long-lived perennial	Does not spread by rootstalks like other Bents. Good in mixtures—makes early and late growth.
SEASIDE	Agrostis maritima	Seed, Lawn, Pasture	12 to 20	Moist bottom lands, slightly acid	Long-lived perennial	Adapted to pasture mixtures on moist, slightly acid lands. Suffers greatly from drought.
BLUEGRASSES—						
BULBOUS	Poa bulbosa	Winter Pasture, Hay, Seed	8 to 16	Fertile, well-drained lands		Grows during winter and early spring. Dormant in summer. Grows well with Alfalfa; used mostly on shallow rocky soil.
CANADA	Poa compressa	Pasture	12 to 20	Widely adapted	Long-lived perennial	Withstands drought, cold and close grazing. Thrives at high altitudes and on poor soils. Makes dense low growth.
KENTUCKY	Poa pratensis	Seed, Lawn, Pasture	18 to 30	Fertile, moist soils of low acidity	Long-lived perennial	Very nutritious. Relished by all livestock. Improves with age on suitable soils.
SHADY (Wood Meadow Grass)	Poa nemoralis	Shady Lawns, Shady Pasture	18 to 24	Fertile, moist, shaded soils	Long-lived perennial	Does not endure intense sunshine and drought. Thrives best on shaded or semi-shaded lands.
SHADY (Rough-Stalked Meadow)	Poa trivialis	Shady Lawns, Shady Pasture	18 to 24	Fertile, moist, shaded soils	Long-lived perennial	Does not endure intense sunshine and drought. Thrives best on shaded lands that are moist and fertile.
BROMEGRASS, Smooth	Bromus inermis	Hay, Pasture	20 to 30	Deep clay or clay loam	Long-lived perennial	Adapted to regions of light rainfall. Roots penetrate 5 to 6 feet. Not adapted to coast region.
BUCKWHEAT	Fagopyrum esculentum	Seed, Green Manure	24 to 36	Wide adaptation	Annual	Good green manure crop. Sometimes used as smother crop for weeds. Good catch crop and bee pasture.
CEREALS—						
BARLEY, Winter	Hordeum vulgare, 8 row Hordeum distichon, 2 row	Seed, Hay	30 to 40	Loams and clays	Winter Annual	Grown mainly as a grain crop. Used for feed and malting. Best nurse crop for starting red clover.
BARLEY, Spring	Hordeum vulgare, 8 row Hordeum distichon, 2 row	Seed, Hay	30 to 40	Loams and clays	Annual	Grown mainly as a grain crop. Used for feed and malting. The beardless varieties make good hay.
OATS, Winter	Avena sativa	Seed, Hay	30 to 60	Moist clay loams	Winter Annual	Grown for grain and companion crop for vining legumes. Good yielder for forage and grain.
OATS, Spring	Avena sativa Avena byzantina, Red	Seed, Hay	30 to 60	Moist clay loams	Annual	Grown for grain, forage and companion crop. Good yielder.
RYE, Winter	Secale cereale	Seed, Hay, Pasture	36 to 72	Moderate drainage, wide adaptation	Winter Annual	Best grain and forage crop for light dry soils. Lodges badly on fertile moist soils.
RYE, Spring	Secale cereale	Seed, Hay, Pasture	36 to 60	Moderate drainage, wide adaptation	Annual	Best grain and forage crop for light dry soils. Lodges badly on fertile moist soils.
WHEAT, Winter	Triticum vulgare, common Triticum compactum, club	Seed, Hay	36 to 60	Bench and bottom lands	Winter Annual	Standard grain crop for fertile lands. Used as a hay crop in some areas, but most profitable as a grain crop.
WHEAT, Spring	Triticum vulgare, common Triticum compactum, club	Seed, Hay	36 to 60	Bench and bottom lands	Annual	Standard grain crop for fertile lands. Used as a hay crop in some areas, but most profitable as a grain crop.
CHEAT OR CHESS	Bromus secalinus	Seed, Hay	24 to 48	Poor lowlands, waste places	Winter Annual	Makes good horse hay on wet acid soils. Sometimes smute badly.
CLOVERS—						
ALSIKE	Trifolium hybridum	Seed, Hay	18 to 30	Fertile, acid lowlands	Short-lived perennial	Thrives best where cool and moist. Endures poor drainage. Medium long-lived on suitable soil.
LADINO	Trifolium repens latum	Seed, Pasture	10 to 14	Moist, fertile soils	Short-lived perennial	Shallow rooted. Requires abundant moisture and fertility in surface soil. Very close grazing is injurious.
WHITE	Trifolium repens	Seed, Pasture	4 to 8	Moist, fertile soils	Short-lived perennial	A good pasture plant, especially in mixtures. Long season and long-lived on fertile, moist soil.
RED	Trifolium pratense	Seed, Hay, Pasture	20 to 28	Well drained, fertile soils	Short-lived perennial	Widely grown legume for forage and seed. Adapted to short rotations. Requires an abundance of lime.
MAMMOTH RED	Trifolium pratense	Hay, Pasture	24 to 48	Fertile uplands, moderately moist	Biennial	Two weeks later than medium red clover. Produces but one crop. Heavy yielder of coarse forage.
SWEET, Yellow	Melilotus officinalis	Hay, Pasture, Green Manure	24 to 48	Light to medium soils of low acidity	Biennial	Better adapted to pasture than white blossom sweet Clover. Does not thrive on acid soils.
SWEET, White	Melilotus alba	Seed, Pasture, Hay, Green Manure	48 to 84	Light to medium soils of low acidity	Biennial	Firm seed bed required. Quite tolerant of Alkali. More drought resistant than alfalfa.
CRIMSON	Trifolium incarnatum	Seed, Green Manure	24 to 48	Well drained, fertile soils	Biennial	A good soil improver. Seed shatters easily and careful harvesting is necessary. Makes good summer pasture.
STRAWBERRY	Trifolium fragiferum	Alkali Pastures	4 to 8	Moist alkali soils	Long-lived perennial	Most alkali tolerant of all legumes. Makes creeping growth. Adapted only where moisture is abundant.
CORN, Field	Zea mays	Silage, Grain, Green Feed	72 to 96	Fertile loams or clays, well drained	Annual	Successful only as cultivated crop. Good silage. Early maturing varieties for Pacific Northwest.
CRESTED DOGS-TAIL	Cynosurus cristatus	Pasture	10 to 18	Cool, moist, fertile soils	Long-lived perennial	Unimportant as a general farm grass. Adapted to shady places. Used some in shady lawns.
CRESTED WHEAT-GRASS	Agropyron cristatum	Seed, Pasture	16 to 30	Dry lands	Long-lived perennial	Excellent dry land grass for arid regions. A heavy seed producer.
FESCUES—						
CHEWING'S	Festuca rubra fallax	Seed, Lawn, Pasture	12 to 20	Well drained, fertile benches	Long-lived perennial	Very fine leaved, makes dense bottom growth—good lawn grass. Quite drought resistant.
CREEPING RED	Festuca rubra	Lawn, Pasture	8 to 16	Well drained, fertile benches	Long-lived perennial	Adapted to lawn and pasture use on shady, moist soils of abundant fertility.
MEADOW	Festuca elatior pratensis	Hay, Pasture	24 to 36	Moist meadowlands	Short-lived perennial	Starts in early spring and persists until late fall. Cold resistant.
TALL	Festuca elatior	Seed, Hay, Pasture	24 to 40	Wide soil adaptation	Long-lived perennial	Grows from early spring to late fall. Particularly good for summer pasture.
FLAX, Fiber	Linum usitatissimum	Fiber	24 to 36	Fertile clay loams	Annual	Requires clean land—its sparse leaf growth does not check weeds. Grown for fiber and seed.
FLAX, Seed	Linum usitatissimum	Seed	18 to 30	Fertile clay loams	Annual	Requires clean, weed-free land. Grown for seed only.
KALE, 1000 Headed	Brassica oleracea acephala	Winter succulence	20 to 30	Fertile loams	Biennial	Start plants in seed bed. Transplant in early June. Ready for feeding after August 15th. Winter hardy.
MEADOW FOXTAIL	Alopecurus pratensis	Seed Pasture	15 to 30	Low, poorly drained lands	Long-lived perennial	Excellent pasture on periodically submerged lands. Seed hard stripped—ripens unevenly and shatters readily.
MILLETS—						
FOXTAIL	Chaetochloa italica	Hay, Seed	18 to 24	Warm, fertile loams	Annual	Best Millet for hay. Matures in 75 to 90 days. Best if cut before seed matures. Plant when soil is warm.
JAPANESE	Echinochloa frumentacea	Pasture, Green Feed	30 to 48	Loams and shot clays in coastal areas	Annual	Especially adapted to the coastal fog belt. Yields large tonnage of green feed. Difficult to cure for hay.
PROSO or HOG	Panicum miliaceum	Seed, Green Feed	18 to 36	Warm loam soils	Annual	Seed when soil is warm. Rapid grower—matures in 70 to 90 days. Yields heavy seed crop.
ORCHARD GRASS	Dactylis glomerata	Seed, Hay, Pasture	30 to 42	Well drained soils	Long-lived perennial	Grows well in shade. Early spring grower. Requires good drainage. Withstands dry summers.
PEAS, FIELD—						
WINTER, Austrian	Pisum arvense	Seed, Hay, Silage	36 to 54	Clay loams and bottom lands	Winter Annual	Best adapted for fall planting. Grown chiefly as a seed crop for shipment to the South.
SPRING, Canada	Pisum arvense	Seed, Hay, Pasture, Silage	24 to 48	Well drained clay and loam soil	Annual	Suited to many heavy soils which are well supplied with moisture. A good cash crop.
MARROWFAT	Pisum arvense	Seed, Hay, Pasture, Silage	30 to 48	Clay and loams	Annual or Winter Annual	Should be planted during the fall or winter on heavier soils having good drainage.

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CROP	Botanical Name	Principal Uses	Average Height Inches	Soil Adaptations	Life	General Information
RAPE	Brassica napus	Seed, Pasture	6 to 12	Fertile loams and bottoms	Biennial	Good pasture for hogs and sheep. A dependable source of midsummer green feed in many districts.
REDTOP	Agrostis alba	Hay, Pasture	20 to 30	Wet lands	Long-lived perennial	Most widely adapted of tame grasses. Thrives on wet acid lands. Good in mixtures.
REED CANARY GRASS	Phalaris arundinacea	Seed, Hay, Pasture	48 to 80	Swampy or bottom lands	Long-lived perennial	Not adapted to mixtures. Suitable for permanent pasture on wet lands. Develops heavy seed.
ROOT CROPS—						
CARROTS	Daucus carota	Winter succulence		Fertile, moist bottom lands	Biennial	Yields less than other common root crops. Keeps well in storage, can be left in the ground until late in the fall.
MANGELS	Beta vulgaris	Winter succulence		Fertile, moist bottom lands	Biennial	Heavy yields, especially after liberal manuring. Keeps well in storage. Must be taken up before frost.
RUTABAGAS	Brassica campestris	Winter succulence		Fertile, moist bottom lands	Biennial	Higher yields than mangels. Adapted to coast regions. Manure increases yield. Good for storage.
TURNIPS	Brassica rapa	Winter succulence		Fertile, moist bottom lands	Biennial	Highest yielder of all common root crops. For fall feeding. Does not keep well in storage.
RYE-GRASSES—						
DOMESTIC, Oregon	Lolium multiflorum	Seed, Hay, Pasture	18 to 36	Low lands, poor drainage	Winter Annual	A rapid growing forage crop. Good for spring pasture and seed.
ITALIAN	Lolium multiflorum	Seed, Hay, Pasture	18 to 36	Low lands, poor drainage	Biennial or Short-lived perennial	Fall planted—makes heavy forage growth and recovers rapidly after cutting.
PACEY'S	Lolium perenne	Lawn, Hay, Pasture	15 to 20	Low lands, poor drainage	Short-lived perennial	Little used on farms, but important in some sections for winter lawns.
PERENNIAL, English	Lolium perenne	Seed, Hay, Pasture	15 to 24	Low lands, poor drainage	Short-lived perennial	Longest-lived of rye grasses, and better suited to use in hay and pasture mixtures.
SORGHUM	Andropogon sorghum	Fodder, Green Feed	48 to 72	Warm, deep, fertile loams	Annual	Requires warm soil and warm growing season. Row culture necessary in Pacific Northwest.
SOYBEAN	Soja max	Seed, Hay, Green Feed	12 to 48	Warm, fertile loams	Annual	Not suited to the coast regions, but a satisfactory crop on some warm, fertile soils.
SUDAN GRASS	Andropogon sudanensis	Hay, Pasture	36 to 80	Warm clay loams	Annual	Thrives best if planted when the soil is warm. Reaches hay stage in 75 to 80 days. Good yielder.
SULLA	Hedysarum coronarium	Green Feed	20 to 30	Well drained soils	Perennial	Adaptability not yet fully determined. Plant as soon as frost danger is over.
SUNFLOWER	Helianthus annuus	Silage, Green Feed	72 to 96	Clay loams	Annual	Chiefly a silage crop. Endures more cold than corn. Thrives on the Coast. Seeded early in May.
SWEET VERNAL GRASS	Anthoxanthum odoratum	Hill-land Pasture	12 to 24	Well drained uplands	Perennial	Starts growth early in spring—makes tough sod. Thrives in the shade of brush and ferns.
TALL MEADOW OAT-GRASS	Arrhenatherum elatius	Seed, Hay, Pasture	36 to 60	Fertile, well drained uplands	Long-lived perennial	Does not endure shade. Makes good early and late pasture. Cut early for good quality hay.
TIMOTHY	Phleum pratense	Seed, Hay, Pasture	30 to 48	Fertile, moist, medium to heavy soils	Short-lived perennial	Well adapted to use in pasture and meadow mixtures. Responds well to fertilizer.
VELVET GRASS or MESQUITE	Holcus lanatus	Seed, Hay, Pasture	20 to 36	Wide adaptation	Perennial	Recommended only for soils too light for better grasses.
VETCHES—						
COMMON or GRAY	Vicia sativa	Seed, Silage, Hay, Green Feed	36 to 60	Well drained, fertile loams	Winter Annual	A spring vetch but commonly fall seeded in Pacific Northwest. Best to seed with grain for support.
HAIRY or WINTER	Vicia villosa	Green Manure, Seed, Pasture	36 to 60	Wide adaptation, needs good drainage	Winter Annual	Very winter-hardy. Seed shatters readily when ripe.
HUNGARIAN	Vicia pannonica	Green Manure, Hay, Seed	30 to 40	Medium wet, acid soils	Winter Annual	Less viny than common vetch. Greater winter-hardiness and aphid resistance, suited to poorly drained soils.
PURPLE	Vicia atropurpurea	Seed, Green Manure	24 to 48	Well drained clays or loams	Annual	Lacks winter hardiness. Often spring seeded. Makes heavy growth during cool early spring weather.
HAY MIXTURES		Hay	20 to 40	Fertile clays, loams and bottom lands	Mostly perennials	Mixtures make good farm hay. Adapted to varied soils and climates.
PASTURE MIXTURES		Pasture	6 to 30	Widely adapted	Mostly perennials	Especially desirable on new clearings and logged-off land

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# VEGETABLE SEED GERMINATION STANDARDS—MINIMUM PERCENTAGE

	Ala. 1942	Ariz. 1941	Fed Seed Act / Interstate Regulation	Fla. 1941	Ga. <sup>o</sup> 1942	Ill. 1942	Mass. <sup>§</sup> 1942	Mich. 1942	Mo. <sup>o</sup> 1942	N. C. 1941	Ohio 1940	Ore. <sup>†</sup> 1939	S. C. 1940	S. D. 1941	Texas <sup>¶</sup> 1941	Va. 1940	Wash. 1941	W. Va. <sup>♦</sup> 1941	Wis. 1941	Can.‡ 1938
Artichoke.....	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	75
Asparagus.....	*70	*70	*70	*70	*70	*70	*70	70	*70	*70	*70	70	*70	70	70	*70	70	70	70	75
Bean.....	80	80	80	80	80	80	80	80	80	80	80	80	80	80	85	80	80	80	80	80
Bean, Large Lima.....	70	70	70	70	70	70	70	75	70	70	70	70	75	70	70	70	70	70	70	70
Bean, Small Lima.....	70	70	70	70	70	70	70	65	70	70	70	80	75	70	80	80	70	70	70	70
Bean, Fordhook.....																				
Beet.....	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
Broccoli.....	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
Brussels Sprout.....	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
Cabbage.....	75	75	75	75	75	75	75	65	75	75	75	80	75	75	75	75	75	75	75	75
Caraway.....																				
Carrot.....	55	75	55	55	55	55	55	55	55	55	55	65	55	65	55	55	55	55	55	55
Cauliflower.....	75	75	75	75	75	75	75	70	75	75	75	75	75	75	75	75	75	75	75	75
Celery.....	55	55	55	55	55	55	55	55	55	55	55	60	55	55	55	55	55	55	55	55
Celery.....	55	55	55	55	55	55	55	55	55	55	55	60	55	55	55	55	55	55	55	55
Celery.....	55	55	55	55	55	55	55	55	55	55	55	60	55	55	55	55	55	55	55	55
Chard, Swiss.....	65	65	65	65	65	65	65	65	65	65	65	70	65	65	65	65	65	65	65	65
Chicory.....	65	65	65	65	65	65	65	65	65	65	65	75	65	65	65	65	65	65	65	65
Citron.....	65	65	65	65	65	65	65	65	65	65	65	75	65	65	65	65	65	65	65	65
Collard.....	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Corn, Sweet.....	75	75	75	75	75	75	75	75	75	75	75	80	75	75	75	75	75	75	75	75
Corn, Curled.....	40	40	40	40	40	40	40	60	40	40	40	40	40	40	40	40	40	40	40	40
Cress, Upland.....	25	25	25	25	25	25	25	30	25	25	25	30	25	25	25	25	25	25	25	25
Cress, Water.....	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Cucumber.....	45	45	45	45	45	45	45	60	45	45	45	45	45	45	45	45	45	45	45	45
Dandelion.....																				
Dill.....																				
Eggplant.....	60	60	60	60	60	60	60	60	60	60	60	65	60	60	60	60	60	60	60	65
Endive.....	70	70	70	70	70	70	70	70	70	70	70	75	70	70	70	70	70	70	70	75
Fetticus (Corn Salad).....	70	70	70	70	70	70	70	70	70	70	70	75	70	70	70	70	70	70	70	75
Kale.....	75	75	75	75	75	75	75	75	75	75	75	80	75	75	75	75	75	75	75	75
Kohi Rabi.....	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
Leek.....	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Lettuce.....	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Melon, Musk.....	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
Melon, Honey Dew.....	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
Melon, Water.....	70	70	70	70	70	70	70	70	70	70	70	75	70	70	70	70	70	70	70	75
Mustard.....	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
Okra.....	50	50	50	50	50	50	50	*70	50	50	50	60	50	50	50	50	50	50	50	50
Onion.....	70	70	70	70	70	70	70	70	70	70	70	75	70	70	70	70	70	70	70	75
Parsley.....	60	60	60	60	60	60	60	60	60	60	60	65	60	60	60	60	60	60	60	65
Parsnip.....	60	60	60	60	60	60	60	60	60	60	60	65	60	60	60	60	60	60	60	65
Pea.....	80	80	80	80	80	80	80	80	80	80	80	85	80	80	80	80	80	80	80	85
Pepper.....	55	55	55	55	55	55	55	55	55	55	55	60	55	55	55	55	55	55	55	55
Pumpkin.....	75	75	75	75	75	75	75	75	75	75	75	85	75	75	75	75	75	75	75	75
Radish.....	75	75	75	75	75	75	75	75	75	75	75	85	75	75	75	75	75	75	75	75
Rhubarb.....	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Rutabaga.....	75	75	75	75	75	75	75	75	75	75	75	80	75	75	75	75	75	75	75	80
Sage.....																				
Salsify.....	75	75	75	75	75	75	75	75	75	75	75	80	75	75	75	75	75	75	75	80
Savory.....																				
Sorrel.....	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Spinach.....	60	60	60	60	60	60	60	60	60	60	60	70	60	60	60	60	60	60	60	60
Spinach, New Zealand.....	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Squash.....	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
Squash.....	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
Tomato.....	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Tomato, Husk.....	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Turnip.....																				

‡Canada—Chervil 75%, Chives 75%, Mangel 65%, Sage 55%, Savory 55%, Vegetable Marrow 75%.

oGeorgia—Cardoon 60%.

¶Federal Seed Act—Chinese Cabbage 75%, Pak-choi 75%, Spinach Mustard 75%, Vegetable Mustard 75%.

§Massachusetts—Chinese Cabbage 75%.

oMissouri Pak-choi 75%, Chinese Cabbage 75%, Spinach Mustard 75%, Vegetable Mustard 75%.

†Oregon—Celery Cabbage 75%.

¶Texas—Sweet Fennel 60%.

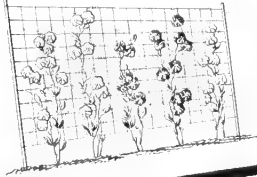
♦W. Virginia—Bean, Pole 80%, Cardoon 60%, Sweet Basil 50%, Sweet Fennel 60%, Sweet Marjoram 65%, Thyme 60%.

\*Including Hard Seeds.

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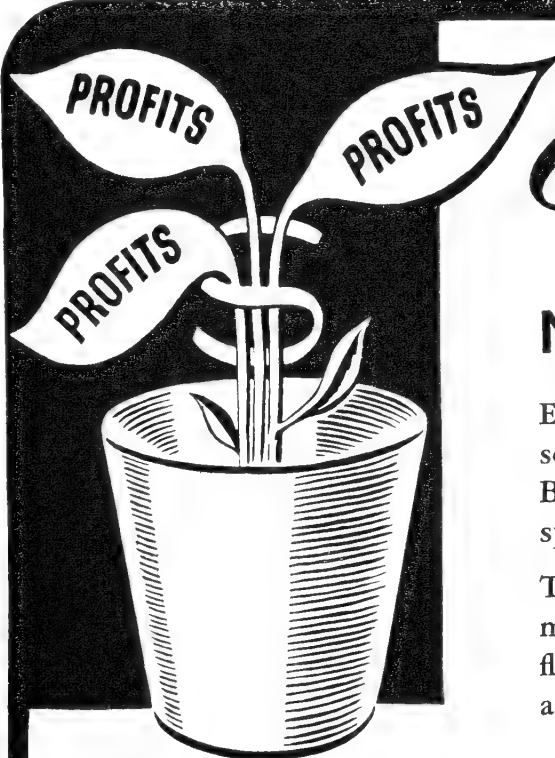
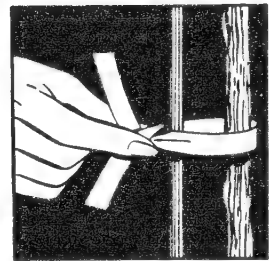


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# Seed Germination Table

Prepared by Agricultural Marketing Administration, U. S. Department of Agriculture, Washington, D. C.

Name of seed	Substrata <sup>1</sup>	Temperature	First count	Final count	Remarks	Name of seed	Substrata <sup>1</sup>	Temperature	First count	Final count	Remarks
Alfalfa— <i>Medicago sativa</i> .....	B, S	° C.	Days	Days		Millet:		° C.	Days	Days	
Rahia grass— <i>Paspalum notatum</i> ...	P	30-35	3	21	Light at 30° C. Remove all glumes with aid of sharp scalpel. Fresh seed lightly, scratch surface of carpoyxis and use potassium nitrate.	Browntop— <i>Panicum fasciculatum</i> .....	B	20-30	4	14	
Barley— <i>Hordeum vulgare</i> .....	T, S	20	3	7	Fresh seed prechill 5 days at 5° or 10° C.	Foxtail, German, Hungarian, or Golden— <i>Setaria italica</i> ..	B	20-30	4	10	
Bean, Azuki— <i>Phaseolus angularis</i> ...	R, S	20-30	4	10		Japanese— <i>Echinochloa crus-galli frumentacea</i> .....	B	20-30	4	10	
Bean, field— <i>Phaseolus vulgaris</i> ....	R, S	20-30	5	8		Pearl— <i>Pennisetum glaucum</i> ..	B	20-30	3	7	
Bean, velvet— <i>Stizolobium utile</i> ....	R, S	20-30	3	14		Proso— <i>Panicum miliaceum</i> ...	B	20-30	3	7	
Bean, Mung— <i>Phaseolus aureus</i> ....	R, S	20-30	3	7		Molasses grass— <i>Melinis minutiflora</i> ..	P	20-30	7	21	Light.
Beet, field (not sugar)— <i>Beta vulgaris</i>	B	20-30	3	14	Soak in water 2 hours before testing. Wash in running water after soaking.	Napier grass— <i>Pennisetum purpureum</i> .....	B	20-30	3	10	
<b>Bentgrass:</b>						Oats— <i>Avena sativa</i> .....	T, S	20	4	10	Fresh seed prechill for 5 days at 5° or 10° C
<b>Creeping (seaside):</b>						Oatgrass, tall— <i>Arrhenatherum elatius</i> .....	P	20-30	6	14	Light.
<b>Agrostis palustris</b> .....						Orchard grass— <i>Dactylis glomerata</i> .....	S, P	20-30	7	18	Germination more rapid in soil; light on Petri dish tests.
<b>Highland:</b>						<b>Peas, field—Pisum sativum arvense</b> .....					
<b>Agrostis tenuis var</b> .....						R, S	20	3	8		
<b>Agrostis spp</b> .....						<b>Rape:</b>					
<b>Bermuda grass—Cynodon dactylon</b> .....						<b>Annual—Brassica napus var</b> .....					
<b>Bluegrass:</b>						<b>Bird—Brassica campestris</b> .....					
<b>Annual—Poa annua</b> .....						B	20-30	3	7		
<b>Canada—Poa compressa</b> .....						P	20-30	3	10	Light, fresh seed potassium nitrate.	
<b>Kentucky—Poa pratensis</b> .....						<b>Turnip—Brassica rapa var</b> .....					
<b>Rough—Poa trivialis</b> .....						B	20-30	3	7		
<b>Wood—Poa nemoralis</b> .....						B	20-30	3	7		
<b>Bluestem—Agropyron smithii</b> .....						TB, P	20-30	5	10	Light.	
<b>Brome, smooth—Bromus inermis</b> .....						P	20-30	7	21	Light; fresh seed potassium nitrate and 15° C.	
<b>Broomcorn—Sorghum vulgare technicum</b> .....						P	20-30	7	28	Light.	
<b>Buckwheat—Fagopyrum vulgare</b> .....						B, S	20-30	3	10		
<b>Carpet grass—Azonopus compressus</b> .....						B, T	20-30	3	6		
<b>Chickpea—Cicer arietinum</b> .....						P	20-35	10	21	Light.	
<b>Clovers:</b>						<b>Rescue grass—Bromus catharticus</b> .....					
<b>Alsike—Trifolium hybridum</b> .....						P	20-30	6	14	Light.	
<b>Alyce—Alysicarpus vaginalis</b> .....						<b>Rhodes grass—Chloris gayana</b> .....					
<b>Berseem—Trifolium alexandrinum</b> .....						B, T	20-30	3	10	Light.	
<b>Bur—Medicago arabica and Medicago hispida</b> .....						T, S	20	3	7		
<b>Cluster—Trifolium glomeratum</b> .....						<b>Rice—Oryza sativa</b> .....					
<b>Crimson—Trifolium incarnatum</b> .....						P, TB	20-30	5	14	Light; fresh seed potassium nitrate.	
<b>Ladino—Trifolium repens</b> .....						B	20-30	4	10	Light.	
<b>Persian—Trifolium reupinatum</b> .....						<b>Sainfoin—Onobrychis viciaefolia</b> .....					
<b>Red—Trifolium pratense</b> .....						B, S	20-30	3	10		
<b>Sour—Melilotus indica</b> .....						B, S	20-30	3	10	Fresh seed prechill at 5° or 10° C. for 5 days.	
<b>Strawberry—Trifolium fragiferum</b> .....						B, S	20-30	3	10		
<b>Subterranean—Trifolium subterraneum</b> .....						<b>Sorghum:</b>					
<b>Suckliug—Trifolium dubium</b> .....						<b>Grain—Sorghum vulgare</b> .....					
<b>Sweet—Melilotus alba and Melilotus officinalis</b> .....						<b>Sweet (sorgo)—Sorghum vulgare</b> .....					
<b>White—Trifolium repens</b> .....						RT, S	20-30	5	8		
<b>Cotton—Gossypium hirsutum</b> .....						B, S	20-30	3	10		
<b>Cowpeas—Vigna sinensis</b> .....						<b>Sudan grass—Sorghum vulgare sudanese</b> .....					
<b>Corn, field—Zea mays</b> .....						T, B	20-30	3	7		
<b>Corn, pop—Zea mays everta</b> .....						P	20-30	6	14	Light.	
<b>Crested dogtail—Cynosurus cristatus</b> .....						<b>Sweet vernalgrass—Anthoxanthum odoratum</b> .....					
<b>Crotalaria—Crotalaria intermedia and C. spectabilis</b> .....						P, TB	20-30	5	10	Light; fresh seed potassium nitrate.	
<b>Dallis grass—Paspalum dilatatum</b> .....						<b>Timothy—Phleum pratense</b> .....					
<b>Fescue:</b>						<b>Velvetgrass—Holcus lanatus</b> .....					
<b>Hair—Festuca capillata</b> .....						P	20-30	6	14	Light.	
<b>Meadow—Festuca elatior</b> .....						<b>Vetch:</b>					
<b>Other fescues</b> .....						<b>Common—Vicia sativa</b> .....					
<b>Flax—Linum usitatissimum</b> .....						T	20	3	10		
<b>Guinea grass—Panicum maximum</b> .....						T	20	3	14		
<b>Hemp—Cannabis sativa</b> .....						T	20	3	10		
<b>Kudzu—Pueraria thunbergiana</b> .....						T	20	3	10		
<b>Lespedeza:</b>						T	20	3	10		
<b>Chinese—Lespedeza sericea</b> .....						<b>Hairy—Vicia villosa</b> .....					
<b>Common—Lespedeza striata</b> .....						<b>Hungarian—Vicia pannonica</b> .....					
<b>Korean—Lespedeza stipulacea</b> .....						<b>Monantha—Vicia monantha</b> .....					
<b>Lupine—Lupinus alba</b> .....						<b>Narrowleaf—Vicia angustifolia</b> .....					
<b>Lupine—Lupinus luteus</b> .....						<b>Purple—Vicia atropurpurea</b> .....					
<b>Meadow foxtail—Alopecurus pratensis</b> .....						<b>Woolypod—Vicia dasycarpa</b> .....					
<b>Medick, black—Medicago lupulina</b> .....						<b>Wheat:</b>					
						<b>Common—spelt and emmer</b>					
						<b>Triticum aestivum</b> .....					
						<b>Durum—Triticum aestivum</b> .....					
						<b>Wheatgrass:</b>					
						<b>Crested—Agropyron cristatum</b> .....					
						<b>Slender—Agropyron pauciflorum</b> .....					
						<b>VEGETABLES</b>					
						<b>Artichoke—Cynara scolymus</b> .....					
						<b>Asparagus—Asparagus officinalis</b> .....					
						<b>Beans:</b>					
						<b>Garden—Phaseolus vulgaris</b> .....					
						<b>Horse or broad—Vicia faba</b> .....					
						<b>Lima—Phaseolus lunatus</b> .....					
						<b>Beet, Swiss chard and mangel—Beta vulgaris</b> .....					
						<b>Brassica oleracea varieties: Cabbage, collards, kale, brussels sprouts, cauliflower, broccoli, and kohlrabi</b> .....					
						<b>Carrot—Daucus carota</b> .....					
						<b>Celeriac—Apium graveolens, var. rapaceum</b> .....					
						<b>Celery—Celeri graveolens var. dulce</b> .....					
						<b>Chicory—Cichorium intybus</b> .....					
						<b>Citron—Citrus vulgaris</b> .....					
						<b>Corn, sweet—Zea mays</b> .....					
						<b>Corn salad—Fetticus—Valerianella locusta var. oleritaria</b> .....					
						<b>Cress:</b>					
						<b>Garden—Lepidium sativum</b> .....					
						<b>Water—Roripa nasturtium-aquaticum</b> .....					
						<b>Cucumber—Cucumis sativus</b> .....					
						<b>Dandelion—Leonodon taraxacum</b> .....					
						<b>Eggplant—Solanum melongena var. esculentum</b> .....					

<sup>1</sup> Substrata: B=between blotters; TB=top of blotters; T=paper toweling; R=rolled towel test; S=soil or sand; TS=top of soil; P=petri dishes with 2 thicknesses of blotters or 1 thickness of absorbent cotton or 5 thicknesses of paper toweling.

<sup>2</sup> "Prewet" method on cotton; shake seed in a closed container, thoroughly wetting the "fuzz" of the seed. Blot off all excess moisture and put in to germinate. If the prewet test is higher report both it and the standard germination.

Name of seed	Substrata <sup>1</sup>	Temperature	First count	Final count	Remarks
Endive— <i>Cichorium endivia</i> .....	P, TS	° C. 20-30	Days 5	Days 14	Light; potassium nitrate or soil.
Leek— <i>Allium porrum</i> .....	B	20	6	14	
Lettuce— <i>Lactuca sativa</i> .....	P	20	3	7	Light for ½ hour; fresh seed prechill at 10° or 15° C. for 3 days.
Muskmelon— <i>Cucumis melo</i> .....	B, T, S	20-30	4	10	
Mustard:					
Black— <i>Brassica nigra</i> .....	P	20-30	3	7	Light; fresh seed potassium nitrate and prechill at 10° C. for 3 days.
India— <i>Brassica Juncea</i> .....	P	20-30	3	7	Light; fresh seed potassium nitrate and prechill at 10° C. for 3 days.
Spinach— <i>Brassica rapa perivridis</i> .....	B	20-30	3	7	
White— <i>Brassica hirta (alba)</i> .....	P	20-30	3	5	Light
Okra— <i>Hibiscus esculentum</i> .....	R	20-30	4	21	
Onion— <i>Allium cepa</i> .....	B, S	20	5	14	
Pak-choi— <i>Brassica chinensts</i> .....	B	20-30	3	7	
Parsley— <i>Petroselinum hortense</i> .....	B	20-30	11	28	
Parsnip— <i>Pastinaca sativa</i> .....	B	20-30	6	28	
Peas, garden— <i>Pisum sativum</i> .....	R, S	20	5	8	
Pepper— <i>Capiscum spp.</i> .....	TB	20-30	6	14	
Pe-tsai (Chinese cabbage)— <i>Brassica pekinensis</i> .....	B	20-30	3	7	
Pumpkin— <i>Cucurbita pepo</i> .....	T, S	20-30	4	7	
Radish— <i>Raphanus sativus</i> .....	B	20	3	6	
Rhubarb— <i>Rheum rhaponticum</i> .....	TS	20-30	7	21	Light.
Rutabaga— <i>Brassica napobrassica</i> .....	B	20-30	3	14	
Salsify— <i>Tragopogon porrifolius</i> .....	T	20	5	10	Fresh seed prechill at 10° C. for 3 days.
Sorrel— <i>Rumex acetosa</i> .....	TS	20-30	3	14	Light.
Spinach:					
Common— <i>Spinacea oleracea</i> .....	TB	10	7	21	
New Zealand— <i>Tetragonia expansa</i> .....	TS	20-30	5	28	Not too wet.
Squash— <i>Cucurbita sp.</i> .....	T, S	20-30	4	7	
Tomato:					
Common— <i>Lycopersicon esculentum</i> .....	B	20-30	5	14	
Husk— <i>Physalis pubescens</i> .....	P, TB	20-30	7	28	Light.
Turnip— <i>Brassica rapa</i> .....	B	20-30	3	7	
Watermelon— <i>Citrullus vulgaris</i> .....	T, S	20-30	4	14	

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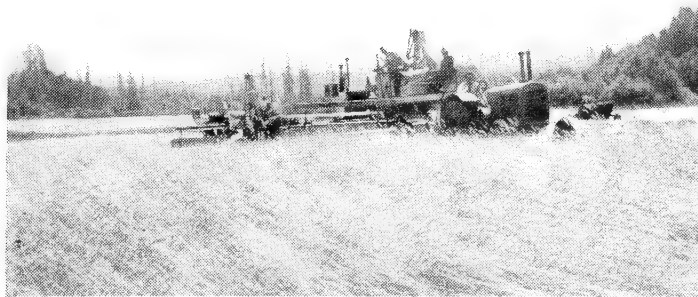
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# State Seed Laws

Compiled by L. J. La Pine  
Seed Analyst

January, 1943

*SEED WORLD and SEED TRADE BUYERS GUIDE wish to acknowledge the work of Miss Macy Spracher, Seed Analyst for Northrup, King & Co., Minneapolis, for her outstanding work in this department in previous editions of the Guide. Much of her work is retained in this compilation of the Seed Laws and to her we give full credit for the arrangement in this as well as all former volumes. Ed.*

## Grouping of Agricultural Seeds for Noxious Weed Labelling

### GROUP A

a. In excess of one seed in each 5 grams of timothy, redtop, tall meadow oat grass, orchard grass, crested dogstail, Canada bluegrass, Kentucky bluegrass, fescues, brome grasses, perennial and Italian rye grass, western rye grass, crimson clover, red clover, white clover, alsike clover, sweet clover, alfalfa, and all other grasses and clovers not otherwise classified.

b. In excess of one seed in each 25 grams of millets, rape, flax, Sudan grass and other seeds not specified in (a) or (c) of this section.

c. In excess of one seed in each 100 grams of wheat, oats, rye, barley, buckwheat, vetches, and other seeds as large or larger than wheat.

### GROUP B

a. In excess of one seed or bulblet in each 5 grams of *Agrostis* spp., *Poa* spp., Rhodes grass, Bermuda grass, timothy, orchard grass, fescues (except meadow fescue), alsike and white clover, reed canary grass, Dallis grass, and other agricultural seeds of similar size and weight, or mixtures within this group;

b. In excess of one seed or bulblet in 10 grams of rye grass, meadow fescue, foxtail millet, alfalfa, red clover, sweet clovers, lespedezas, smooth brome grass, crimson clover, *Brassica* spp., flax, *Agropyron* spp., and other agricultural seeds of similar size and weight or mixtures within this group, or of this group with (a);

c. In excess of one seed or bulblet in each 25 grams of proso, Sudan grass

and other agricultural seeds of similar size and weight, or mixtures not specified in (a), (b), or (d);

d. In excess of one seed or bulblet in each 100 grams of wheat, oats, rye, barley, buckwheat, sorghums (except Sudan grass), vetches, and other agricultural seeds of a size and weight similar to, or greater than, those within this group, or any mixtures within this group.

*Note—Where there is a clause concerning HYBRID SEED CORN in the law, the labeling requirements are given a special heading coordinate with other groups of seeds. Where it comes under a regulation which may be changed any time by the enforcement officer, the requirements will be found under ENFORCEMENT.*

## ALABAMA

### Seed Law 1940—Rules and Regulations 1942

#### INFORMATION REQUIRED ON ANALYSIS TAGS OR CONTAINER

##### (A) Agricultural Seeds. Every lot of 5 pounds or more

1. Common name and variety.
2. Net weight.
3. Lot number (regulation).
4. Percentage of pure seed.
5. Percentage of weed seeds. Prohibit 2½%, Dallis and Carpet grass 5%.
6. Percentage of other crop seed (regulation).
7. Percentage of inert matter (regulation).
8. Name and number per pound of each noxious weed seeds present singly or collectively in excess of—
  - (a) One in 5 grams (see page 106, group A.)
  - (b) One in 25 grams.
  - (c) One in 100 grams.
9. Percentage of—
  - (a) Germination.
  - (b) Hard seeds. (Regulation.)
  - (c) Month and year of test. Date of test not over 180 days prior to date of sale.
10. Where grown.
11. Full name and address of person responsible for label.

##### (B) Mixtures of Field Seeds. Every lot of 5 pounds or more (by regulation every lot)

1. That such seed is a mixture.
2. Net weight.
3. Lot number (regulation).
4. Name and percentage of each agricultural seed present in excess of 5% of total mixture.
5. Percentage of weed seeds. Prohibit 2½%, Dallis and Carpet grass 5%.
6. Percentage of other crop (regulation).
7. Percentage of inert matter (regulation).
8. Name and number per pound of each noxious weed seeds present singly or collectively in excess of one seed in each 15 grams of the mixture.
9. For each agricultural seed present in excess of 5% give—
  - (a) Percentage of germination.
  - (b) Percentage of hard seeds. (Regulation.)
  - (c) Month and year of test. Date of test not over 180 days prior to date of sale.
10. Where grown.
11. Full name and address of person responsible for label.

##### (C) Special Mixtures. Every lot of 8 ounces or more (by regulation every lot)

1. That such seed is a mixture.
2. Net weight.
3. Lot number (regulation).

##### (D) Vegetable Seeds included as agricultural seed; therefore each lot of 5 pounds or more is to be labeled as agricultural seed under "A." By regulation the Department of Agriculture asks for the following labeling:

- (a) Packet seeds of less than 8 ounces shall bear a statement showing:

- (1) Name of kind and variety of seed.
- (2) For seed which germinates less than the standard last established by the Association of Official Seed Analysts. See standards, page 102.

- (I) Percentage of germination exclusive of hard seeds.
- (II) Percentage of hard seed if present.
- (III) The calendar month and year the test was completed to determine such percentage.
- (IV) The words "Below Standard."

- (3) Name and address of person responsible for the information given.
- (b) Packet or package seed of 8 ounces and over and less than 5 pounds shall bear a statement showing:
  - (1) Name of kind and variety of seed.
  - (2) Percentage of germination, exclusive of hard seed.
  - (3) Percentage of hard seed if present.
  - (4) The calendar month and year the test was completed to determine such percentages.
  - (5) Name and address of party responsible for the information given.

### PROHIBITS THE SELLING OR GIVING AWAY FOR PLANTING PURPOSES SEED—

1. Containing 2½% of weed seeds. Domestically grown Dallis and Carpet grass, 5% of common weeds (until July 1, 1943).
2. Containing 300 primary or 800 secondary noxious weed seeds per pound.
3. Excessively low in germination.
4. With germination date over 180 days old.
5. Mislabeled seed whose variety is unadapted and unsuited for seeding purposes in Alabama.
6. 800 seeds of Johnson grass will be permitted in Dallis grass until July 1, 1943; however, when more than 300 are present the tag shall bear the statement "Excessive Johnson Grass" in red ink.

### NOXIOUS WEEDS PRIMARY NOXIOUS

- Bermuda grass (*Cynodon dactylon*)
- Bindweed (*Convolvulus arvensis*).
- Dodders (*Cuscuta* spp.).
- Garlic, wild (*Allium vineale*).
- Johnson-grass (*Sorghum halepense*).
- Nutgrass (*Cyperus rotundus*).
- Onion, Wild (*Allium canadense*).
- Sheep-sorrel (*Rumex acetosella*).

### SECONDARY NOXIOUS

- Buckhorn (*Plantago lanceolata*).
- Cheat or chess (*Bromus secalinus*).
- Corncockle (*Agrostemma githago*).
- Darnel grass (*Lolium temulentum*).
- Dock, Broadleaf (*Rumex obtusifolius*).
- Dock, Curled (*Rumex crispus*).
- Plantain, Bracted (*Plantago aristata*).
- Quackgrass (*Agropyron repens*).
- Thistle, Canada (*Cirsium arvense*).

### LABORATORY

Federal—State seed laboratory.  
L. N. Allen, Associate Seed Technologist,  
U. S. Department of Agriculture.  
O. L. Justice, Chief seed analyst State of Alabama.  
Tests—Any citizen of Alabama may submit samples for test. No charge will be made for the first \$3.00 worth of service, all over that will be charged as prescribed in the Rules and Regulations. Farmers' samples will be accepted during the intervals beginning May 15 and ending August 15, and beginning November 15 and ending December 15.

### ENFORCEMENT

Under State Board of Agriculture.

- (a) Notice of shipment of agricultural seeds, field and vegetable, shall be mailed to the Commissioner of Agriculture and Industry within 24 hours of shipping date and shall bear:
  - (1) Name and address of shipper.
  - (2) Name and address of person to whom shipped.
  - (3) The amount.
  - (4) The kind and variety of seed.
  - (5) The lot numbers of seed.
- (b) Notice of the location of so called commission boxes of packet seed shall state:
  - (1) Number of boxes.
  - (2) Number and size of packages in each.
  - (3) Their classification as to kinds of seed contained therein.
  - (4) Name and address of shipper and party to whom delivered.

### REGULATIONS

Size of analysis tag shall be 4¾ x 2¾ inches, or equivalent in square inches.

All information required on analysis tag shall be placed on one side of the label without intervening matter.

The date on the analysis tags should be the date the germination test was completed.

A complete analysis totaling 100% must be given. Blank spaces on a form tag or incomplete analysis are not permissible.

Abbreviation of names of the variety and kind of seed is not permissible.

Place of origin shall not be used as part of varietal name and kind of seed.

Modifying words or phrases shall not be used in connection with the variety, as "type," "for forage purposes," etc.

Brand names, designs, grades or pictures indicating a contradiction to any part of the analysis shall not be permitted.

Different varieties of the same kind of seed, when in quantities less than 5%, will be considered other crop seed.

Standard Weights—Seed when packed for sale shall be in bags of standard weights and sizes as follows:

This regulation is abrogated until July 1, 1943.

Ryegrass, Vetches, mixtures of Vetches or Peas, Austrian Peas, Cotton Seed and Cro-talaria—100 lbs. net.

Barley 96 and 120 pounds net.

Lespedeza—100 and 125 pounds net.

Crimson Clover, Cane and Sudan Grass—100 and 150 lbs. net.

Soybeans and Wheat—120 to 150 pounds net.

Rye—112 and 140 pounds net.

Oats shall be 4 bushels of not less than 128 pounds.

Records of receipt, sale and delivery of all seed by any dealer shall be accessible for examination by authorized agent of the Department of Agriculture for a period of 3 years. Said records must be available to inspectors within 10 days after delivery of seeds.

Trucks or other motor conveyors transporting seed over the highways shall have available for examination a bill of lading, waybill, or delivery receipt showing (1) the name of the shipper or party from whom purchased; (2) the name and address of the party to whom seeds are to be delivered; (3) the kind and amount of each separate kind of seed and (4) the name of the truck driver and truck line making the delivery.

Express, mail and freight including truck deliveries to consumers of seed shall also be subject to provisions and rules and regulations pertaining to the enforcement of the Seed Law.

New analysis tag bearing the name of the vendor or other party responsible shall be placed on seed after the original test date becomes 180 days old.

Seeds treated with fungicides, shall show on the label the words "Poison Treated" in not less than ¼ inch face red type.

Minimum germination. No agricultural seed except grasses, unscarified legumes, garden seed listed in The Standards for Germination and seed released by the U. S. customs shall be offered for sale if the germination is below 60%.

Seed labeled or sold as "Certified," "Registered" or "Pedigreed" must have been certified or registered and inspected by an officially authorized agency and cannot be sold in Alabama unless the party selling shall have registered with the Alabama Department of Agriculture Seed Laboratory the lot number, variety and kind, name and address of the grower, and the history of the seed.

Oats consisting of mixed varieties, and oats containing a total of 5% or more of other oat varieties shall not be sold or offered for sale as seed oats.

False wild oats will be considered weeds.

Only the analysis tag and a tag showing that the seeds have been treated with poison will be allowed, and both must be attached by the same fastener.

Agricultural seed containing primary noxious weed seeds in excess of 200 per pound shall be labeled in red ink in not less than 12 point type, "EXCESSIVE NOXIOUS WEEDS."

## ARIZONA

### Seed Law 1941—Rules and Regulations Nov. 26th 1941

### INFORMATION REQUIRED ON ANALYSIS TAGS OR CONTAINERS

#### (A) Agricultural Seeds (Unmixed). Every lot.

1. Name of—
  - (a) Kind or,
  - (b) Kind and variety, if unknown so state.
2. Lot number or other lot identification.
3. Percentage of purity.
4. Percentage of inert matter.
5. Percentage of weed seeds.
6. Percentage of other agricultural seed.
7. Percentage of—
  - (a) Germination, exclusive of hard seed.
  - (b) Hard seed.
  - (c) Month and year test was completed. The test shall have been completed within a nine month period exclusive of the month in which the test was completed.

Following (a) and (b) statement of "Total Germination and Hard Seed" may be given if desired.

8. Origin of alfalfa, red clover and field corn (except hybrid). If origin is unknown it must be so stated.
9. Name and address of dealer who labeled the seed, or who sells, offers or exposes said seed for sale.

10. Name and number of secondary noxious weed seeds per ounce in groups B1 and B2 and per pound in B3 and B4 when present singly or collectively in excess of
  - (a) a. 1 seed in 5 grams (see page 106, group B).
  - b. 1 seed in 10 grams.
  - c. 1 seed in 25 grams.
  - d. 1 seed in 100 grams.

- (b) Name and number per ounce of Bermuda grass (*Cynodon dactylon*) and Sour clover (*Melilotus indica*) when present in seeds of grassed or small seeded legumes.

11. Statement that no primary noxious weed seeds are present in the lot, subject to tolerances.
12. Year in which seed was grown.

#### (B) Mixed Agricultural Seeds. Every lot.

Same as unmixed agricultural seed except it shall be called "Mixed" or a "Mixture" and the information required under (A) 1, 3 and 7 shall be given for each kind of agricultural seed present in excess of 5% in the order of its predominance.

#### (C) Vegetable Seeds. Every lot of less than one pound.

1. Name of kind and variety.

2. Seed which germinates less than the standard last established by the state entomologist. (See page 102 for standards.)

- (a) Percentage of germination exclusive of hard seed.
- (b) Percentage of hard seed.
- (c) Month and year test was completed. The test shall have been completed within a nine month period exclusive of the month in which the test was completed.
- (d) The words "BELOW STANDARD" in not less than 8 point type.

3. Name and address of dealer who labeled seed, or who sells, offers or exposes said seed for sale.

### PROHIBITS FROM SALE

1. Unless the test for germination shall have been completed within a nine month period exclusive of the month in which the test was made.
2. If containing primary noxious weed seeds, subject to tolerances.

### NOXIOUS WEEDS

PRIMARY NOXIOUS WEEDS, prohibited if present subject to tolerances.

Nut grass—*Cyperus rotundus*, C. esculentus; Bindweed—*Convolvulus arvensis*; Russian knapweed—*Centaurea repens*; Canada thistle—*Cir-*

sium arvense; Leafy spurge—Euphorbia esula; Hoary cress—Lepidium draba, L. repens, Hymenophyllum pubescens; Horsenettle—Solanum elaeagnitolum, S. carolinense; Perennial sow thistle—Sonchus arvensis; Camels thorn—Alhagi camelorum; Johnson grass—Sorghum halepense (when it occurs in sudan grass and small seeded legumes).

#### SECONDARY NOXIOUS WEEDS

Wild oats—Avena fatua; Wild mustard—Brassica arvensis, B. nigrum, B. juncea; Tansy mustards—Sisymbrium irio, S. Sophia, S. altissimum; Didders—Cuscuta spp.; Ragweeds—Franseria tenuifolia, F. discolor, Ambrosia psilostachya; Poverty weed—Iva axillaris; Alkali mallow—Sida hederaceae; Blue sunflower—Helianthus ciliaris; Squirrel tail grass—Hordeum jubatum; Wild barley—Hordeum murinum; Buckhorn plantain—Plantago lanceolata; Russian thistle—Salsola kali var. tenuifolia; Bur grass—Cenchrus pauciflorus; Puncture vine—Tribulus terrestris; Whorled milkweed—Asclepias galioides; Johnson grass—Sorghum halepense (except as specified under Primary noxious weeds).

"STOP SALE" ORDER. The state entomologist shall have the power to issue and enforce a stop sale order to the owner or custodian of any agricultural or vegetable seed which is in viola-

tion of any provisions of this act, which order shall prohibit the further sale of the seed until proof is furnished that the law has been complied with. Before such order is issued or attached the owner or custodian shall be given an opportunity to comply with the law or to withdraw the seed from sale. The owner or custodian of seed that has been denied sale under a stop sale order shall have the right to appeal from the order to the Superior court of the county in which the seed is found.

SEIZURE. Any lot of agricultural or vegetable seed not in compliance with the provisions of this act shall be subject to seizure upon the complaint of the state entomologist to the Superior court of the county in which the seed is located. If the court finds that the seed does not comply with the law it shall order the condemnation thereof, and the seed shall be denatured, processed, destroyed, relabeled, or otherwise disposed of as ordered by the court. Upon application of the owner or custodian of the seed, the court shall have power to permit the applicant to process or relabel the seed to bring it into conformity with the act.

Sugar beet seed exempt from the various provisions requiring the percentage of germination.

LICENSE. Any dealer who sells, distributes,

processes or mixes for the use of another, any agricultural or vegetable seed shall obtain a license, at a cost of fifty cents (50c) from the state entomologist. A dealer shall not be entitled to a license unless he has an established plant, warehouse or place of business. The license shall be renewed annually not later than July 1st, and the application for renewal shall be accompanied by a fee of fifty cents (50c). This provision shall not apply to a farmer growing or marketing his own seed, or to any individual who harvests the producer's crop and receives part of the crop as payment for services rendered in harvesting.

#### SEED LABORATORY

Agronomy Dept., University of Arizona, Tucson, Ian A. Briggs, Associate Agronomist.

#### FEES FOR TESTING

Not more than 5 samples shall be tested free of charge in any calendar year, nor more than 1 in any calendar month for an individual. Samples in excess of this number shall be tested upon payment of a minimum fee of seventy-five cents (75c) for either purity or germination and \$1.50 for both. Fees shall be proportionately higher when more than the usual amount of time is required.

## ARKANSAS

Act of 1921 As Amended 1939 - Rules 67 and 68 - Regulations Form 101 and 102  
Revised June 30, 1940

### INFORMATION REQUIRED ON ARKANSAS PERMIT TAG

#### (A) Agricultural Seeds—Each Bag.\*

1. Kind of seed.
2. Lot number.
3. Percentage of pure seed.
4. Percentage of weed seed.
5. Names and numbers of noxious weed seeds present per pound or, if not present, a statement to that effect.
6. Percentage of:
  - (a) Germination exclusive of hard seed.
  - (b) Hard seed.
  - (c) Date of test. Made not more than 6 months previously.
7. Percentage of hard seeds if present.
8. State in which grown; if unknown, so state.
9. Seedsman's or vendor's name and address.

#### (B) Mixtures.\*

Mixtures of 2 or more kinds—percentage of purity of the predominant kind may be given and the other kinds be considered as impurities, or the percentage of the various kinds present may be shown with the germination of each (exclusive of hard seeds) and the percentage of hard seeds, if present, or if the germination (including hard seeds) of none of said seeds is below 85%, then only the germination of the mixture taken as a whole need be shown.

#### (C) Vegetable Seeds.

The State Plant Board is authorized to sample and test vegetable seeds and to publish the results should the seed be found adulterated, misbranded or of poor quality.

#### NOXIOUS WEEDS

Dodder—Cuscuta spp.; Buckhorn—Plantago lanceolata; Chess or Cheat—Bromus secalinus;

Red Rice; Nut grass—Cyperus rotundus; Darnel—Lolium temulentum; Johnson grass—Sorghum halepense; Corn cockle—Agrostemma githago; Bottle brush plantain—Plantago aristata; sorrels—Rumex acetosa and Rumex acetosella; Docks—Rumex crispus, R. obtusifolius and R. conglomeratus; Wild onion or garlic—Allium spp.; Morning glory—Ipomoea purpurea; Field bindweed—Convolvulus arvensis; Hedge bindweed—Convolvulus sepium.

### PROHIBITS FROM SALE OR TRANSPORTATION

#### FIELD SEEDS CONTAINING:

Field bindweed, wild onion and nut grass.

#### FIELD SEEDS OTHER THAN LESPEDEZA AND SUDAN GRASS CONTAINING:

- 5 Johnson grass per pound.
  - 250 Dodder and cheat per pound.
  - 2000 Noxious weed seeds per pound.
- #### LESPEDEZA AND SUDAN GRASS CONTAINING:
- 25 Johnson grass per pound, if less, use special permit tag.
  - 250 Cheat per pound.
  - 500 Dodder per pound, if from 100 to 500, use special permit tag.
  - 2000 Noxious weed seeds per pound.

### SEED LABORATORY

Agricultural Building, Fayetteville, Arkansas. John E. Casey, Analyst.

### ENFORCEMENT AND REGULATIONS

Enforcement under State Plant Board, War Memorial Building, Little Rock, Arkansas. Paul H. Millar, Chief Inspector.

Permit tags required on each bag of field seeds may be secured from the State Plant Board, War Memorial Building, Little Rock, Arkansas; tags 2 cents each; good until July 1 of following year; expired tags exchanged at ¼ cent each.

Special Permit Tags bearing the words "Excessive Noxious Weeds" in large type, secured from the Plant Board.

Annual application of \$1.00 required except from those who use less than 20 permit tags and growers of Arkansas certified seed. Permit tags may be cancelled for failure to comply with the regulations.

Cotton seed. To sell cotton seed in Arkansas must file with the application for permit, a satisfactory certificate of freedom from communicable diseases signed by state quarantine officer of state in which seed was grown.

Vetch seed must have attached to each bag, in addition to analysis and permit tag, a state or federal certificate, attached by official seal, to seal the mouth of the bag, showing that the bag has been satisfactorily fumigated or that the seed was grown in a state or county free from vetch weevil.

Hybrid Corn. Permits to sell hybrid corn will be granted:

- (1) To breeder who has been officially recognized in his respective state.
- (2) On strains which have been found adapted to Arkansas. Breeder's permit tag must be attached to each container.

Sorghum seed for syrup purposes and Abruzzi rye is prohibited unless permission has been obtained from the Plant Board based on proof of truthness to name.

Use of words "Certified" or "Registered" limited to seed certified or registered by the duly authorized officer of the state of origin.

If Soybeans and small grains are sold for other than planting purposes this must be indicated on the bag or tag.

\*The information required by the Federal Seed Act, if given in toto, may be substituted for the information in (A) and (B).

## CALIFORNIA

Agricultural Code Amended 1939

### INFORMATION REQUIRED ON ANALYSIS TAGS.

(In not less than 7 point type or written in ink.)

#### (A) Agricultural Seeds. Every lot of 5 lbs. or more.

1. The commonly accepted name.
2. Percentage of pure seed.
3. Percentage of weed seed.
4. The name and number per pound of each primary noxious weed seed present.
5. The name of each kind of secondary noxious weed singly or collectively in excess of:
  - (a) One in 5 grams (See page 106, group A).
  - (b) One in 25 grams.
  - (c) One in 100 grams.
6. Percentage of—
  - (a) Germination, exclusive of hard seed. (Regulation.)
  - (b) Hard seeds. (Regulation.)
  - (c) Month and year of test.
7. The name and address of the vendor.

#### (B) Mixtures of two kinds of seeds. (C) Special Mixtures. Each lot of 8 ounces or more. Every lot of 5 pounds or more.

1. That such seed is a mixture.
  2. Name and percentage of each kind of Agricultural seed present in excess of 5% by weight of the total in the order of its preponderance.
  3. Percentage of weed seeds.
  4. Name and number per pound of each primary noxious weed seed present.
  5. Name of each secondary noxious weed present singly or collectively in excess of one seed in each 15 grams.
  6. For each agricultural seed present in excess of 5% give—
    - (a) Percentage of germination, exclusive of hard seed. (Regulation.)
    - (b) Percentage of hard seed. (Regulation.)
    - (c) Month and year of test.
  7. Name and address of vendor.
1. That such seed is a mixture.
  2. Name of each kind of agricultural seed present in proportion of 5% or more of the total mixture in the order of its preponderance.
  3. Percentage of weed seeds.
  4. Percentage of inert matter.
  5. Name and number per pound of each primary noxious weed seed present.
  6. Name of each secondary noxious weed seed present singly or collectively in excess of one seed in each 15 grams.
  7. Name and address of the vendor.

#### (D) Vegetable Seed—Law does not include flower, sugar beet, and garden vegetable seed.



## NOXIOUS WEEDS

### PRIMARY NOXIOUS WEEDS

Blueweed, Texas—*Helianthus ciliaris*  
 Camel's thorn—*Alhagi camelorum*  
 Canada thistle—*Cirsium arvense*  
 Cress, Austrian field—*Roripa austriaca*  
 Cress, Hoary—*Lepidium draba*, including *Lepidium repens*, *Hymenophyllum pubescens*  
 Cress, Perennial pepper—*Lepidium latifolium*  
 Gaura, Scarlet—*Gaura coccinea*  
 Gaura, Wavy leaved—*Gaura sinuata*  
 Horsenettle, Carolina—*Solanum carolinense*  
 Horsenettle, White—*Solanum elaeagnifolium*  
 Knapweed, Russian—*Centaurea repens*  
 Klamath weed—*Hypericum perforatum*  
 Nutgrasses—*Cyperus* spp., including *Cyperus esculentus*, *Cyperus rotundus*  
 Quackgrass—*Agropyron repens*  
 Sowthistle, Creeping or Perennial—*Sonchus arvensis*  
 Surge, Leafy—*Euphorbia esula*

### SECONDARY NOXIOUS WEEDS

Bassia, Fivehook—*Bassia hyssopifolia*  
 Bindweed or Wild morning glory—*Convolvulus arvensis*  
 Crabgrass—*Digitaria sanguinalis*  
 Crabgrass, Smooth—*Digitaria ischaemum*  
 Dodder, Clover—*Cuscuta epithymum*  
 Dodder, Field—*Cuscuta pentagona*  
 Dodder, Flax—*Cuscuta epilinum*  
 Dodder, Large-seeded—*Cuscuta indecora*  
 Dodder, Small-seeded—*Cuscuta planiflora*  
 Dogbane—*Apocynum cannabinum*  
 Johnson Grass—*Holcus halepensis*  
 Mallow, White or Alkali—*Sida hederacea*  
 Nightshade, Black—*Solanum nigrum*  
 including *Solanum douglasii*—(Perennial)  
 Poverty weed—*Iva axillaris*  
 Poverty weed, Franseria—*Franseria tenuifolia*  
 Puncture vine—*Tribulus terrestris*  
 Ragweed, Western—*Ambrosia psilostachya*  
 Red rice—*Oryza sativa*-var.  
 Sandbur—*Cenchrus pauciflorus*

Thistle, Iberian—*Centaurea iberica*  
 Thistle, Italian—*Carduus pycnocephalus*  
 Thistle, Purple star—*Centaurea calcitrapa*  
 Thistle, Russian—*Salsola kali*  
 Thistle, Yellow star—*Centaurea solstitialis*

## LABORATORY AND TESTS

Federal—State Seed Laboratory, State Office Building, Sacramento.

Leatha D. Bunting, Analyst, U. S. Dept. of Agriculture.

Free tests—Four free tests or one special mixture will be made during the calendar year for any firm or individual.

Charges:

- (a) For purity tests.
1. Alfalfa, cereals, clovers, cotton, cowpeas, fescues, field peas, flax, flower, lolium, millets, mixtures of only 2 kinds of seeds, mustards, phalaris, rape, rice, sorghum, soy beans, sugar beets, timothy, vegetable and vetches .....\$1.50
  2. Agropyrons, Bermuda grass, brome grass, crested dogs tail, meadow foxtail, sudan grass, sweet vernal, and tall meadow oat grass .....\$2.00
  3. Bent grasses, Dallis grass, Ky. bluegrass, and other Poa spp., orchard grass, redtop, and Rhodes grass .....\$3.00
  4. Special mixtures .....\$5.00
- (b) For Germination Tests.
1. All seeds listed under (1) above (except sugar beet) and (2) also Orchard grass, red top, and Rhodes grass.....\$ .75
  2. Bent grasses, Dallis grass, Ky. bluegrass, and other Poa spp., and sugar beet (sprout test)..\$1.50

- (c) Examination for weed seeds.....\$1.00  
 (d) Identification .....\$ .50  
 (e) Official sampling by request. A charge of \$1.00, plus traveling expenses of inspector and regular charges for test or tests requested.  
 (f) Any seed not listed will be charged fee in appropriate class above.

## ENFORCEMENT

State Dept. of Agriculture, Bureau of Field Crops, L. M. Jeffers, Chief.

## REGULATIONS

- (1) Hard Seed—It is not permissible to include the hard seed as a part of the germination percentage. The percentage of hard seeds may be stated separately.
- (2) Label statements shall be in not less than 7 point type or written in ink.
- (3) Common name not sufficient for:
  - (a) Mustards used as cover crops. Both common name and specific name are required.
  - (b) Ryegrass—The common name origin shall be given.
  - (c) "Vetch" not sufficient, give variety name also.
- (4) Mixtures and special mixtures. Agricultural seeds shall be named on the label in order of their preponderance in the mixture. If a component is less than 5% of a special mixture its name must not be included unless accompanied by the actual percentage. Naming a special mixture after one of its component parts is not permissible unless the percentage of pure seed of the kind named be stated on the label.

## CONNECTICUT

### Act of 1937

## INFORMATION REQUIRED ON ANALYSIS TAGS OR CONTAINER

### (A) Agricultural Seeds—Each lot.

1. Name of seed.
2. Percentage of purity.
3. Percentage of weed seeds.
4. Name and number per ounce of noxious weeds present singly or collectively in excess of:
  - (a) 1 seed in each 5 grams.
  - (b) 1 seed in each 25 grams.
  - (c) 1 seed in each 100 grams.
5. Percentage of germination together with month and year of test.
6. Full name and address of vendor.

### (B) Mixtures of Agricultural seeds of not more than 2 kinds of seeds.

1. That such seed is a mixture.
2. Name and approximate percentage by weight of each kind of Agricultural seed present in excess of 5% of the total mixture.
3. Percentage of weed seeds.
4. Name and number per ounce of each nox-

ious weed present singly or collectively in excess of one seed in each 15 grams.

5. Percentage of germination of each Agricultural seed present in excess of 5% of the total mixture, together with month and year tested.
6. Full name and address of vendor.

### (C) Special Mixtures.

1. That such seed is a mixture.
2. Name and percentage by weight of each kind of seed present in the mixture.
3. Percentage by weight of weed seeds.
4. Percentage by weight of inert matter.
5. Name and number per ounce of each noxious weed, singly or collectively in excess of one seed in 15 grams.
6. Full name and address of vendor.

### (D) Vegetable seeds. Each separate container.

1. The kind and variety of seed.
2. Percentage of germination together with year tested.
3. Name and address of packetor or vendor.

## NOXIOUS WEEDS

Quack grass—*Agropyron repens*; dodder—*Cuscuta* spp.; Canada thistle—*Cirsium arvense*; plantain—*Plantago* spp. (includes buckhorn); hawkweed—*Hieracium* spp.; curled dock—*Rumex crispus*; wild mustard—*Brassica arvensis* and other Brassica species.

## SEED LABORATORY

Conn. Agricultural Experiment Station, New Haven.

E. M. Stoddard, Analyst in Charge.

Tests—Any citizen of Conn. may send for test a maximum of 5 germination tests or 1 purity test within a given calendar month. Samples for labeling purposes not accepted.

## ENFORCEMENT

is under the Commissioner of Agriculture, Olcott F. King, State Office Building, Hartford. Francis H. Adams—Chief Inspector. Conn. Dept. of Agriculture has established 3 voluntary grades for lawn grass. The use of these grades is limited to Connecticut dealers, but is not obligatory on them.

# STOKES TOMATO SEED

Stokesdale

Master Marglobe

Rutgers

*Certified by the State of New Jersey*

# FRANCIS C. STOKES COMPANY

Vincentown

New Jersey

*Growers*  
of  
**Watermelon**  
and  
**Crotalaria**  
**Seed**

★  
**Also**  
**NURSERY STOCK**

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*Serving the trade for 40 years*

**LET US KNOW YOUR**  
**REQUIREMENTS**

**SIMPSON NURSERY CO.**  
**MONTICELLO, FLORIDA**

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**GRASSES**

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Our specialty is domestic  
and imported grasses for  
use in lawn mixtures. We  
shall be glad to quote at  
any time.

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*When in a hurry phone LD-66*

■  
**O. M. SCOTT & SONS**  
**COMPANY**

**Marysville, Ohio**

**COLORADO**

*As Amended In 1921, 1925, and 1929*

**INFORMATION REQUIRED ON**  
**ANALYSIS TAGS**

SEEDS	
Kind .....	Variety .....
Pure Seed % .....	Date of Test .....
Germination % .....	Hard Seeds % .....
Grown in .....	Locality (If in Colo.) .....
Noxious Weeds: Name and Number per pound, in excess of 90 seeds per pound .....	
.....	
Name (Seller) .....	
Address .....	

(A) **Agricultural Seeds—5 pounds or more.**

(B) **Mixtures of Agricultural seeds as above in A.**

(C) **Vegetable Seeds—Law does not apply except to "Vine Seeds."\* Vine seeds—Label 5 pounds or more.**

1. Name.
2. State or foreign country where grown, if in Colorado, the locality. Or plainly mark "unknown."
3. Cantaloupe seed saved from cull piles and melons left in field after shipping shall be plainly marked "cull seed."
4. Name and address of vendor.

\*"Vine Seeds"—includes all varieties of cucumbers, cantaloupes, muskmelons, honeydews, casabas, pumpkins, squashes, and watermelons.

**NOXIOUS WEEDS**

Barley, wild, or squirrel-tail grass (*Hordeum jubatum*)  
Bindweed or wild morning-glory (*Convolvulus arvensis*)

Cheat (*Bromus secalinus*)  
Clover, hop (*Trifolium procumbens*)  
Cockle (*Saponaria vaccaria*, syn. *Vaccaria vaccaria*; and *Agrostemma githago*)  
Crabgrass (*Digitaria ischaemum*, *Digitaria sanguinalis*; syn. *Syntherisma ischaemum*, *Syntherisma sanguinalis*)  
Dodders (any variety) (*Cuscuta pentagona*, *C. indecora*, *C. planiora*, *C. epilinum*)  
Mustard, wild (any variety) (*Brassica* spp.)  
Oats, wild (*Avena fatua*)  
Plaintains (any variety) (*Plantago lanceolata*, *P. major*, *P. rugelii*)  
Poverty weeds (any variety) (*Iva axillaris*, *Franseria tomentosa*, *F. discolor*)  
Sowthistle (*Sonchus arvensis*)  
Thistle, Canada (*Cirsium arvense*)

**SEED LABORATORY**

At Colorado Agricultural Experiment Station, Fort Collins, Colorado.  
Bruce J. Thornton, Assoc. Bot. in Charge.  
Helen Kroeger, Analyst.  
The per cent of hard seed may be specified on the label, but must not be added to the germination.

**DELAWARE**

*Law of 1929*

**INFORMATION REQUIRED ON**  
**ANALYSIS TAG.**

(A) **Agricultural seeds. Every lot of 10 pounds or more.**

1. Name.
2. Percentage of pure seed.
3. Name and number per ounce of each noxious weed seed present in excess of:
  - (a) One in each 5 grams. (See page 106, group A.)
  - (b) One in 25 grams.
  - (c) One in 100 grams.
4. Percentage of germination together with month and year tested.
5. Name and address of vendor.

(B) **Mixtures exempt except noxious weed clause (See No. 3 above).**

(C) **Vegetable Seed not under the law except canning house peas which are listed as agricultural seeds.**

**NOXIOUS WEEDS**

Quack grass—*Agropyron repens*; Canada thistle—*Cirsium arvense*; dodders—*Cuscuta* species; wild mustard—*Brassica arvensis*; wild oats—*Avena fatua*; orange hawkweed—*Hieracium aurantiacum*.  
Dodder in excess of 30 per ounce is prohibited in lespedeza.

**STOP SALE AND SEIZURE**

The State Board of Agriculture may cause to be seized and held any lot of agricultural seed or mixtures of the same found to violate any of the provisions of this Act until the law has been complied with or said seed violation otherwise legally disposed of.

**SEED LABORATORY**

State Board of Agriculture, Dover.  
John L. Clough, Analyst.  
Purity and germination tests 25 cents each.

**ENFORCEMENT**

State Board of Agriculture, Dover.

**FLORIDA**

*Law of 1941 and Regulations*

**INFORMATION REQUIRED ON**  
**ANALYSIS TAG OR CONTAINER**

(A) **Agricultural Seeds (Unmixed). Every lot.**

1. Commonly accepted name of:
  - (a) Kind or
  - (b) Kind and variety or
  - (c) Kind and type.
2. Lot number or other lot identification.
3. Percentage of purity.

4. Percentage of inert matter.
5. Percentage of weed seeds. Prohibit if in excess of 3%, Carpet grass 5%.
6. Percentage of other agricultural seed.
7. Percentage of:
  - (a) Germination exclusive of hard seed.
  - (b) Hard seed.
  - (c) Month and year of test. The test for germination shall have been completed within a 12 month period exclusive of the month in which it was completed. Following (a) and (b) "Total Germination and Hard Seed may be given if desired."
8. Origin of alfalfa, red clover, and field corn, if unknown it must be so stated.
9. Name and address of person who labeled seed, or who sells, offers, or exposes said seed for sale.
10. Name and number of each kind of noxious weed seed per ounce in groups B1 and B2 and per pound in B3 and B4 when present singly or collectively in excess of:
  - a. 1 seed in 5 grams. (See page 106, group B)
  - b. 1 seed in 10 grams.
  - c. 1 seed in 25 grams.
  - d. 1 seed in 100 grams.

**(B) Mixed agricultural seed. Every lot.**

Same as for unmixed seed except that it must be called "Mixed" or a "Mixture" and the information required under items (A) 1, 3 and 7 shall be given for each agricultural seed component present in excess of 5%, in the order of its predominance.

**(C) Vegetable seeds. Every lot.**

1. Name of kind and variety.
2. For seed which germinates less than the standard last established by the Commissioner of Agriculture.
 

(See page 102 for standards)

  - (a) Percentage of germination, exclusive of hard seed.
  - (b) Percentage of hard seed.
  - (c) Month and year of test. The test shall have been completed within a 12 month period exclusive of the month in which the test was completed.
  - (d) The words "BELOW STANDARD" in not less than 8-point type. (Provided no seed shall be sold which falls more than 20% below the established standard.)
3. Name and address of the person who labeled seed, or who sells, offers, or exposes said seed for sale.

**Prohibits the Sale, Offering or Exposing for Sale of:**

1. Agricultural or vegetable seeds unless the test for germination shall have been completed within a 12 month period exclusive of the month in which test was completed.
2. Seed containing in excess of 500 noxious weeds per pound.
3. Seeds containing in excess of 3% of weeds, Carpet grass 5%.
4. Agricultural seed except grasses, unscarified legumes such as clovers, alfalfa, Alyce clover, crotalaria, chickpea, and kudzu, garden seed listed in The Standards for Germination, and seed released by the United States Customs, if the germination percentage is below 60%.
5. Seeds which fall 20% below the established germination standards.

**NOXIOUS WEEDS**

Garlic or wild onion (*Allium vineale*).  
 Bermuda grass (*Cynodon dactylon*, except when sold as such).  
 Quack grass (*Agropyron repens*).  
 Dodder (*Cuscuta species*).  
 Johnson grass (*Sorghum halepense*, except when sold as such).  
 Nut grass (*Cyperus rotundus*).  
 Canada thistle (*Cirsium arvense*).  
 Corn cockle (*Agrostemma githago*).

**"STOP SALE."**

"Stop Sale" notice or order may be issued and enforced by the Commissioner of Agriculture or his authorized agents to the owner or custodian of any lot of agricultural or vegetable seed which he finds or has good reason to believe is in violation of any of the provisions of this act which will prohibit further sale, barter or exchange of such seed until the Commissioner is satisfied the law has been complied with. After receiving confirmation that the seed does not comply with the act the owner or custodian shall have 15 days in which to comply with the law or withdraw the seed from sale.

**SEIZURE OF SEED.**

If for a period of 15 days, after having received the "stop sale" notice, the owner or custodian of the seed has failed to comply

with the law or to withdraw such seed from sale the Commissioner shall be authorized to seize and hold said lot of seed which shall, after the expiration of 15 days from the date of seizure, be destroyed or disposed of by the Commissioner in such manner as he shall by regulation prescribe.

**SEED LABORATORY**

State Seed Laboratory at Tallahassee. Miss Mildred V. Henry, seed analyst. Fees for tests for persons residing in Florida.

Purity on:

Clovers, lespedeza, beggarweed, and seed of similar size .....	\$0.50
Grasses similar to carpet, Dallis, red top and Bahia .....	\$1.00
Mixtures, such as lawn grass mixtures .....	\$2.00
Germination of any sample .....	\$0.25

Fees for tests for persons not residing in Florida:

The fees shall be the same as those charged by Commercial analysts. For example:

Oats .....	\$1.50
Rye, wheat, and similar grains .....	\$1.00
Grasses .....	\$3.00
Mixtures .....	\$3.00

**ENFORCEMENT**

Commissioner of Agriculture, Nathan Mayo. Department of Agriculture, Tallahassee. Supervising Inspector, Phil S. Taylor.

**Registration and license fees.**

- (A) Every person, before selling, offering or exposing for sale any agricultural or vegetable seeds, or mixtures thereof, other than packaged seed, shall
1. Register with the Commissioner as a seed dealer.
  2. Give number and location of each place of business at which such seed is sold, offered or exposed for sale.
  3. Pay the Commissioner
    - (a) \$1.00 if retailer, for each place of business.
    - (b) \$25.00 if wholesaler, or wholesaler and retailer for each place of business where seeds are sold, offered or exposed for sale at wholesale, or at wholesale and retail, and \$1.00 for each place of business at which seeds are sold, offered or exposed for sale at retail only.
  4. Such registrations shall be renewed July 1st of each year at the same fee.
- (B) When vegetable seeds are sold or consigned to or placed with any person for sale in packets or packages of 8 ounces or less, each box or container of not exceeding 72 dozen such packets or packages of vegetable seeds, or vegetable and flower seeds, shall have attached thereto an inspection fee stamp furnished and secured from the Commissioner, for which a fee of 25c shall be paid.

**REGULATIONS**

- (a) Analysis tags for agricultural seed shall be not less than a No. 5 standard tag—size 4 3/4 x 2 3/4 inches.
- (b) All information required on the analysis tag shall be placed on one side of the tag without intervening matter, and no other information shall be placed on this side with the analysis. The analysis shall be complete and total 100%.
- (c) Abbreviation of the name of the variety and the kind of seed on the analysis tag is prohibited.
- (d) Modifying words or phrases shall not be used in connection with the variety (as for example "type," "for forage purposes," etc.), nor shall group names be used as variety names.
- (e) Seed dealers carrying in stock grains or other seeds, which are intended for feeding purposes and not for planting, shall affix to each bag, parcel, or container a tag stating
  1. Kind and net weight of the grain.
  2. In plain, legible type the words: "The grain in this container is intended for feeding purposes only and will not be sold for seed."
- (f) New analysis tags bearing the name of the vendor, or other party responsible, shall be placed on the seed after the original test date becomes twelve months old.
- (g) Records of receipt, sale and delivery of all seed by any dealer shall be kept readily accessible for examination by an authorized agent of the Department of Agriculture, and such records shall be on hand not later than 10 days after receipt of such seed, and be kept for a period of three years.
- (h) Trucks and other motor conveyances transporting seed for sale, or to be sold to consumers on the public highways of Florida, shall have available for examination at any time a bill of lading, waybill, or a delivery receipt showing
  1. Name of shipper or party from whom purchased.

# SEEDS

We Sell—

We Buy

## BLUE GRASS

## ALFALFA

## CLOVERS

## LESPEDEZA

## GRASSES

## FORAGES



Since 1887

# Peppard Seed Co.

Kansas City, Mo.

2. If for delivery, the name and address of the party to whom the seeds are to be delivered.
  3. The kind and amount of each separate kind of seed.
  4. Name of the truck driver and truck line making delivery.
- (i) Seed treated with fungicides, or any substance likely to be poisonous to human beings or animals, shall show on the label the words "Poison Treated" in not less than 1/4 inch face red type, and it shall be unlawful to sell such seed for use or for processing either for human or animal consumption.
  - (j) Seeds containing more than 200 noxious weed seeds per pound shall be labeled in red ink in not less than 12 point type "EXCESSIVE NOXIOUS WEEDS."
  - (k) Worthless seed (seed which falls below the limits fixed by the Florida Seed Law and the regulations governing it) may not be given away or sold for planting purposes.
  - (l) Oats consisting of mixed varieties shall not be sold for planting purposes.
  - (m) Different varieties of the same kind of seed, when in quantities of less than 5%, will be considered as other crop seed.

- (n) Brand names, designs, grades, or pictures indicating a condition or quality, other than that required on the analysis tag, or indicating contradictions to any part of the analysis, shall not be permitted.
- (o) No agricultural seed, except grasses, unscarified legumes such as clovers, alfalfa, Alyce clover, crotalaria, chickpea, and kudzu, garden seed listed in The Standards for Germination, and seed released by the United States Customs shall be offered for sale if the germination percentage is below sixty.
- (p) Tolerances shall be recognized between the percentages or rate of occurrence found by analysis, test, or examination, in the administration of the act as referred to in Section 201.59 of the Federal Seed Act.
- (q) The use of the disclaimer or non-warranty clause in any invoice advertising, labeling written, printed or graphic matter pertaining to any seed shall not constitute a defence, or be used as a defence in any way in any prosecution or in any proceeding for confiscation of seeds brought under the provisions of this act, or the rules and regulations made and promulgated thereunder.

(Long leaf pine—*Pinus palustris*; slash pine *P. caribaea*; loblolly pine—*P. taeda*; short leaf pine—*P. echinata*).

- (1) Technical generic and specific names in official use by the United States Department of Agriculture.
- (2) State and county of origin.
- (3) Date of collection—month and year.
- (4) Name of collector.
- (5) Percentage of purity of whole, normal seeds, with or without wings, of the species concerned, if based on seeds with wings attached it shall be so stated.
- (5) Percentage of other species if present.
- (7) Percentage of germination. Test shall have been completed within a nine month period, exclusive of the month in which it was completed.

**Prohibits the sale, offering or exposing for sale of any agricultural, vegetable or certain tree seeds—**

- (1) Unless the test for germination shall have been completed within a nine month period, exclusive of the month in which it was completed.
- (2) Containing primary noxious weed seeds. Subject to tolerances.
- (3) That have been treated with poisonous materials unless the labels are marked with 1/4 inch red letters "POISON TREATED."
- (4) Containing over 100 primary noxious weed seeds per pound.
- (5) Containing over 200 secondary noxious weed seeds per pound.

**GEORGIA**

**Law 1941—Regulations 1943**

**INFORMATION REQUIRED ON ANALYSIS TAG OR CONTAINER.**

- (A) **Agricultural seeds. Every lot of 5 pounds or more.**
  - (1) Commonly accepted name of:
    - a. Kind or variety, and
    - b. Kind and type.
  - (2) Lot number or other lot identification.
  - (3) Percentage of pure seed.
  - (4) Percentage of inert matter.
  - (5) Percentage of weed seeds. Prohibited if in excess of 2 1/2%. Dallis grass and carpet grass 5%.
  - (6) Percentage of other agricultural seeds.
  - (7) Origin, if unknown it must be so stated.
  - (8) Name and address of person who labeled the seed, or who sells, offers or exposes said seed for sale.
  - (10) Name and number per pound of primary and secondary noxious weed seeds present singly or collectively in excess of:
    - (a) One in 5 grams (see p. 106, Group B)
    - (b) One in 10 grams.
    - (c) One in 25 grams.
    - (d) One in 100 grams.
  - (11) Percentage of: (Regulation)
    - a. Germination
    - b. Hard seeds
    - c. Date of test

(B) **Mixed Agricultural Seeds. Every lot of 5 pounds or more.**

Same as for unmixed seeds, except it must be called "Mixed" or a "Mixture" and the information required under items (A) 1 and 3 shall be given for each agricultural seed present in excess of 5%, in the order of its predominance.

(C) **Hybrid seed corn. Every lot of 5 pounds or more.**

In addition to the information required under section (A) the following additional information shall be given:

- (1) Name and address of the party who grew the seed, or is responsible for the distribution.
- (2) Variety and kind of foundation seed stock used in its production.
- (3) Name or designation under which each lot will be sold.
- (4) Length of growing season in days, from germination to maturity.

(D) **Vegetable seeds. Every lot of 5 pounds or more.**

- (1) Name of kind and variety.
- (2) For seed which germinates less than the standard last established by the Commissioner of Agriculture. (See page 102 for standards.)
  - a. Percentage of germination, exclusive of hard seeds.
  - b. Percentage of hard seeds.
  - c. Month and year of test. Test shall have been completed within a nine month period exclusive of the month in which the test was completed.
  - d. Marked "BELOW STANDARD" in not less than 8-point type.
- (3) State where grown.
- (4) Name and address of person who labeled the seed, or who sells, offers or exposes said seed for sale.
- (5) Seed which falls more than 20% below standard cannot be sold.

(E) **Certain Tree seeds. Every lot of 5 pounds or more.**

**NOXIOUS WEEDS.**

**Primary noxious weeds.**

**PROHIBITED SUBJECT TO TOLERANCES**

Bindweed—*Convolvulus* spp.; Johnson grass—*Sorghum halepensis*; Wild onion or garlic—*Allium vineale*; nut grass—*Cyperus rotundus*; quack grass—*Agropyron repens*; Bermuda grass—*Cynodon dactylon*; Canada thistle—*Cirsium arvense*; dodder—*Cuscuta* spp.

**Secondary noxious weeds.**

Corn cockle—*Agrostemma githago*; coffee weed—*Cirrhium intybus*; darnel—*Lolium temulentum*; cheat or chess—*Bromus* spp.; sand spur—*Cenchrus pauciflorus*; rough pig weed—*Amaranthus retroflexus*; plantains—*Plantago* spp.; wild mustard—*Brassica* spp.; bitter weed—*Helentium tenuifolium*.

FARMERS are exempt from complying with the provisions of this act unless they are selling their seed outside the county where grown, then each container must be tagged, giving:

- (1) Name of grower.
- (2) Name of kind and variety.
- (3) Calendar year harvested.
- (4) If containing undesirable or noxious weeds it must be so stated. If a dealer purchases seed from a farmer in his trade territory he may sell it, complying with the same provisions as required of the farmer.

**SHIPMENTS**

Every lot of seed covered by this act being shipped shall be accompanied by a bill of lading or other evidence giving:

- (1) Name and address of consignor and consignee.
- (2) Class and amount of each being transported.

**SHARE YOUR A-1 FINE SEED SEPARATOR**  
*With Your Fellow Seed Men*

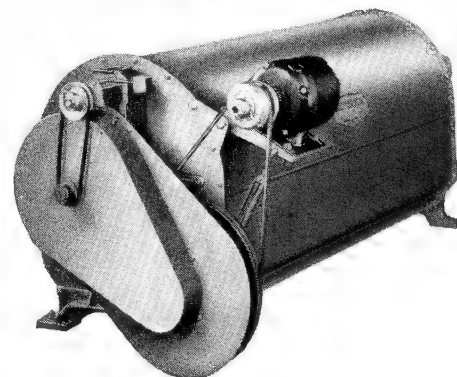
We can furnish only a small part of the A-1 Fine Seed Machines that seed houses wish to buy. Yet there is an urgent need for abundant supplies of good, clean seed so we may have the big crops necessary to feed America and her allies. Your A-1 Fine Seed Separator saves 75% of the good seed that other machines waste with the tailings. When you share your A-1 with a fellow seed man, and help him save valuable seed that would otherwise be wasted, you are making an important contribution to your country's cause.

The unique "square shouldered" indents of the A-1 cylinders provide "human hand" accuracy that ordinary machines can not approach. The unlimited flexibility of the adjustable trough and variable speed drive assure outstanding accuracy on a great variety of seeds.

**SUPERIOR SEPARATOR CO.**

1179 15th Ave. S. E., Minneapolis, Minnesota

for hybrid seed corn, grain cleaning and grading equipment for mills, malt



Removes Canadian thistle from alsike, quack grass from sweet clover, dodder from carrot seed, sour clover from burr clover, seeds from rye grass, grasshopper dirt from timothy, pigweed and catchfly from alfalfa. The separations are positive, rapid and minutely accurate. "Hair splitting" adjustments are instantly and accurately made without fussing or guessing.

Makers of: length and width and thickness graders houses, seed houses, country and terminal elevators.

"STOP SALE" orders shall be issued and enforced by the Commissioner of Agriculture to the owner or custodian of any lot of agricultural, vegetable or certain tree seeds which are in violation of any provisions of this act which shall prohibit the further sale of such seeds until that officer has evidence the law has been complied with. Any lot of seed, the sale of which has been prohibited as provided in this paragraph, the owner or custodian shall have the right to appeal from such order to a court of competent jurisdiction, where such seed are found, praying for a judgment as to the justification of said order, and for the discharge of such seed from the order in accordance with the findings of the court.

**SEIZURE.** Any lot of agricultural, vegetable or certain tree seeds not in compliance with the provisions of this act shall be subject to seizure on complaint of the Commissioner of Agriculture to a court of competent jurisdiction in the area in which the seed is located. If the court finds the seed to be in such violation of the act and orders its condemnation it shall be, denatured, processed, destroyed, relabeled or otherwise disposed of in compliance with the laws of the state; Provided, in no instance shall such disposition be ordered by the court without first having given the claimant an opportunity to apply to the court for the release of said seed or permission to process or relabel it to bring it into compliance with the act.

**HYBRID SEED CORN**—the term means the first generation seed of a cross produced by controlling the pollination, and by combining two, three, or four inbred lines, or by combining one inbred line or a single cross with an open pollinated variety. Hybrid designations shall be treated as variety names.

**STANDARDS OF LESPEDEZA.** All tags and invoices marked to show the quality. Regulations effective until July 1, 1943.

1. **FIRST QUALITY.** Purity minimum 99%, weeds maximum one-half of one percent, germination not less than 75% and not more than 15% hard seeds, containing not more than 100 PRIMARY or SECONDARY NOXIOUS weed seeds per pound.
2. **SECOND QUALITY.** Purity minimum 96%, weeds maximum 2½%, germination not less than 60%, and not more than 20% hard seeds, containing not more than 200 PRIMARY or 400 SECONDARY NOXIOUS weed seeds per pound.

**SEED LABORATORY**

Department of Agriculture, Atlanta.  
Ercelle Fuller, analyst in charge.

**ENFORCEMENT**

Department of Agriculture, Atlanta, Georgia.  
Tom Linder, Commissioner of Agriculture.  
C. Reynolds Clark, State Chemist.

**IDAHO**

*Law of 1931, Amended 1939*

**INFORMATION REQUIRED ON ANALYSIS TAG OR CONTAINER.**

**(A) Agricultural Seeds. Every Lot.**

1. Name of seed.
2. Percentage of pure seed.
3. Name of noxious weeds present.
4. Germination of non-leguminous plants, together with the date of test.
5. Year grown.
6. Where grown.
7. Name and address of vendor.

**(B) Mixtures. Every Lot.**

1. That such seed is a mixture.
2. Name of each kind present in proportions of 5% or more.
3. Name and number of noxious weeds.
4. Percentage of inert matter.
5. Percentage of germination of non-leguminous plants together with date of test.

**(C) Vegetable Seed.**

Classed as agricultural seeds; label as under (A) above.

**(D) Flower Seeds.**

Classed as agricultural seeds; label as under (A) above.

**NOXIOUS WEEDS**

Prohibit any: Quack grass—Agropyron repens; Canada thistle—Carduus arvensis; buckhorn plantain—Plantago lanceolata; per-

ennial sow thistle—Sonchus arvensis; hoary cress—Lepidium draba, Lepidium repens, Hymenophyssa pubescens; wild morning-glory—Convolvulus arvensis and Convolvulus sepium; spurge—Euphorbia corollata, Euphorbia esula, Euphorbia cyparissias; yellow toad flax—Linaria vulgaris; perennial ground chery—Physalis subglabrata; Russian knapweed—Centaurea picris.

Prohibited in greater proportion than one seed of any or all to 10,000 seeds of the agricultural seed being offered for sale.

Wild mustard—Brassica spp.; wild oats—Avena fatua; dodder—Cuscuta spp.; corn cockle—Agrostemma githago; puncture vine—Tribulus terrestris; frenchweed—Thlaspi arvense.

**SEED LABORATORY AND TESTS**

Seed Laboratory, College of Agriculture, Boise Idaho.  
Mr. E. K. Chaffee, Seed Analyst.  
Fees—Purity tests, 25 cents; Germination tests 25 cents.

**ENFORCEMENT**

H. L. Spence, Jr., State Seed Commissioner  
Agronomy Extension Service, University of Idaho, Boise, Idaho.

**SCREENINGS**

All screenings, removed during the process of cleaning field, flower or garden seed containing any seeds of noxious weeds shall be destroyed or devalitized before leaving the place where cleaning occurred.

**ILLINOIS**

*Law 1941 Rules and Regulations 1942.*

**INFORMATION REQUIRED ON ANALYSIS TAG OR CONTAINER.**

**(A) Agricultural Seeds. Every lot.**

- (1) Commonly accepted name of:
  - a. Kind or,
  - b. Kind and variety or,
  - c. Kind and type.
- (2) Lot number or other lot identification.
- (3) Percentage of pure seed.
- (4) Percentage of inert matter.
- (5) Percentage of weed seeds. Prohibited if in excess of 2%.
- (6) Percentage of other agricultural seeds.
- (7) Percentage of:
  - a. Germination, exclusive of hard seed.
  - b. Hard seeds.
  - c. Month and year test was completed. The test for germination shall have been completed within a nine month period, exclusive of the month in which test was completed.

Following a. and b. the additional statement "Total germination and hard seed" may be given if desired.

- (8) Origin of alfalfa, red clover and field corn (except hybrid, if unknown it must be so stated.
- (9) Name and address of the person who labeled the seed, or who sells, offers or exposes said seed for sale.
- (10) Name and number of each kind of secondary noxious weeds, per ounce in groups Ba and Bb, and per pound in groups Bc and Bd when present singly or collectively in excess of:
  - 1 in 5 grams.
  - 1 in 10 grams.
  - 1 in 25 grams.
  - 1 in 100 grams.

(See page 106, Group B)  
The name of any primary noxious weed seed present in the proportion of:  
1 in 50 grams in agricultural seeds of groups Ba & Bb (page 106).  
1 in 150 grams in agricultural seeds of group Bc.  
1 in 1 pound in agricultural seeds of group Bd.

Ask  
**Steele,  
Briggs**

OF  
**CANADA**

for

**ALFALFA VARIEGATED  
ALFALFA GRIMM  
SWEET CLOVER  
ALSIKE**

**CANADIAN RED CLOVER  
CANADIAN BLUE GRASS  
SLENDER WHEAT GRASS  
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CRESTED WHEAT GRASS**

both Fairway and Forage Strain

**STEELE, BRIGGS SEED CO., Limited**  
Toronto, Winnipeg, Regina  
CANADA

Contract  
**GROWERS**

**TOBACCO  
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Yellow Potato Onion Sets  
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Write for Prices and  
full information

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LIMESTONE, TENNESSEE**

WHOLESALE SEED GROWERS EST. 1907

**(B) Mixtures of Agricultural Seeds. Every lot.**

Same as for unmixed agricultural seed, except that it must be called "Mixed" or a "Mixture" and the information required under items (A) 1, 3 and 7 shall be given for each component present in excess of 5% in the order of its predominance.

**(C) Vegetable Seeds. Every lot.**

- (1) Name of kind and variety.
- (2) For seed which germinates less than the standard last established by the Director of Agriculture. (See page 102 for standards.)
  - a. Percentage of germination, exclusive of hard seed.
  - b. Hard seeds.
  - c. Month and year test was completed. The test for germination shall have been completed within a 9 month period exclusive of the month in which the test was completed.
  - d. The word "BELOW STANDARD" in not less than 8-point type.
  - e. Name and address of the person who labeled the seed, or who sells, offers or exposes said seed for sale.

**Prohibits the sale, offering or exposing for sale any agricultural or vegetable seed—**

- (1) Unless the test for germination has been completed within a nine month period, exclusive of the month in which the test was completed.  
Agricultural Seed Only.
- (2) Agricultural seeds containing in excess of 2% weeds.
- (3) Agricultural seeds containing primary noxious weed seeds, singly or collectively, in excess of 1 in 50 grams of the seeds in groups Ba and Bb and in excess of 1 in 150 grams of the seeds in group Bc, and in excess of 1 in a pound of the seeds in group Bd (page 106), (Vegetable seeds exempt).
- (4) Agricultural seeds containing secondary noxious weed seeds, either singly or collectively, in greater proportion than 1 to 1,000 agricultural seeds.

**NOXIOUS WEEDS.**

**PRIMARY NOXIOUS WEEDS**

PROHIBITS IF IN EXCESS OF 1 IN 50 GRAMS, 1 IN 150 GRAMS AND 1 IN A POUND.

Canada thistle—*Cirsium arvense*  
Perennial sow thistle—*Sonchus arvensis*  
Field bindweed—*Convolvulus arvensis*  
Leafy spurge—*Euphorbia esula*  
Russian knapweed—*Centaurea picris*  
Hoary cress—*Lepidium draba*.

**SECONDARY NOXIOUS WEEDS**

PROHIBITS IF IN EXCESS OF 1 to 1,000 AGRICULTURAL SEEDS.

Curled dock—*Rumex crispus*  
Wild garlic—*Allium* spp.  
Dodders—*Cuscuta* spp.  
Bullnettle—*Solanum carolinense*  
Buckhorn—*Plantago lanceolata*  
Quack grass—*Agropyron repens*  
Wild carrot—*Daucus carota*  
Wild Mustard—*Brassica* spp.  
Johnson grass—*Sorghum halepense*  
Ox-eye daisy—*Chrysanthemum leucanthemum*

**STOP SALE AND SEIZURE**

The authorized agents of the Department of Agriculture shall seize or prohibit the sale of any lot of agricultural or vegetable seed being sold, offered or exposed for sale which appears to be in violation of this act or to fall below the statement on the label or tag. Said seed shall not be sold, offered or exposed for sale for seeding purposes until it is released by the Department of Agriculture, provided that the right to appeal to a court of competent jurisdiction to review any order, rule or regulation shall exist in all cases. Any seed, seized in accordance with the provisions of this act, found by a court of competent jurisdiction to be in violation of any

of the provisions thereof may be disposed of by the Department of Agriculture.

- a. By sale for the purpose of recleaning.
- b. By delivery to the owner, provided he has appeared as claimant thereof and paid the court costs and fees and all other necessary expenses in connection with the seizure of the seed, and has executed and delivered a bond, with good and sufficient sureties, conditioned that the seed will not be sold or disposed of contrary to any provisions of this act.
- c. By destruction.

**LABORATORY AND ENFORCEMENT**

State Department of Agriculture.  
Charles H. Keltner, Superintendent of Division of Plant Industry, Springfield.

Tests—Residents permitted 5 free tests for both purity and germination.

Tests of clover, alfalfa, lespedeza, timothy, vetch, sudan grass, rape, and millet charges shall be 50 cents for purity and 50 cents for germination. Chaff grasses \$1.00 for purity, and \$1.00 for germination. Uncleaned red-top not permitted on free list purity and germination \$5.00.

**Regulations (November 1, 1942)**

*Regulation I*

Seed in storage, in bins or other containers in salesroom, storeroom or warehouse, unless otherwise labeled, shall be considered offered or exposed for sale for seeding purposes in Illinois and shall be subject to the provisions of the seed law.

*Regulation II*

Agricultural seeds for seeding purposes stored in bulk or bins or tanks shall be labeled by attaching a tag or label to the bin at the entrance. Each portion of seeds sold from this bulk for seeding purposes shall be accompanied by an exact copy of the label attached to the container of the bulk lot.

*Regulation V*

When the number of mottled seed in sweet clover seed is in excess of 1.3%, the seed

shall not be considered white blossom sweet clover and shall be labeled as sweet clover or a mixture of White Blossom and Yellow Blossom Sweet Clover and the percentage of each given.

*Regulation VI*

**Hybrid Corn.** Definition: "Hybrid Seed Corn is the seed of corn resulting from the first cross fertilization involving inbred lines of corn and/or their combinations, the inbred lines having been self-fertilized until they are reasonably pure."

To sell seed of corn labeled "Hybrid Corn" without giving proper and indisputable evidence that it complies with the above definition shall constitute a violation of the Illinois Seed Law.

*Regulation VII*

**Certified and Registered Seed.** Such seed must have been produced and labeled in accordance with the procedures and in compliance with the rules and regulations of an officially recognized seed-certifying agency. The Illinois Crop Improvement Association is recognized as the certifying agency in Illinois.

*Regulation VIII*

**Recleaned Seed.** Agricultural seed shall be considered recleaned if the total inert matter and weed seeds shall not exceed 20% of the sample in the case of Bluegrasses; 15% in case of Red Top, Bent Grasses, Orchard Grass and Brome Grass; and 3% in all other agricultural seeds.

*Regulation XI*

Inasmuch as the sale of agricultural seeds (vegetable seeds exempt) containing any of the primary noxious weed seeds in greater number than 1 to 50 grams in the seeds of groups Ba and Bb, 1 to 150 grams in the seeds of group Bc, and 1 to the pound in the seeds of group Bd (page 106), is prohibited, the presence of any of these weed seeds, if present in smaller amounts than specified above, shall be shown on the tag or label.

Section 40 of the Criminal Code of the Illinois statutes prohibits the bringing into this state, seeds of Canada Thistle, Perennial Sow Thistle, European Bindweed, Russian Knapweed and Leafy Spurge.

**WORLD'S LARGEST SEED CORN PLANT**



Our new plant located at San Jose, Illinois (25 miles south of Peoria), has a drying capacity, normal season, of 145,000 bushels. Seed storage capacity 184,000 bushels. 63 drying bins holding from 550 bushels to 1,150 bushels each. Equipped with the newest and best machinery we can buy.

Thirty-five years' experience in producing high-yielding seed corn. 14 leading hybrids, mostly certified. We produce our own inbreds, single crosses and four-way crosses.

**Flat grades \$3.50 to \$7.75 per bushel, subject to dealers liberal discount.**

**Send for new catalog. Agents wanted; some good territory still open.**

**Write for wholesale carload prices.**

**KELLY SEED COMPANY**

PEORIA, ILLINOIS

SAN JOSE, ILLINOIS

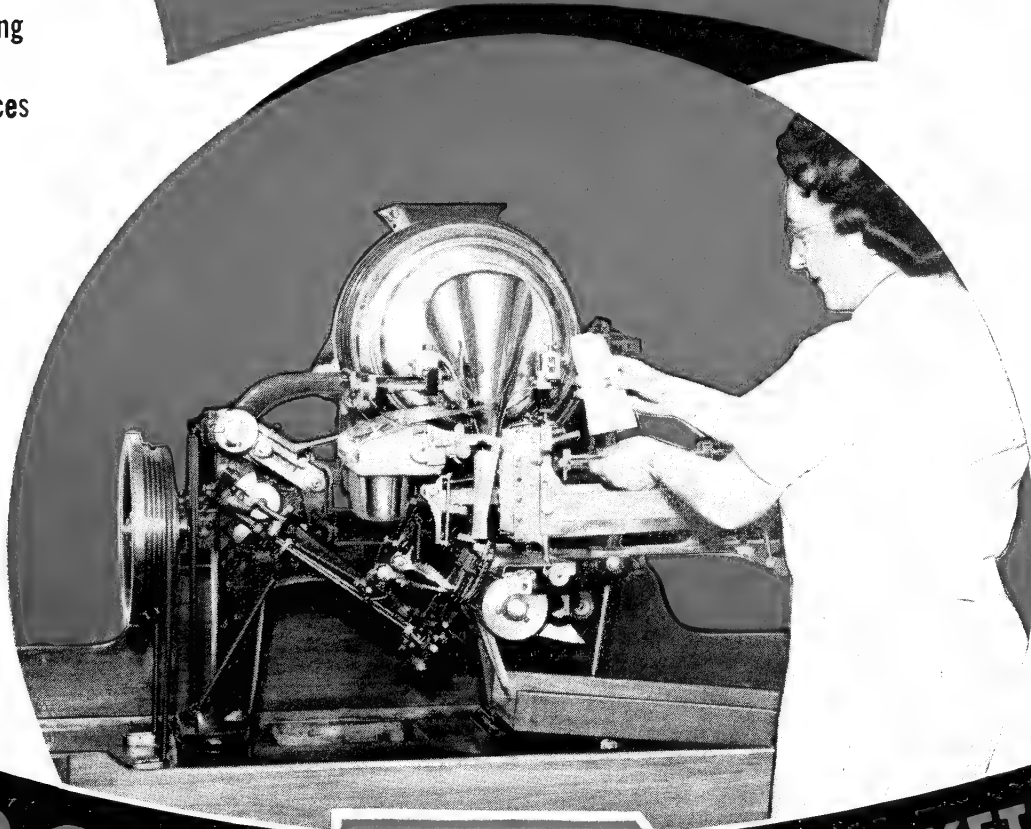
TO HELP PERPETUATE V GARDENS

TO RELEASE LABOR  
FOR WAR WORK

TO HELP FEED THE NATION

TO HELP FEED  
THE WORLD

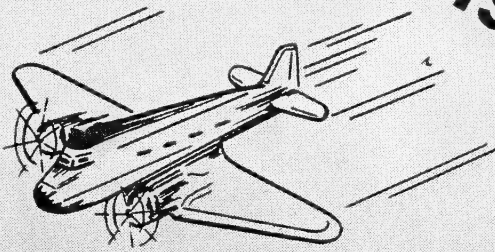
Write for  
favorable leasing  
terms and  
low packet prices



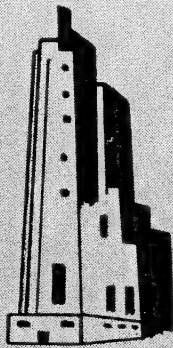
**BROWN** - MADE SEED PACKETS AND  
AUTOMATIC SEED PACKET  
FILLING AND SEALING MACHINES

THE BROWN BAG FILLING MACHINE CO., Fitchburg, Mass.

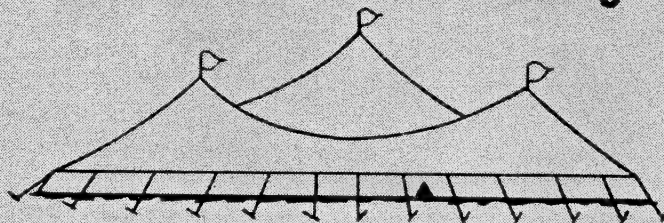
Just as there is



a f-a-s-t-e-s-t plane



a **TALLEST** building



a **"BIGGEST"** show on earth"

**SO TOO IS THERE A**

Those who buy their seed carefully know that it yields better crops, is uniformly excellent, always dependable. Thousands play safe and buy it every year, declaring that it has no equal.

**85 Varieties**  
NORTHERN OHIO GROWN

- FIELD
- SWEET
- ENSILAGE
- HYBRID

SEED CORN

*The* **O & M SEED** Company





**O & M Oats — 1942**  
 Crop Yield Over 80 bushels per acre



**A FINEST SEED . . . and it's O & M!**

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*Write for prices on  
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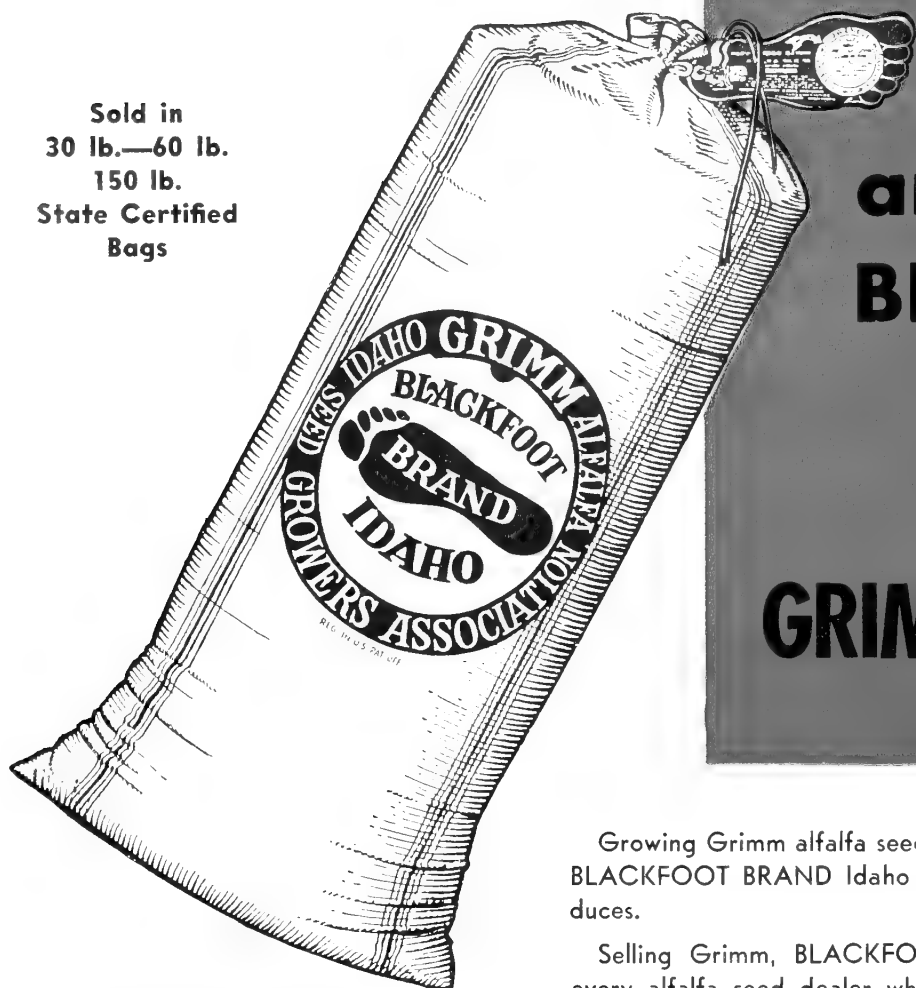
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 COLUMBIA GRAY SEED  
 OATS**

**LENROC SEED OATS  
 BOONE SEED OATS**

**GROWERS Green Springs, Ohio**

**YOUR DOLLARS SOWN IN BONDS TODAY WILL  
 ASSURE THE HARVEST OF PEACE TOMORROW**

Sold in  
30 lb.—60 lb.  
150 lb.  
State Certified  
Bags



### Ladak Alfalfa Seed

... a hardy, wilt-resisting strain especially adapted to areas that require a heavy first cutting; and,

### Certified Midland & Cumberland Red Clovers

... are grown to the same, exacting standards as Idaho Grimm, and are marketed in sealed and certified bags under the BLACKFOOT BRAND name. Place your orders NOW!



**Growing  
and Selling  
BLACKFOOT  
BRAND  
is a  
GRIMM Business!**

Growing Grimm alfalfa seed is important business in Idaho, and BLACKFOOT BRAND Idaho Grimm is the best that Idaho produces.

Selling Grimm, BLACKFOOT BRAND, is good business for every alfalfa seed dealer who wants to make the most year in and year out profit.

### Sells Fast—Repeats Often

BLACKFOOT BRAND is profitable because your farmer customers know it is DEPENDABLE. They pay a premium for it and come back for more because THEIR profit lies in what they cut or feed. BLACKFOOT BRAND cuts and feeds more per acre because it is hardy, resists winter-kill and consistently grows heavy stands.

This reputation for dependability has been developed by more than 22 years of careful, state-inspected and state-certified growing and processing.

Regular, year-after-year advertising has helped create, expand and maintain the steady demand for BLACKFOOT BRAND—will continue to assist in moving it for you at a satisfactory profit.

Make your alfalfa seed business a GRIMM one. Order now from—

**IDAHO GRIMM**  
**Alfalfa Seed Growers Association**  
**Blackfoot, Idaho**

# INDIANA

## Law 1941 and Amendments and Rulings to January 1, 1939

### INFORMATION REQUIRED ON ANALYSIS TAG.

#### (A) Agricultural Seeds. Use Indiana Tags A or B. Every lot of one pound or more.

1. Commonly accepted name of kind and variety. When not known so state by using word "unknown."
2. Percentage of pure seed.
3. Percentage of inert matter.
4. Percentage of weed seeds. Prohibit if in excess of 3%.
5. Percentage of other agricultural seeds.
6. Percentage of:
  - a. Germination.
  - b. Hard seed.
  - c. Month and year of test.
7. Locality where grown. If unknown it must be so stated by using the word "unknown."
8. Name and address of person or firm who labeled seed, or who sells, offers or exposes seed for sale.
9. Name and number of secondary noxious weeds per pound. If present in excess of 1/2 of 1 percent seed is prohibited from sale.

#### (B) Mixtures. Use Indiana Tag C. Every lot of one pound or more.

Same as for unmixed agricultural seeds except that it must be called a "Mixture" and the information required under items (A) 1, 2 and 6 shall be given for each agricultural seed present in excess of 5%. The locality where grown is not required.

#### (C) Vegetable Seed. Use Indiana Tag B. Every lot of one pound or more.

All garden and truck crops included under agricultural seeds. See (A) above. Label as above under (A).

#### Prohibits the Sale, Offering or exposing for Sale of:

- (1) Agricultural or vegetable seed containing Primary Noxious Weeds subject to tolerances.
- (2) Agricultural or vegetable seed containing more than 1/2 of one percent of Secondary Noxious Weeds.
- (3) Agricultural or vegetable seeds containing more than 3% of weeds.

### NOXIOUS WEEDS

#### Primary Noxious Weeds

##### PROHIBITS SEED CONTAINING ANY SUBJECT TO TOLERANCES.

Canada thistle (*Cirsium arvense*).  
Field bindweed (*Convolvulus arvensis*).  
Johnson grass (*Sorghum halepense*).  
Perennial sow thistle (*Sonchus arvensis*).  
Quack grass (*Agropyron repens*).  
Wild garlic (*Allium vineale*).

#### Secondary Noxious Weeds

##### PROHIBITED IF PRESENT IN EXCESS OF 1/2 OF ONE PERCENT.

Bitter wintercress (*Campe barbarea*).  
Bracted plantain (*Plantago aristata*).  
Buckhorn (*Plantago lanceolata*).  
Common plantain (*Plantago major* and *rugelii*).  
Corn cockle (*Agrostemma githago*).  
Curled dock (*Rumex crispus*).  
Dodder (*Cuscuta* spp.).  
Field peppergrass (*Lepidium campestre*).  
Horsenettle (*Solanum carolinense*).  
Mustard (*Brassica arvensis*).  
Oxeye daisy (*Chrysanthemum leucanthemum*).  
Red sorrel (*Rumex acetosella*).  
Wild carrot (*Daucus carota*).

### CONDEMNATION OF SEED.

Any lot of agricultural seed not in compliance with the provisions of this act shall be subject to seizure on complaint of the state seed commissioner to a court of competent jurisdiction in the area in which the seed is located. In the event that the court finds the seed to be in violation of the act and orders the condemnation of said seed, it shall be denatured, processed, destroyed, relabeled or otherwise disposed of in compliance with the laws of the state: Provided, That in no instance shall such disposition of said seed be ordered by the court without first having given the claimant an opportunity to apply to the court for release of said seed on promise to process or relabel to bring it into compliance with the act.

ANY GROWER of seed can sell his seed for sowing purposes, without labeling, if he has not advertised it other than by word of mouth or notice placed before his farm, provided he makes the sale and delivers the seed on his premises to the purchaser himself, provided the seed contains no Primary Noxious weeds, not more than 1/2 of one percent Secondary Noxious weeds, and not more than 3 percent of all weeds.

### LABORATORY AND TESTS

Seed Laboratory at Lafayette is under the State Chemist and Seed Commissioner, cooperating with the U. S. Department of Agriculture. H. R. Kraybill, State Chemist and Seed Commissioner.  
E. R. Clark, Associate Seed Technologist, U. S. Department of Agriculture.  
Miss Regina Schulte, Analyst, U. S. Department of Agriculture.  
Number of free tests for any one firm or person limited to two samples during any one month.

### ENFORCEMENT AND REGULATIONS

All agricultural seed shipped or delivered in the State of Indiana, must have attached to each bag of one pound or more an Indiana State Label properly filled out. Tags are purchased from the Seed Commissioner as follows:

Style "A"—The orange colored tag, for unmixed alfalfas, clovers or grasses.

Style "C"—The green colored tag, for mixed alfalfas, clovers or grasses.

Tags for 100 pounds—8 cents each  
Tags for 75 pounds—6 cents each  
Tags for 50 pounds—4 cents each  
Tags for 25 pounds—2 cents each

Style "B"—The uncolored manila tag for cereals, garden and truck crop seeds.

Tags for 200 pounds—8 cents each  
Tags for 175 pounds—7 cents each  
Tags for 150 pounds—6 cents each  
Tags for 125 pounds—5 cents each  
Tags for 100 pounds—4 cents each  
Tags for 75 pounds—3 cents each  
Tags for 50 pounds—2 cents each  
Tags for 25 pounds—1 cent each

*Ruling No. 1.* In the case of leguminous seeds containing hard seeds, the actual percentage of germination should be given and may be followed by the percentage of hard seeds, but hard seeds cannot be included in the germination percentage.

*Ruling No. 2.* Wholesale seedsman is required to attach at least one Indiana State tag, properly filled out to each bag shipped to retailer. The retailer is then required to attach sufficient tags to cover the net weight before offering seed for sale.

*Ruling No. 3.* Hybrid Corn may be so labeled only when such seed represents the first generation of a cross between strains of different parentage and involving inbred lines of corn and/or their combinations.

*Ruling No. 5.* Effective January 1, 1939. White blossom sweet clover seed containing more than 5% of mottled seeds must not be labeled *white blossom sweet clover*. Such seed may be labeled *sweet clover*.

# Redtop



## Ging & Company

FARINA  
ILLINOIS

# GEO. KELLER & SONS

Quincy, Ill.

## K Brand Seeds

### Wholesale Dealers

- Red Clover
- Mammoth Clover
- Timothy
- Alsike
- Alfalfa
- Sweet Clover
- Lespedeza

# DAVENPORT SEED CO.

*Headquarters*

**IOWA Grown  
TIMOTHY**

*Car Lots a Specialty*



**Hardy  
Alfalfas  
Red Clovers  
Alsike  
Sweet Clover  
Soy Beans  
Hybrid  
Seed Corn**

317 E. 2nd St.

**DAVENPORT, IOWA**

*Headquarters*

**WESTERN GROWN**

*Kentucky*

**BLUE GRASS**

*We Buy and Sell*

Dwarf Essex Rape, Red, White and Alsike Clover, White and Yellow Blossom Sweet Clover, Alfalfa, Blue Grass, Red Top, Millet, Cane, Kaffir, Hybrid Seed Corn and all seed grains.

Correspondence Solicited

**Ouren Seed Company**

Council Bluffs, Iowa

## IOWA Code of 1941

### INFORMATION REQUIRED ON ANALYSIS TAGS OR CONTAINER

#### (A) Agricultural Seeds (Unmixed) Every lot.

- (1) Name of:
  - (a) Kind, or
  - (b) Kind and variety, or
  - (c) Kind and type.
- (2) Lot number or other lot identification.
- (3) Percentage of pure seed.
- (4) Percentage of inert matter.
- (5) Percentage of weed seeds. Prohibited if in excess of 3%.
- (6) Percentage of other agricultural seeds.
- (7) Percentage of:
  - (a) Germination, exclusive of hard seed.
  - (b) Hard seed.
  - (c) Month and year tested. Test shall have been completed within a 9 month period, exclusive of month in which test was made.

Following (a) and (b) Total Germination and Hard Seed may be given, if desired.

- (8) Origin of alfalfa and red clover, if unknown it must be so stated.
- (9) Warning as to danger if seed has been treated with a compound poisonous to man or farm animal.
- (10) Name and address of person who labeled, sells, offers or exposes seed for sale.
- (11) Name and number per ounce of each secondary noxious weed in groups (Ba), (Bb) and (Bc) and per pound in group (Bd) singly or collectively in excess of:
  - (a) 5 per ounce. (See page 106, group B.)
  - (b) 3 per ounce.
  - (c) One per ounce.
  - (d) 5 per pound.

#### (B) Mixed Agricultural Seed. Every lot.

Same as unmixed seed, except that the information required under items 1, 3 and 7 shall be given, for each agricultural seed component present in excess of 5%, in order of its preponderance.

#### (C) Vegetable Seeds Not Included Under Law.

#### (D) Seed sold by the grower on his farm are exempt from detailed labeling provisions if a placard is displayed or a written or printed statement supplied purchaser giving

- (1) Percentage of germination.
- (2) Month and year of test.
- (3) Kind and number per ounce or pound of all secondary noxious weeds present.
- (4) A guarantee that no primary noxious weeds are present.

#### (E) Information Required on labels of inoculants for leguminous plants.

- (1) Kind of plants for which inoculant is to be used.
- (2) Amount of seed content will inoculate.
- (3) Expiry date of inoculant.
- (4) Name and address of manufacturer or laboratory of origin or of vendor if he accepts responsibility for accuracy of the information.

#### (F) Seed Potatoes bearing blue certification label shall be

- (1) Certified and bear label with the word CERTIFIED thereon.

#### (G) Prohibits the sale, offering or exposing for sale of seed if,

- (1) Contains primary noxious weed seeds, subject to tolerances.
- (2) Contains in excess of 3% of weed seeds.
- (3) Screenings of agricultural seed containing less than 25% viable seed not marked "NOT FOR PLANTING PURPOSES," provided the claimant of said seed having been given the opportunity to apply to said court for the release of said seed.

#### NOXIOUS WEEDS

PRIMARY NOXIOUS WEEDS prohibited subject to tolerances given in the rules and regulations.

- Quackgrass—*Agropyron repens*.  
Canada thistle—*Cirsium arvense*.  
Perennial sow thistle—*sonchus arvensis*.  
European morning glory—*Convolvulus arvensis*.  
Horse Nettle—*Solanum carolinense*.  
Leafy spurge—*Euphorbia esula*.  
Perennial peppergrass—*Lepidium draba*.  
Russian Knapweed—*Centaurea repens*.

#### SECONDARY NOXIOUS WEEDS

- Wild carrot—*Dacus carota*.  
Sour dock—*Rumex crispus*.  
Smooth dock—*Rumex altissimus*.  
Sheep sorrel—*Rumex acetosella*.  
Butterprint—*Abutilon theophrasti*.  
Mustards—*Brassica* spp.  
Cocklebur—*Xanthium commune*.  
Buckhorn—*Plantago lanceolata*.  
Dodders—*Cuscuta* spp.

SCREENINGS, from agricultural seed subject to act, shall be prohibited from sale unless labeled, if in containers, or marked on invoice if in bulk. "NOT FOR SEEDING PURPOSES." Screenings shall include chaff, empty florets, immature seed, weed seed, inert matter and other material removed in any way, by cleaning or processing and containing less than 25% of viable agricultural seed.

"STOP SALE" orders may be issued by the secretary of agriculture or his agent if he believes any provision of the seed act has been violated and further sale prohibited until the officer has evidence the law has been complied with, or the seed has been removed from sales room open to the public, or an appeal from such order taken to a court of competent jurisdiction and the seed discharged from said order if in accordance with the finding of the court, the owner or custodian praying for a judgment of the justification of said order.

SEIZURE OF SEED. Upon the recommendation of the state secretary of agriculture or his duly authorized agents, the court of competent jurisdiction in the area in which the seed is located shall cause the seizure and subsequent denaturing, processing, or destruction to prevent the use for sowing purposes of any agricultural seed, the sale of which is prohibited due to (1) the presence of primary noxious weeds, (2) containing in excess of 3% of weeds.

#### SEED LABORATORY AND TESTS

Service Laboratory—Extension Department, Iowa State College of Agriculture, Ames, Iowa.  
Dr. R. H. Porter, Analyst.  
Test fees—To Iowa residents, 30 cents per sample and up depending on kind.

#### ENFORCEMENT AND REGULATIONS

Department of Agriculture  
Inspection Laboratory—Des Moines, Iowa  
E. L. Redfern—Chief Chemist.  
Frank E. Wells—Seed Analyst.

## KANSAS

*Law of 1935, Amended 1939*

### INFORMATION REQUIRED ON ANALYSIS TAG.

#### (A) Agricultural Seeds. Every lot.

1. Commonly accepted name.
2. Percentage of pure seed.
3. Percentage of weed seed.
4. Percentage of inert matter.
5. Percentage of other agricultural seeds. (Regulation.)
6. Percentage of:
  - (a) Germination, exclusive of hard seeds.
  - (b) Hard seeds.
  - (c) Date of test. Date cannot be over one year old.
7. Where grown, if unknown, so state.

8. Lot or stock number.
9. Name and number per pound of all noxious weed seeds present singly or collectively at the rate of more than 1/10 of one per cent by count.
10. Name and address of vendor.

#### (B) Mixtures. Every lot.

1. Commonly accepted name and percentage of each agricultural seed composing the mixture, when present in amount of 5% or more.
2. Percentage of weed seed.
3. Percentage of inert matter.
4. Names and numbers per pound of all noxious weed seeds present, singly or combined, at rate of more than 1/10 of one per cent by count.

5. For each kind present in excess of 5% give:
- Percentage of germination, exclusive of hard seeds.
  - Percentage of hard seeds.
  - Date of test. Date cannot be over one year old.
6. Name and address of vendor.

**(C) Vegetable seeds are not included in the law.**

**(D) Hybrid Seed Corn**

"Hybrid Seed Corn" is defined as seed of the first generation of a cross involving one or more unrelated inbred lines or their combinations. An "inbred line" is a line of corn that has been developed as a result of not less than five generations of controlled self-fertilization or its equivalent.

Any corn offered as hybrid seed corn shall be registered by filing with the Secretary of the State Board of Agriculture a verified statement giving:

- Name or number by which the hybrid is designated.
- The complete pedigree of each hybrid.
- The name of the breeder who developed each inbred line in the combination.

In addition to the label requirements under (A) every lot shall be labeled with the name or number by which the hybrid is designated.

**NOXIOUS WEEDS**

PROHIBIT ANY:  
field bindweed—*Convolvulus arvensis*

PROHIBIT MORE THAN AN AVERAGE OF ONE SEED IN 5 GRAMS:  
dodder—*Cuscuta* species; Johnson grass—*Sorghum halepense*.

GIVE NAME AND NUMBER PER POUND IF MORE THAN 1/10 OF 1% BY COUNT EITHER SINGLY OR IN COMBINATION:  
Canada thistle—*Cirsium arvense*; corn cockle—*Agrostemma githago*; buckhorn plantain—*Plantago lanceolata*; wild mustards—*Brassica* species; French weed—*Thlaspi arvense*; quack grass—*Agropyron repens*; wild onion—*Allium* species; dock—*Rumex* species; wild oats—*Avena fatua*; bull nettle—*Solanum carolinense*; wild carrot—*Daucus carota*; chess or cheat—*Bromus* species; morning glory—*Ipomoea* species; ox-eye daisy—*Chrysanthemum leucanthemum*; hoary cress—*Lepidium draba*.

**LABORATORY AND TESTS**

Seed Laboratory at Manhattan, is maintained by the Kansas State Board of Agriculture, cooperating with the Kansas State College of Agriculture:

Paul Ijams, Director of Control Division.  
J. W. Zahnley, Director of Laboratory.  
Tests free to Kansas residents, but limited:  
Wholesalers not more than 10 per month  
Retailers not more than 10 per month  
Planters not more than 5 per month  
Not more than 1/3 of these allowances per any one month, may consist of redbud, bluegrass, lawn or pasture mixtures and others of similar nature.  
Fee for out of state samples to be set by State Board of Agriculture.

**ENFORCEMENT AND REGULATIONS**

Enforcement is under State Board of Agriculture, J. C. Mohler, Secretary, Topeka.  
"The so-called "Disclaimer Clause," as now commonly printed is not permitted on a seed label in Kansas."

In the case of open-pollinated corn, the county where grown must be given.  
Percentage of other crop seeds to be given on analysis tag, on unmixed seeds.  
Seed held for more than one year must be retested.

**KENTUCKY**

*Law of 1932*

**INFORMATION REQUIRED ON ANALYSIS TAG.**

**(A) Agricultural seeds. Use Kentucky official manila tag "A," except on cereals use yellow tag "B." Every lot of one pound or more.**

- Commonly accepted name.
- Percentage of pure seed.
- Percentage of weed seed.
- Name and number of each kind of noxious weed seeds and bulbs present per ounce of agricultural seeds.
- Percentage of—  
  - Germination, exclusive of hard seeds.
  - Hard seeds. (Regulation.)
  - Month and year of test.
- Where grown; if unknown give statement to that effect.
- Name and address of vendor.

**(B) Mixtures. Every lot of 1 pound or more. Use Kentucky official blue tag "C."**

- That seed is a mixture.
- Name and percentage of each kind of agricultural seed in excess of 5% by weight of total mixture.
- Percentage of weed seed.
- Name and number per ounce of each kind of noxious weed seeds and bulbs present.
- For each agricultural seed present in excess of 5% give—  
  - Percentage of germination, exclusive of hard seeds.
  - Percentage of hard seeds. (Regulation.)
  - Month and year tested.
- Where grown; if unknown, give statement to that effect.
- Name and address of vendor.

**(C) Special Mixtures. Every lot of 1 pound or more. Use Kentucky official blue tag "C."**

- That seed is a mixture.
- Name of each agricultural seed, which is present in proportion of 5% of total mixture.
- Percentage of weed seeds.
- Percentage of inert matter.
- Name and number per ounce of each kind of noxious weed seeds and bulbs present.
- Name and address of vendor.

**(D) Vegetable Seeds. Use Kentucky official yellow tag "B". Lettuce, peas, tomatoes, beans, onions, cabbages, carrots, melons and other truck**

**crops listed as agricultural seeds. Label as under (A) above.**

**NOXIOUS WEEDS**

Quack grass—*Agropyron repens*; dodder—*Cuscuta* sp.; sorrel—*Rumex acetosella*; buckhorn—*Plantago lanceolata*; corn cockle—*Agrostemma githago*; wild onion—*Allium vineale*; Canada thistle—*Cirsium arvense*.  
Added 1936-37  
Ox-eye daisy—*Chrysanthemum leucanthemum*;  
Johnson grass—*Sorghum halepense*.

**LABORATORY AND TESTS**

State Seed Laboratory at the Experiment Station, Lexington.  
A resident of Kentucky may submit not more than 8 samples for free analysis during the calendar year and not more than 2 samples in any calendar month. Samples in excess of such numbers will be charged at the rate of:  
50 cents to \$2.00 for purity tests; mixtures \$3.00  
25 cents to 50 cents for germination  
Non-residents' rates—purity \$3.00, germination \$1.00.  
W. A. Price, Head of Entomology and Botany Department, in charge of laboratory.

**ENFORCEMENT**

Thomas Cooper, Director of Agricultural Experiment Station.  
W. A. Price, enforcement agent.  
Purchase Kentucky Official Tags from Director of Agricultural Experiment Station, Lexington, at following prices:  
Manila tag "A" for unmixed alfalfas, clovers, and grass; blue tag "C" for mixed seeds.  
Tag for 100 pounds—8 cents each  
Tag for 75 pounds—6 cents each  
Tag for 50 pounds—4 cents each  
Tag for 25 pounds—2 cents each  
Yellow tag "B" for cereals, garden and truck crops.  
Tag for 100 pounds—4 cents each  
Tag for 75 pounds—3 cents each  
Tag for 50 pounds—2 cents each  
Tag for 25 pounds—1 cent each

**REGULATION**

- The percentage of hard seed should be shown on the tag, but must not be included in the percentage of germination.
- Hybrid Seed Corn must bear on the label the name of the hybrid. If the hybrid is not well known, the name of the inbreds composing it, together with the number of days required for maturity shall be reported to the enforcement officer in charge of the Pure Seed Law.

**GILT EDGE SEEDS**

*Wholesalers and Jobbers of FIELD SEEDS*

*Specializing in CLOVERS GRASSES*

**KOREAN LESPEDEZA**

*50 years in same location*  
**NATIONAL SEED CO.**  
101 W. Main St. Louisville, Ky.

MEMBERS  
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**BUCKAROO BRAND**



**WESTERN GROWN BEANS PEAS**

GROWING, HARVESTING AND CLEANING

ALL UNDER PERSONAL SUPERVISION

*Growing Stations in Montana and Wyoming*

**MAX F. WILHELMI**  
Seedsman

*Wholesale Seed Grower*

804 Massachusetts St.  
**LAWRENCE, KANSAS**

## LOUISIANA

### Act of 1926 and Regulations 1934

#### INFORMATION REQUIRED ON ANALYSIS TAG

##### (A) Agricultural seed. Every lot of 10 pounds or more.

1. Commonly accepted name.
2. Percentage of pure seed.
3. Percentage of weed seed.
4. Name and number per ounce of each kind of noxious weed seed present singly or collectively in excess of:
  - (a) one seed in 5 grams.  
(See page 106, group A.)
  - (b) one seed in 25 grams
  - (c) one seed in 100 grams
5. Percentage of germination with the month and year tested.
6. Year in which seed was grown.
7. Where grown if brought into the state.
8. Name and address of vendor.

##### (B) Mixtures of agricultural seeds of only 2 kinds. Every lot of 10 pounds or more.

1. That seed is a mixture.
2. Name and percentage of each kind of agri-

cultural seed present in excess of 5% of total mixture.

3. Percentage of weed seeds.
4. Name and number per ounce of each kind of noxious weed seed present singly or collectively in excess of one seed in each 15 grams.
5. Percentage of germination of each kind of agricultural seed present in excess of 5% together with the month and year tested, and year grown.
6. Where grown if brought into the state.
7. Name and address of vendor.

##### (C) Special Mixtures. Every lot of 8 ounces or more.

1. That such seed is a mixture.
2. Name of each kind of agricultural seed present in proportion of 5% or more.
3. Percentage of weed seed.
4. Percentage of inert matter.
5. Name and number per ounce of each kind of noxious weed present singly or collectively in 15 grams.
6. Where grown if brought into the state.
7. Name and address of vendor.

##### (D) Vegetable seeds. Every lot of 10 pounds or more.

Included under agricultural seeds. Label as under (A) above.

#### NOXIOUS WEEDS

Dodder—*Cuscuta epithimum*; Johnson grass—*Sorghum halepense*; tie vine—*Convolvulus arvensis*, cockle bur—*Xanthium canadense*; cocoa grass—*Cyperus rotundus*; Bermuda grass—*Cynodon dactylon*; foxtail—*Alopecurus geniculatus*; ox-eye daisy—*Rudbeckia hirta*; wild mustard—*Brassica arvensis*; large dock—*Rumex obtusifolius*; crab grass—*Digitaria sanguinalis*; dandelion—*Pyrrothopappus carolinianus*; thistle—*Sonchus* species.

#### LABORATORY AND TESTS

Seed Laboratory, Department of Agriculture, Baton Rouge, in charge of A. P. Kerr, State chemist.

Commissioner of Agriculture may fix number of free samples to be tested in a period of time and may fix charges for tests of samples submitted in excess of those free of charge.

#### ENFORCEMENT

Enforcement under Commissioner of Agriculture, Harry D. Wilson, A. P. Kerr, enforcement agent, Baton Rouge.

## MARYLAND

### Law of 1941

#### INFORMATION REQUIRED ON ANALYSIS TAG OR CONTAINER

##### (A) Agricultural Seeds (Unmixed). Every lot.

1. Commonly accepted name of
  - (a) Kind or
  - (b) Kind and variety or
  - (c) Kind and type.
2. Lot number or other identification.
3. Percentage of pure seed.
4. Percentage of inert matter.
5. Percentage of weed seeds.
6. Percentage of other agricultural seed.
7. Percentage of
  - (a) Germination, exclusive of hard seed.
  - (b) Hard seed.
  - (c) Month and year tested. Test shall have been completed within a nine month period exclusive of the month in which the test was made.  
Following (a) and (b) "Total Germination and Hard Seed" may be given if desired.
8. Origin of Alfalfa, Red Clover and Field corn (except hybrid) if unknown must be so stated.
9. Name and address of person who labeled, or sells, offers or exposes seed for sale.
10. Name and number of each kind of noxious weed seed, per ounce in group B1 and B2 and per pound in groups B3 and B4 if present singly or collectively in excess of
  - (a) one seed in five grams (see page 106, group B).
  - (b) one seed in ten grams.
  - (c) one seed in twenty-five grams.
  - (d) one seed in one hundred grams.

##### (B) Mixed Agricultural Seed. Every lot.

Same as for unmixed seed except that the information required under Items (A) 1, 3 and 7 shall be given, in the order of its predominance, for each agricultural seed component present in excess of 5%. When more than one component is named the word "mixture" or "mixed" shall be used.

##### (C) Vegetable Seeds.

1. For containers of 8 ounces or more.
  - (a) Lot number or other identification.
  - (b) Name of kind and variety.
  - (c) Percentage of
    1. Germination, exclusive of hard seed.
    2. Hard seed.
    3. Month and year tested. Test shall have been completed within a nine month period exclusive of the month in which it was completed.
    4. Name and address of person who labeled, or offers, sells or exposes said seed for sale.
2. For containers of less than 8 ounces.
  - (a) Name of kind and variety.
  - (b) For seed which germinates less than the standard last established by the State Board of Agriculture.
    1. Percentage of germination, exclusive of hard seed.
    2. Percentage of hard seed.
    3. Month and year tested. Test shall have been completed within a nine month period exclusive of the month in which it was completed.
    4. Words "BELOW STANDARD" in not less than 8 point type.
  - (c) Name and address of person who labeled, or offers, sells or exposes said seed for sale.

##### (D) Prohibits the sale, offering or exposing for sale of any agricultural or vegetable seed if,

1. The test for germination has not been completed within a nine months period, exclusive of the month in which test was completed.

#### NOXIOUS WEEDS

Dodder—*Cuscuta* Spp.; Canada Thistle—*Cirsium arvense*; Quackgrass—*Agropyron repens*; Bindweed—*Convolvulus arvensis*; Johnson grass—*Sorghum halepense*; Wild garlic—*Allium vineale*; Bermuda grass—*Cynodon dactylon*.

"STOP SALE" orders may be issued by the authorized agent of the State Board of Agriculture

when he finds any agricultural or vegetable seed in violation of the provisions of this act which shall prohibit further sale of said seed until the agent has proof the law has been complied with. No "stop sale" order shall be issued or attached to any lot of seed without first giving the owner or custodian an opportunity to comply with the law or to remove seed from sale. An appeal from such an order may be made to a court of competent jurisdiction where the seeds are found, praying for a judgment as to the justification of said order and for the discharge of such seeds from the order prohibiting the sale in accordance with the findings of the court.

#### SEIZURE OF SEED

Any lot of agricultural or vegetable seed not in compliance with the provisions of this act shall be subject to seizure on complaint of the authorized agent of the State Board of Agriculture to a court of competent jurisdiction in the area in which the seed is located. In the event the court finds the seed to be in violation of the law and orders the condemnation of said seed it shall be denatured, processed, destroyed, re-labeled or otherwise disposed of in compliance with the laws of the state, but in no instance without first having given the claimant an opportunity to apply to the court for a release of said seed or permission to process or relabel it to bring it into compliance with this act.

#### SEED LABORATORY AND TESTS

Seed Laboratory at Agricultural Experiment Station, College Park, Maryland. Number of free tests to Maryland citizens determined by the person in charge.

F. S. Holmes, in Charge of Laboratory.

#### ENFORCEMENT AND REGULATIONS

Enforcement under State Board of Agriculture. *Bermuda grass*—while a "noxious weed" when present in any other kind of seed, may be sold as *Bermuda grass*.

(Not under law of 1941.)

## MAINE

### Revised In 1919

#### INFORMATION REQUIRED ON ANALYSIS TAG

##### (A) Agricultural Seeds. Every lot.

1. Name of seed.

2. Percentage of pure seed.
3. Name and amount (number per pound) of each kind of noxious weed.
4. Percentage of germination together with the month and year tested.

##### (B) Mixtures not included.

##### (C) Vegetable seed not included.

#### NOXIOUS WEEDS

Ball mustard—*Neslia paniculata*; bearded dandelion—*Lolium temulentum*; bitter dock—*Rumex obtusifolius*; black mustard—*Brassica nigra*;

bladder campion—*Silene latifolia*; blue bur or stickseed—*Lappula echinata*; blueweed—*Echium vulgare*; Canada thistle—*Cirsium arvense*; charlock—*Brassica arvensis*; chicory—*Cichorium intybus*; clover dodder—*Cuscuta* species; clustered dock—*Rumex conglomeratus*; common ragweed—*Ambrosia artemisiifolia*; common (annual) sow thistle—*Sonchus oleraceus*; corn cockle—*Agrostemma githago*; cow-herb—*Saponaria vaccaria*; daisy fleabane—*Erigeron ramosus*; false flax—*Camelina sativa*; field bindweed—*Convolvulus arvensis*; field penny cress—*Thlaspi arvense*; field (perennial) sow thistle—*Sonchus*

*arvensis*; great ragweed—*Ambrosia trifida*; Indian mustard—*Brassica juncea*; hare's-ear mustard—*Conringia orientalis*; king devil weed—*Hieracium pratense*; night-flowering catchfly—*Silene noctiflora*; orange hawk weed—*Hieracium aurantiacum*; ox-eye daisy—*Chrysanthemum leucanthemum*; perennial ragweed—*Ambrosia psilostachya*; ribgrass—*Plantago lanceolata*; rutabaga—*Brassica campestris*; small seeded false flax—*Camelina microcarpa*; spiny-leaved or prickly sow thistle—*Sonchus asper*; sweet scabious—*Erigeron annuus*; tumble mustard—*Sisymbrium altissimum*; white campion—*lych-*

*nis alba*; wild carrot—*Daucus carota*; wild oats—*Avena fatua*; wild radish—*Raphanus raphanistrum*; witch grass—*Agropyron repens*; yellow dock—*Rumex crispus*.

#### SEED LABORATORY

Maine Agricultural Experiment Station, Orono. George P. Steinbauer, Analyst.

#### ENFORCEMENT

Department of Agriculture, Augusta. A. M. G. Soule, Chief of Division of Inspection.

## MASSACHUSETTS

### Law of 1938

#### INFORMATION REQUIRED ON ANALYSIS TAGS

##### (A) Agricultural seed, every lot.

1. Name and variety.
2. Percentage of pure seed.
3. Percentage of weed seed.
4. Name and number per ounce of each kind of noxious weed seeds present singly or collectively in excess of
  - (a) one seed in each 5 grams (See page 106, group A.)
  - (b) one seed in each 25 grams
  - (c) one seed in each 100 grams
5. Germination together with month and year of test.
6. Name and address of vendor.

##### (B) Mixtures of Agricultural seeds of not more than two kinds. Every lot.

1. That such seed is a mixture.
2. Name, variety and percentage by weight of each kind of agricultural seed in excess of 5% by weight of the total mixture.
3. Percentage of weed seeds.
4. Name and number per ounce of noxious weed seeds present singly or collectively in excess of one seed in each 15 grams.
5. Percentage of germination of each kind of

##### (C) Mixtures of Agricultural Seeds not included in the above. Every lot.

- agricultural seeds present in such mixture in excess of 5% by weight, together with the month and year tested.
6. Name and address of the vendor.
  1. That the seed is a mixture.
  2. The name, variety and percent by weight of each kind present in excess of 5% by weight of the total mixture.
  3. Percentage of weeds.
  4. Percentage of inert matter.
  5. Name and number per ounce of each kind of noxious weed seed present singly or collectively in excess of one seed in each 15 grams of such mixture.
  6. Percentage of germination of each kind of agricultural seed present in excess of 5% of the entire mixture together with the month and year tested.
  7. Name and address of the vendor.

##### (D) Vegetable seeds. Each separate container.

1. Kind of seed and variety.
2. Percentage of germination, together with the month and year tested provided such seed germination is less than the standard for such seed for the current year as established

in Massachusetts. (See page 102 for standards.)

3. Name and address of vendor, packer or processor.

##### (E) Flower Seed. Each container.

1. Kind of seed and variety.
2. Name and address of vendor, packer or processor.

#### NOXIOUS WEEDS

Quack grass—*Agropyron repens*; Canada thistle—*Cirsium arvense*; dodder—*Cuscuta* species; wild mustard—*Brassica* species; English plantain—*Plantago lanceolata*.

#### SEED LABORATORY

Massachusetts Agricultural Experiment Station, Amherst, F. A. McLaughlin, analyst in charge. Tests—Any person residing or doing business in this commonwealth shall have the privilege of submitting samples of seed for test subject to rules and regulations, including a reasonable fee for such test.

#### ENFORCEMENT

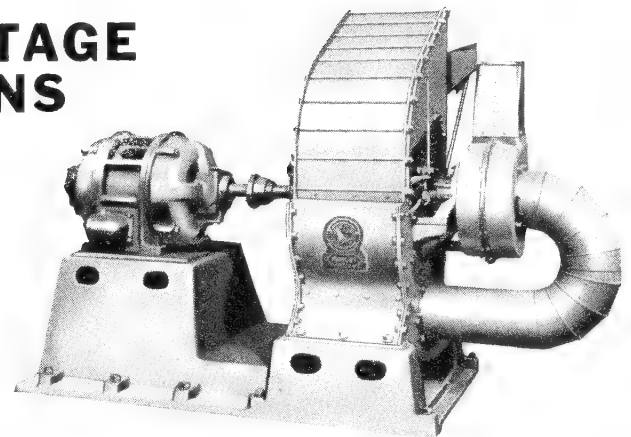
State Department of Agriculture, Commissioner of Agriculture, State House, Boston.

## YOU MUST TAKE ADVANTAGE OF CHANGING CONDITIONS

To Hold Your Business  
And Increase Profits

# "JAY BEE"

World's Standard Grinder for  
Capacity, Economy, Durability



**G**REATER efficiency, more speed, bigger capacities, lower operating cost, to beat competition—that's the "JAY BEE" all-steel hammer mill.

For nearly a quarter century—the Bossert made "JAY BEE" mill outlasts 'em all, outrinds 'em all. Heavy boiler-plate and alloy-steel construction makes the "JAY BEE" almost unbreakable. It grinds more feed at less cost per ton than any other hammer mill made.

From the finest whole wheat flour and corn meal, to every grain and roughage grown, the "JAY BEE" grinds to any degree of fineness, always cool, and uniform. It costs less to operate and maintain, and is

practically free from repairs over a long period of years.

Sizes and styles to meet every grinding requirement, from 12 H.P. to 200 H.P. with belt, V-belt, and direct-connected drives. Batch mixers, corn crackers, stationary molasses mixers.

#### MAINTAIN SERVICE CONTACT WITH FARMERS

Seedsmen and custom millers have added greatly to their income. They fortify their local business with the "JAY BEE" Portable. They make any kind of feed from the farmer's crops right on his farm. This brings in new business, and helps hold and increase their sales of mixed feeds, concentrates, minerals, and molasses.

Investigate the profit possibilities at once. Write for descriptive literature, prices, terms, etc.

**J. B. Sedberry, Inc., Dept. 78, Franklin, Tenn.—Utica, N. Y.**

JOHN J. WOODS & SONS, JAY BEE SALES CO., KANSAS CITY, MO.

J. B. Sedberry Co., 2608 So. Wells St., Chicago, Ill.—A. E. Thompson Co., 718 Washington Ave., N., Minneapolis, Minn.—T. G. Holland, 474 Fairfax Road, Drexel Hill, Pa.—Jay Bee of Texas, 705 Ross Ave., Dallas, Texas—Jay Bee Sales Co., 395 Broadway, New York—Jackson, Tenn.—P. O. Box 853, Winston-Salem, N. C.—436 Starks Bldg., Louisville, Kentucky—The Lamielt Co., Greenwich, Ohio

# MICHIGAN

## Law 1941 and Regulations

### INFORMATION REQUIRED ON ANALYSIS TAG OR CARTON

#### (A) Agricultural Seeds. One pound or more.

- (1) Commonly accepted name.
- (2) Lot number or other identification.
- (3) Percentage of pure seed.
- (4) Percentage of inert matter.
- (5) Percentage of weed seeds.
- (6) Percentage of other agricultural seeds.
- (7) Percentage of:
  - a. Germination, exclusive of hard seed.
  - b. Hard seed.
  - c. Month and year of test.
- (8) Origin of red clover, alfalfa, soy beans and field corn.
- (9) Name and address of person who labels seed, or who sells, offers or exposes seed for sale.
- (10) Name of each noxious weed seed present, singly or collectively, in excess of:
 

1 in each	5 grams.
1 in each	25 grams.
1 in each	100 grams.

(See page 106, group A.)

#### (B) Mixtures of alsike and timothy, alsike and white clover, red top and Timothy, alsike and red clover. One pound or more.

- (1) That such seed is a mixture.
- (2) Lot number or other identification.
- (3) Name and percentage of each kind of agricultural seed present in excess of 5% of the total mixture.
- (4) Percentage of inert matter.
- (5) Percentage of weed seeds.
- (6) Percentage of other agricultural seeds.
- (7) Percentage of:
  - a. Germination, exclusive of hard seed, for each kind of agricultural seed present in excess of 5% of the total.
  - b. Hard seed.
  - c. Month and year of test.
- (8) Origin of red clover, alfalfa, soy beans and field corn.
- (9) Name and address of person who labels seed, or who sells, offers or exposes seed for sale.
- (10) Name and number per pound of noxious weeds present.

#### (C) Special Mixtures. Eight ounces or more.

- (1) That such seed is a mixture.
- (2) Lot number or other lot identification.
- (3) Name and percentage of each kind present in excess of 5% of the total mixture.
- (5) Percentage of weed seeds.
- (6) Percentage of other agricultural seeds.
- (7) Percentage of:
  - a. Germination, exclusive of hard seed, for each kind of agricultural seed present in excess of 5% of the total.
  - b. Hard seed.
  - c. Month and year of test.
- (8) Origin of red clover, alfalfa, soy beans and field corn.
- (9) Name and address of the person who labels seed, or who sells, offers or exposes seeds for sale.
- (10) Name and number per pound of noxious weeds present.

#### (D) Lawn grass mixtures. Every lot.

- (1) That seed is a mixture.
- (2) Name and proportion of each ingredient seed present in quantity of 5% or more.
- (3) Percentage of inert matter.
- (4) Percentage of weed seeds.
- (5) Percentage of other agricultural seeds.
- (6) Percentage of germination of each kind of agricultural seed present in excess of 5% of the total mixture with the month and year tested.
- (7) Name and address of person who labels seed, or who sells, offers or exposes seed for sale.

#### (E) Vegetable seeds. Each separate container.

- (1) Kind and variety of seed.
- (2) Percentage of germination together with month and year tested, if the germination is below the Michigan standard for that kind and variety. (See page 102 for standards.)

(3) Name and address of person who labels seed, or who sells, offers or exposes seed for sale.

#### (F) Hybrid Seed Corn.

Use of term "Hybrid," with seed corn, shall be restricted to first generation stock of a cross, the parentage of which involves one or more inbreds. In addition to the regular label requirements (A) every lot shall be labeled with the name or number by which the hybrid is designated and the vendor shall file with the Commissioner of Agriculture a statement giving the pedigree of the hybrid and name of the breeder who developed the inbred.

#### Prohibits the Sale, Offering and Exposing for Sale of—

Agricultural seed containing noxious weed seeds in excess of one weed seed to 2,000 agricultural seeds.

#### NOXIOUS WEEDS—Prohibited 1 to 2000 crop seeds.

Quack grass—*Agropyron repens*; Canada thistle—*Cirsium arvense*; dodder—*Cuscuta* species; mustards (charlock, black mustard and Indian mustard)—*Brassica* or *sinapsis* species; wild carrot—*Daucus carota*; bindweed—*Convolvulus arvensis*; perennial sow thistle—*Sonchus arvensis*; Hoary alyssum—*Berteroa incana*.

#### SEIZURE OF SEED

The Commissioner, his deputy or duly appointed agent may seize any lot of agricultural or vegetable seed which, in his opinion, is being sold, offered or exposed for sale contrary to the provisions of this act. If after analysis said seed were found to be in violation to this act the commissioner, his deputy or duly authorized agent shall make complaint before a justice of the peace in the township or city where such seed were seized. If said seed shall be found upon trial to be possessed for the purpose of being sold, offered or exposed for sale contrary to this act, the justice shall render judgment as in his discretion seems proper.

- a. Seized seed to be forfeited to the state to be disposed of.
- b. Defendant clean seed under reasonable restrictions imposed by the commissioner.
- c. Defendant properly mark or label seed according to the requirements of this act.

In any judgment so rendered, the defendant shall pay the court costs and the actual necessary expenses in the seizure of such seed before the seed is returned to him.

#### SEED LABORATORY

Department of Agriculture, Lansing.  
Chas. A. Stahl, seed analyst.  
Fees—Field seeds, 50 cents; chaffy grasses, \$1.00; mixtures, 50 cents for each crop seed in excess of 5% (including germination). Germination only, 50 cents per test.

#### ENFORCEMENT AND REGULATIONS

Enforcement—Leo V. Card, Commissioner of Agriculture.

Regulations:  
1. Mixtures—Any two or more kinds of agricultural seeds in quantities of 5% or more in the same lot shall constitute a "mixture." Agricultural seeds in mixtures must be present in quantities of 5%

#### Requirements for Grades

Grasses from	Group I Min.	Group II Max.	Shade Grasses Min.	Group III Max.	Rye-Grass Max.	Maximum Inert	Maximum Weeds	Germination
Grade A...	48%	45%	....	....	15%	6.60	.40	Not less than standard
Grade A for shade .....	....	....	48%	....	15%	6.60	.40	Not less than standard
Grade B...	32%	55%	....	....	25%	10.40	.60	Not more than 5% below std.
Grade B for shade .....	....	....	20%	....	25%	10.40	.60	Not more than 5% below std.
Grade D...	....	....	....	15%	35%	14.20	1.00	Not more than 15% below std.
Grade D for shade .....	....	....	20%	15%	35%	14.20	1.00	Not more than 15% below std.

or more to be considered as a part of the pure seed.

2. Hard seeds—Germination guarantee must not include the so-called "hard seed" as seed germinated. Additional information such as hard seeds is permissible on the tag. Permit hard seeds to be added to actual germination as "Probable live seed."
3. Michigan lawn grass grades (August, 1941)—Along with the regular analysis required under (D) in a conspicuous place, each package, bag, carton or bulk of mixed lawn seed meeting the requirements of grade A shall be labeled "Lawn Seed Michigan Grade A" and all meeting the requirements of Grade B shall be labeled "Lawn Seed Michigan Grade B." All mixed grass seed not meeting the requirements of Grade A or B must be designated as "Grass Seed Grade D" and must meet the requirements of Grade D.
4. When making up mixtures, if the inert matter in Grades A & B is less than the maximum allowed, additional Red Top may be added to make up the difference. Similarly in Grass Seed Grade D, as much as 5% Rye grass may be added. In all cases the excess of these components must be compensated by at least an equal amount of inert matter.

#### Classification of Grasses

Group I (Turf Grasses)	Minimum Purity	Minimum Germ.
Kind of Seed		
Ky. Blue Grass ( <i>Poa pratensis</i> )..	82%	80%
*Rough Blue Grass ( <i>Poa trivialis</i> )	90%	70%
European Red Fescue ( <i>Festuca rubra-genuina</i> ) .....	97%	80%
New Zealand Chewing Fescue ( <i>Festuca rubra-fallax</i> ) .....	97%	70%
†Bent Grasses .....	97%	85%
White Clover .....	95%	‡92%
Group II (Nurse Grasses)		
Red Top ( <i>Agrostis palustris</i> , A. Alba) .....	92%	90%
Rye Grass ( <i>Lolium perenne</i> and <i>italicum</i> ) .....	97%	90%
Group III (Special Purpose Grasses)		
Seaside Bent ( <i>Agrostis palustris maritima</i> ) .....	97%	85%
Canada Blue Grass ( <i>Poa compressa</i> ) .....	82%	85%
Annual Blue Grass ( <i>Poa annua</i> )	82%	85%
Rough Blue Grass ( <i>Poa trivialis</i> ) .....	90%	70%
Hard Fescue ( <i>Festuca ovina duriuscula</i> ) .....	97%	80%
Fine Leaved Fescue ( <i>Festuca ovina, tenuifolia</i> ) .....	97%	80%
European Red Fescue ( <i>Festuca rubra-genuina</i> ) .....	97%	80%
Sheeps Fescue ( <i>Festuca ovina</i> )..	97%	80%
Creeping Bent Stoions		
Group IV (Filler Grasses) (Not recommended for lawn)		
Crested Dogtail ( <i>Cynosurus cristatus</i> ) .....	97%	80%
Wood Meadow Grass ( <i>Poa nemoralis</i> ) .....	80%	80%
Orchard Grass ( <i>Daetylis glomerata</i> ) .....	80%	80%
Meadow Fescue ( <i>Festuca elatior</i> )	95%	90%
Timothy ( <i>Phleum pratense</i> )....	98%	90%

Note: Valuable in shady places are: Rough Blue Grass, Chewings Fescue, Velvet Bent (*agrostis canina*), Fine Leaved Fescue.

\*Also a good Nurse Grass.  
†Minimum Purity for South German Mixed Bent 80%.

‡Total germ. and Hd. Seeds.



## MINNESOTA

### Act as Amended 1941 and Regulations

INFORMATION REQUIRED ON ANALYSIS TAGS. USE MINNESOTA STATE TAGS. (Information In Not Less Than 8 Point Gothic Caps.)

#### (A) Agricultural seeds. One pound or more.

1. Commonly accepted name and variety.
2. Percentage of pure seed.
3. Percentage of weed seeds. (Prohibit 2%).
4. Name and number per pound of certain primary noxious weed seeds when present singly and collectively in excess of 10 per pound. Prohibited if in excess of 25 per pound. See noxious weed section. (If less than 10 per pound can be marked "trace.")
5. Percentage of germination together with the date of test. Test cannot be over 6 months old.
6. Where grown (in case of corn the county).
7. Name and address of vendor.

#### (B) Mixtures of field seeds. One pound or more.

1. The words "Mixed Seeds."
2. Name and percentage by weight of each kind of agricultural seed in excess of 5% of the total mixture.
3. Percentage of weed seeds (Prohibit 2%).
4. Name and number per pound of noxious weeds when present singly or collectively in excess of 10 per pound.
5. Percentage of germination of each kind of agricultural seed together with the date of test.
6. Where grown.
7. Name and address of vendor.

#### (C) Special Mixtures. Eight ounces or more.

1. The words "Special Mixture" or "Lawn Mixture."
2. Name (for Lawn grass mixtures—give the name and percentage) of each kind of agricultural seed present in excess of 5 percent.
3. Percentage of weed seeds.
4. Percentage of inert matter.
5. Number of seeds per pound of noxious weeds. (except in lawn mixtures)
6. Percentage of germination of each kind in excess of 5%. Test cannot be over 12 months old.
7. Full name and address of vendor.

#### (D) Vegetable seed.

Not included under law. Agricultural seed shall include the seeds planted and grown in Minnesota for the production of root crops, grains, seeds, forage, hay, and for green manure crops and lawns.

#### (E) Hybrid Seed Corn.

**Definition**—"Hybrid Seed Corn" shall be seed of the first generation of a cross involving two, three or four different inbred lines of corn or their combinations and shall be restricted to seed of single crosses, three-way crosses and double crosses, these in turn being defined as follows:

- (1) Single cross—The first generation of a hybrid between two inbred lines.
- (2) Three-way cross—The first generation of a hybrid between a single cross and an inbred line.
- (3) Double cross—The first generation of a hybrid between two single crosses.

**Maturity Zones**—The Dean and Director of Department of Agriculture of the University of Minnesota shall determine, establish and number or otherwise identify corn growing sections of the state and determine and publish for each section so established, the approximate number of days growing season required for corn from emergence of the corn plants above ground after planting to maturity.

**Label**—In addition to label requirements under (A) the label must state:

- (1) Whether said hybrid corn is a single cross, three-way cross or double cross.
- (2) The year, county and state in which it was grown.
- (3) The approximate number of days for maturity in the section in Minnesota where said corn is intended to be grown.

#### SCREENINGS

It shall be unlawful for any person to sell to the consumer, offer or expose for sale any screenings of any name or nature that have not been devitalized by grinding sufficiently fine to destroy all weed seeds, or otherwise devitalize them.

for Every Purpose

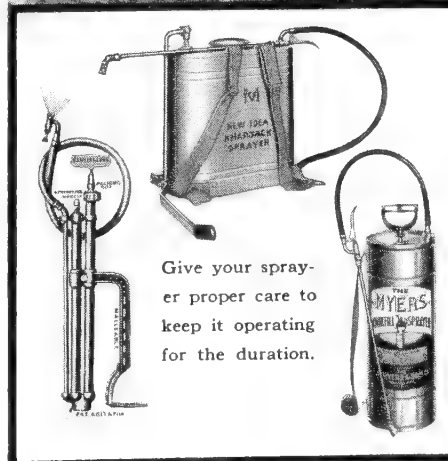
MYERS

Portable SPRAYERS




*Silver Prince*

Thousands of these Myers sprayers, powered by electric motor and gasoline engine, are in use applying insecticides, disinfectants, water paints, whitewash, etc. The compact Silver Prince provides advantages of high-pressure spraying at low investment cost.



Fortunate are the owners of Myers Sprayers . . . for these efficient sprayers are not only famous for quality and reliability, but are backed by an unusual parts-replacement service.

If you own a Myers Sprayer — whether it is one of the thousands used for greenhouses, nurseries, truck gardens, estates and golf courses, or a Myers Power Sprayer — you can be sure of obtaining replacement parts for it. Parts are available for every sprayer Myers has ever built. See your Myers dealer near you for parts and capable repair service.



4H52

THE F. E. MYERS  
& BRO. CO.  
1423 Fourth St.  
Ashland, Ohio

### "STOP SALE"

The commissioner is authorized to seize and hold any lot, parcel, package or bulk of agricultural seeds or mixtures of the same found in violation of any provisions of the seed law or rules and regulations thereof until same have been complied with or said violation otherwise disposed of.

### SEIZURE OF SEED

The commissioner upon seizing any agricultural seeds shall notify the person who was in possession of such seeds, or the owner thereof, or his agent, of such seizure, and return said seed to the consignor upon receipt of the expenses for transportation and also the expenses in handling, storing or caring for said seed, before same is billed for return shipment. If after 10 days said costs are not paid, the commissioner may confiscate said seed and destroy or otherwise dispose of it to prevent its use for seeding purposes and the net proceeds from the sale of such seed by the commissioner shall be transmitted to the State Treasurer.

**IMPORTED SEEDS.** It shall be unlawful to import or bring into the state or transport within the state any agricultural seeds unless each container shall bear a label giving—

1. Kind and variety of seed.
2. Percentage of purity.
3. Percentage of germination and date of test.
4. The state from which seed was shipped, if corn, the county in which it was grown.
5. Name and address of person shipping seed.

In all other respects the seed shall conform to the act and the rules and regulations of the commissioner.

### NOXIOUS WEEDS

Prohibited when in excess of 25 per pound, singly or collectively.

Quack grass—*Agropyron repens*; Canada thistle—*carduus arvensis*; perennial sow thistle—*Sonchus arvensis*; dodders—*cuscuta* species; oxeye daisy—*Chrysanthemum leucanthemum*; buckhorn plantain—*Plantago lanceolata*.

Prohibited when in excess of 9 per pound, singly or collectively.

Perennial pepper grass—*Lepidium draba*; horse nettle—*Solanum carolinense*; Australian field cress—*roripa* or *radicula austriaca*.

Prohibit any—Creeping Jennie—*Convolvulus arvensis*. Leafy spurge—*Euphorbia esula*.

### SEED LABORATORY AND TESTS

*State Seed Testing Laboratory*—University Farm, St. Paul. J. L. Larson, Chief Analyst. Fees for tests (5 free samples allowed during a year.)

Germination—

25 cents—corn, peas, flax, beans, cereals, vetch and such larger seeds.

30 cents—alfalfa, clover, rape, sorghum, millet, Sudan grass, timothy and similar seeds, also vegetable and flower seeds.

40 cents—blue grass, redtop, rye grass, wheat grass, brome grass, fescues, tobacco, Reed Canary grass and similar smaller grasses.

Purity—

25 cents—cereals, buckwheat, flax, vetch and other seeds of similar size.

50 cents—millets, Sudan grass, alfalfa, alsike clover, red clover, sweet clover, rape, timothy, rye grass, cereal mixtures, slender wheat grass and seeds of similar character.

\$1.00—white clover, orchard grass, timothy and alsike mixtures, all clover mixtures and all uncleaned seeds.

\$2.00—Kentucky blue grass, redtop, bent grasses, and all lawn grass mixtures.

Examination for Noxious Weeds—

50 cents—grasses and other small seeds.

30 cents—other larger seeds.

### ENFORCEMENT AND REGULATIONS

Enforcement: State Dept. of Agriculture  
537 State Office Bldg., St. Paul.  
Division of weed and seed control, C. P. Bull, director.

Regulations:

*Grimm Alfalfa*—After Sept. 1st, 1930, no alfalfa seed shall be sold in Minn. as "Grimm" alfalfa in amounts of 30 pounds or more, except in sealed sacks bearing labels of the seed certification agency of the state in which the seed was grown.

The name "GRIMM" when used to designate the variety of alfalfa and referring to the seed of alfalfa shall mean and refer only to alfalfa seed, which may be traced through definite lineage to known Grimm alfalfa fields in Carver county, Minnesota. The size of the label shall not be less than two inches by four inches. Type not less than 8 point Gothic caps.

*Re-Germination Tests*—Tests made the year previous to which the seed is offered for sale are not regarded as fulfillment of the law. Date of test shall not be more than 6 months prior to date of sale.

*Lawn grass* labels must be placed on the front of the carton.

*Sugar beets* and mangels shall be regarded as agricultural seeds and labeled as such.

*Hard seeds*—In stating the germination it shall be permissible to state the actual germination in terms of %, the hard seed, (where hard seeds occur) in terms of % and add these two figures together to get a figure which can be listed as "live seed."

### SEED TAG SALE ACT

The following tags shall be used for pure and unmixed seeds other than cereals and shall be obtained from the Commissioner of Agriculture at the given prices.

**YELLOW TAGS** for alfalfa, sweet clover, red clover, alsike clover, white clover, lespedeza, and other legume seeds of similar size, timothy, bromus, rye grass, orchard grass, reed canary grass, blue grass, fescues, red top, rape, bent grass and wheat grass.

**GREEN TAGS** for flax, millets, proso, sorghum or cane, kafir corn, milo maize, mangold, hemp, sudan grass, rutabagas and vetches.

**BROWN TAGS** for field and canning peas, navy and/or white beans, sunflowers, field and sweet corn and soybeans.

**WHITE TAGS** for any and all mixtures of seeds of the foregoing groups when two or more kinds, and/or varieties are intermingled in proportions of five percent or more by weight.

### PRICES OF TAGS:

100 to 150 pound containers	5c each.
60 to 99 pound containers	4c each.
30 to 59 pound containers	3c each.
15 to 29 pound containers	2c each.
1 to 14 pound containers	1c each.

## MISSISSIPPI

### Law of 1940 and Regulations Effective January 1, 1941

#### INFORMATION REQUIRED ON ANALYSIS TAGS.

##### (A) Agricultural Seeds. Every lot of 5 pounds or more

1. Common name and variety.
2. Net weight.
3. *Lot number.* (Regulation.)
4. Percentage of pure seed.
5. Percentage of weed seeds. Prohibit if in excess of 2½%.
6. *Percentage of other crop seed.* (Regulation.)
7. *Percentage of inert matter.* (Regulation.)
8. Name and number per pound of each noxious weed present singly or collectively in excess of:
  - (a) One in each 5 grams. (See page 106, group A.)
  - (b) One in 25 grams.
  - (c) One in 100 grams.
9. Percentage of:
  - (a) Germination, exclusive of hard seeds.
  - (b) Hard seeds. (Regulation.)
  - (c) Month and year of test, provided not over 180 days prior to date of sale.
10. Where grown.
11. Full name and address of person responsible for the label.

##### (B) Mixtures of agricultural seeds (by regulation every lot)

1. That such seed is a mixture.
2. Net weight.
3. *Lot number.* (Regulation.)
4. Name and percentage of each agricultural seed present in excess of 5% of total mixture.
5. Percentage of weed seeds. Prohibit if in excess of 2½%.
6. *Percentage of other crop.* (Regulation.)
7. *Percentage of inert matter.* (Regulation.)
8. Name and number per pound of each noxious weed seed present singly or collectively in excess of one seed in each 15 grams of the mixture.
9. For each agricultural seed present in excess of 5% give:
  - (a) Percentage of germination, exclusive of hard seeds.
  - (b) Hard seeds. (Regulation.)
  - (c) Month and year of test, provided not over 180 days prior to the date of sale.
10. Where grown.
11. Full name and address of person responsible for the label.

##### (C) Vegetable seed. Each separate container

1. Name of kind and variety.
2. (a) Year during which seeds were grown or (b) Percentage of germination, hard seed if present and calendar month and year of test. (Regulation.)
3. For seeds germinating less than the standard last set by the Association of Official Seed Analysts in addition to (b) shall show the words "Below Standard." (Regulation.)
4. Name and address of party responsible for the information given.

**McClons, Peas and Beans included as agricultural seeds**

#### NOXIOUS WEEDS

Wild onion; Bermuda grass; Johnson grass; dodder; hawkweed; bindweed; nut grass or cocoa grass; dock and plaintain.

#### WITHDRAW FROM SALE.

Seeds not having a reasonable viability, or that are extremely impure, notwithstanding that they may be properly labeled, shall be withdrawn from sale when, in the opinion of the Commissioner such withdrawal is in the interest of normal crop production.

#### SEIZURE OF SEED.

The Commissioner of Agriculture may seize and hold any lot of agricultural or vegetable seeds found to violate any of the provisions of the seed act until the law has been complied with and said violation otherwise legally disposed of.

#### SEED LABORATORY AND TESTS

State Seed Laboratory, State College.  
A. D. Suttle, Analyst, State College, Mississippi.

Any citizen of Mississippi has the privilege of submitting not more than 10 samples of agricultural and vegetable seeds for free test and analysis in any one year. Charges to non-residents to be fixed by the Commissioner of Agriculture.

#### ENFORCEMENT

State Department of Agriculture, Jackson.  
Si Corley, Commissioner of Agriculture.  
J. M. Dean, Chief Inspector.  
Seedsmen must secure permit of Commissioner of Agriculture annually, \$1.00 for each seedsmen registered and 25 cents for each agent.

#### REGULATIONS

*Notice of Shipment:*

- (a) Notice of shipment of agricultural or vegetable seeds shall be mailed within 24 hours from shipping date and shall bear:
  - (1) Name and address of shipper.
  - (2) Name and address of person to whom shipped.
  - (3) The amount.
  - (4) The kind and variety of seed.
  - (5) The lot numbers of seed.
- (b) Notice of the location of so-called commission boxes of packet seed shall state:
  - (1) Number of boxes.
  - (2) Number and size of packages in each.
  - (3) Their classification as to kinds or seed contained therein.
  - (4) Name and address of shipper and party to whom delivered.

*Size of analysis tag* shall be 4¾ x 2¾ inches or equivalent in square inches.

All information required an *analysis tag* shall be placed on one side of the label without intervening matter.

The *date* on the analysis tags should be the date the germination test was completed. A *complete analysis* totaling 100% must be given. Blank spaces on a form tag or incomplete analysis are not permissible.

*Abbreviation* of names of the variety and kind of seed is not permissible.

*Place of origin* shall not be used as part of varietal name and kind of seed, as Miss. oats. *Modifying words* or phrases shall not be used in connection with the variety, as "type," "for forage purposes," etc.

*Brand names, designs, grades or pictures* indicating a contradiction to any part of the analysis shall not be permitted.

*Different varieties* of the same kind of seed, when in quantities less than 5%, will be considered other crop seed.

Invoices and records of purchase or sale of all seed by the dealer or seedsman shall be accessible for examination by authorized agent of the Department of Agriculture for a period of 3 years.

Trucks or other motor conveyors transporting seed for sale on the public highways shall have available for examination a bill of lading, waybill, or delivery receipt showing (1) the name of the shipper or party from whom purchased; (2) the name and address of the party to whom seeds are to be delivered; (3) the kind and amount of each separate kind of seed and (4) the name of the truck driver and truck line making the delivery.

Farmer seed sold off the premises to be used for planting purposes must be tagged. Seeds gathered in elevator or other establishments to be sold by farmers or others are subject to the act.

Express, mail and freight, including truck deliveries to consumers of seed shall also be subject to provisions and rules and regulations pertaining to the enforcement of the Seed Law.

New analysis tag bearing the name of the vendor or other party responsible shall be placed on seed after the original test date becomes 180 days old.

Worthless seed may not be sold or given away for planting purposes. Seed will be considered worthless if it contains in excess of 2½% total weeds or 300 noxious weeds per pound, or is of excessively low germination or mislabeled seed, whose variety is unadapted and unsuited for seeding purposes in Mississippi.

Seeds treated with fungicides shall show on the label the words "Poison Treated" in not less than ¼-inch face red type.

Minimum germination. No agricultural seed except grasses, unscarified legumes, garden seed listed in the Standards for Germination and seed released by the U. S. customs shall be offered for sale if the germination is below 60%.

Excessive Noxious Weeds. Seeds containing more than 200 noxious weeds per pound shall be labeled in red ink in not less than 12 point type "Excessive Noxious Weeds." Such excess shall not exceed 300 per pound. Seed labeled or sold as "Certified," "Registered" or "Pedigreed" must have been certified or registered and inspected by an officially authorized agency and cannot be sold in Mississippi unless the party selling shall have registered with the Mississippi Department of Agriculture Seed Laboratory the lot number, variety and kind, name and address of the grower, and the history of the seed.

Mixed varieties of oats shall not be sold for planting purposes in this state.

False wild oats will be considered weeds.

Permits. All seed permits expire December 31 of each year. Failure to secure permit by March 1 will incur a penalty equivalent to the cost of the license; anybody selling seed required to be tested and tagged is required to have a permit.

## MISSOURI

### Law 1938, Rules and Regulations 1942

#### INFORMATION REQUIRED ON ANALYSIS TAGS

##### (A) Agricultural seeds. Each lot one pound or more.

1. Commonly accepted name.
2. Percentage of pure seed.
3. Percentage of weed seed.
4. Name of each noxious weed seed and number per ounce of the seeds in group Ba, Bb, Bc and per pound in group Bd (page 106-B) present singly or collectively in excess of:
  - (a) One in 5 grams.
  - (b) One in 25 grams.
  - (c) One in 100 grams.
 (See page 106, group A.)
5. Percentage of germination (including hard seeds) together with month and year tested. Test cannot be over 9 months old.
6. Percentage of hard seeds.
7. Name of state and county (if field corn) where grown. If unknown, a statement to that effect.
8. Full name and address of vendor together with the vendor's "Missouri Permit No. ...".

##### (B) Seed Mixtures.

1. That such seed is a mixture.
2. Name and percentage of each kind present in excess of 5% by weight of the total.
3. Percentage of weed seeds.
4. Percentage of inert matter.

5. Name and number of each noxious weed present.
6. Percentage of germination of each kind present in excess of 5% by weight. Test cannot be over 9 months old.
7. Full name and address of vendor together with vendor's "Missouri Permit No. ...".

##### (C) Vegetable Seeds. Each separate container.

1. The kind of seed and variety.
2. Percentage of germination together with the month and year tested, if the germination is below the Missouri Standard. (See page 102 for standards.) Statement "Below Standard." Test cannot be over 9 months old.
3. Full name and address of the packetor.
4. No label required on vegetable seed sold and delivered directly to purchaser from a container which is labeled.
5. If the container holding the small packets of vegetable seeds is labeled with the Missouri Permit Number, each individual packet need not be so labeled.

##### (D) Hybrid Seed Corn

1. Hybrid seed corn shall be the seed of the first generation or a control cross involving one, two, three or four different inbred lines of corn or their combinations and shall be restricted to seed of top crosses, single crosses, three-way crosses and double crosses.
2. Each package or bulk lot shall be labeled with the words "top cross hybrid," "single cross hybrid," "three-way cross hybrid" or "double cross hybrid," as the case may be.
3. Each package or bulk lot shall be labeled with the name and number by which the hybrid is designated.
4. The information required under (A) Shall also be required for each package or bulk lot of Hybrid Seed Corn.

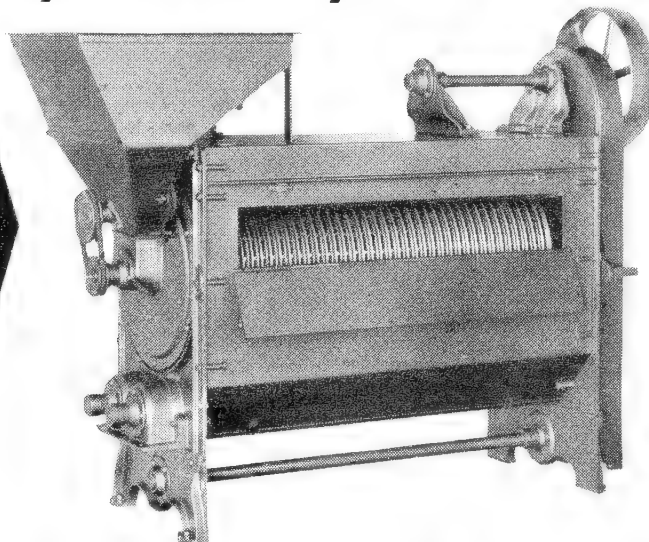
##### NOXIOUS WEEDS

PROHIBITED—Canada thistle; Johnson grass; Field bindweed—Convolvulus arvensis.

NAME AND NUMBER—Quack grass; dodder; Russian thistle; wild carrot; buckhorn and other varieties of plantain; wild onion; red sorrel; ox-eye daisy; garlic; docks.

## NEW, Amazingly Accurate Machine Grades Hybrid Corn by THICKNESS!

The HART  
PRECISION  
GRADER



### Operates As Single Unit Or In Series

Extremely accurate, yet so flexible it can be adapted to meet the needs of every individual producer! That's the Hart Precision Grader, Hart-Carter's new development for thickness grading of hybrid seed corn! Can be installed as single machine or

in combinations of two, three or four machines mounted in series. Many combinations of flow possible. Many exclusive features. Special device prevents kernels plugging slots. Write now for full details and price information.

### Extra Capacity In LENGTH Grading!



No. 2 HART CORN GRADER

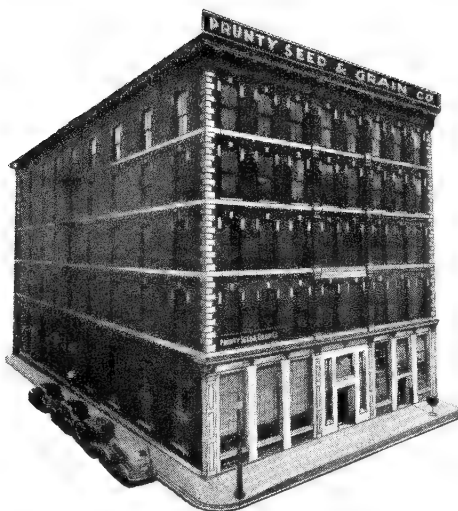
Grades by length at extra capacity under close, positive control. Simple adjustments permit flexibility in grading. Various sizes of indents available. Cylinder shells easily changed. Comes complete with V Belt motor drive—nothing extra to buy. Order now.

## HART-CARTER COMPANY

WRITE FOR FREE  
DESCRIPTIVE  
CATALOG, FOLDERS

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FOR  
**POP CORN  
 BIRD SEED  
 FARM SEED  
 GRASS SEED**  
 see  
**PRUNTY SEED & GRAIN CO.**  
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In Our 69th Year of Seed Service

*We Specialize in*  
**MONTANA  
 GROWN  
 ALFALFA SEED**  
**Hardest in America**

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 wholesale dealers in  
 car or truck lots.  
 Also

**CRESTED WHEAT GRASS  
 BROME GRASS  
 SWEET CLOVER  
 RED CLOVER**

**MONTANA SEED CO.**  
 Bozeman, Montana

## LABORATORY AND TESTS

Federal-State Laboratory at Columbia, Missouri.  
 Missouri College of Agriculture, cooperating with  
 the U. S. Department of Agriculture.

W. C. Etheridge, Collaborator in charge.  
 Miss Clara Fuhr, Analyst, U. S. Dept.  
 Agriculture.

May regulate the maximum number of free  
 samples tested for any one person or firm  
 in a given period of time.

## ENFORCEMENT AND REGULATIONS

Missouri State Department of Agriculture,  
 Jefferson City, Missouri.

W. R. Crispin, Marketing Specialist, Grain  
 and Seed Division, U. S. Dept. of Agri-  
 culture.

Permit number to be secured annually at cost

of \$1.00 on application to Department of Agri-  
 culture. The permit expires December 31 each  
 year.

"Each container" means each and every packet  
 containing seeds.

Hard Seeds—Law includes hard seed in per cent  
 of germination and requires separate statement.  
 Any lot of seed of more than 10 pounds sold  
 from bulk direct to the purchaser shall be ac-  
 companied by a copy of the label attached to  
 the container of the bulk lot of seed.

Hemp (*Cannabis sativa*) shall always be con-  
 sidered a weed when found as an incidental  
 seed.

Any seed treated with a substance poisonous  
 to human beings or animals shall show on  
 the label or a separate tag the word "poison"  
 or "treated" or "poison treated."

## MONTANA

### Law of 1913 and Amendments to 1939

#### INFORMATION REQUIRED ON ANALYSIS TAG

##### (A) Agricultural seeds. One pound or more.

1. Lot number or other distinguishing mark.
2. Commonly accepted name.
3. Variety; if unknown, state "Unknown."
4. Percentage of pure seed.
5. Percentage of weed seed.
6. Percentage of inert matter.
7. Percentage of other crop seed.
8. Name and number per pound of noxious  
 weeds present in excess of:  
 (a) One in 5 grams.  
 (See page 106, group A.)  
 (b) One in 25 grams.  
 (c) One in 100 grams.
9. Percentage of germination, together with  
 date of test. In cases where there are hard  
 seed, these shall be stated separately with  
 the provision that any portion or all the  
 per cent of such hard seed may be added  
 to the per cent of germination and stated  
 as "total live seed".
10. Name of state where grown.
11. Name and address of vendor.

##### (B) Mixtures. One pound.

1. Name of mixture.
2. Lot number or other distinguishing mark.
3. Name and percentage of each kind of agri-  
 cultural seed present in excess of 5% of  
 total mixture.
4. Percentage of weed seeds.
5. Percentage of inert matter.
6. Percentage of other crop seeds.
7. Name and number per pound of noxious  
 weeds present singly or collectively in excess  
 of one seed in each 15 grams.
8. Percentage of germination of each kind of  
 agricultural seed present in excess of 5%,  
 together with the month and year tested.  
 In cases where there are hard seed, these  
 shall be stated separately with the provision  
 that any proportion or all the per cent of  
 such hard seeds may be added to the per  
 cent of germination and stated as "total live  
 seed".
9. Name and address of vendor.

##### (C) Vegetable seed are not included in the law.

#### NOXIOUS WEEDS

Quack grass; fanweed or French weed; wild  
 oats; dodder; Canada thistle; wild mustard;  
 wild morning glory; white top; leafy spurge;  
 perennial sow thistle; Russian knapweed; blue  
 lettuce.

#### SEED LABORATORY AND TESTS

Montana Grain Inspection Laboratory,  
 Agricultural Experiment Station,  
 Bozeman, Montana.  
 W. O. Whitcomb, Analyst.

#### ENFORCEMENT AND REGULATIONS

Enforcement under Department of Agriculture  
 Helena, Montana

J. T. Kelly, Commissioner.

When blank spaces on the label are unfilled, it  
 shall be deemed to imply the word "none".  
 (part of the law)  
 Classification of seeds.

1. *Agricultural seeds* shall be seeds which, be-  
 fore the removal of weed seed and inert mat-  
 ter, shall be 75% pure seed, except in grass  
 seed which contain a high per cent of empty  
 glumes and is otherwise of good quality.
2. *Mixed agricultural seed* shall be seeds which,  
 before the removal of weed seed and inert  
 matter, consists of 75% or more of agricul-  
 tural seeds of two or more kinds in excess  
 of 5% each. Grains for which Federal Stand-  
 ards have been fixed shall be classed as to  
 mixtures of the individual grains but not as  
 mixed grain, and shall be designated as pro-  
 vided for in the Federal Standards.
3. *Screenings* shall be seeds which, before the  
 removal of weed seeds and inert matter,  
 consist of less than 75% agricultural seeds.  
 Such screenings shall be designated according  
 to the kind or kinds of seed present.

Local dealer may use the wholesaler's label  
 for only ninety days provided it complies with  
 the Montana labeling requirements.

Seed labels complying with the Montana Seed  
 Law may be purchased from the Montana Grain  
 Inspection Laboratory at \$1.00 per 100 or 2  
 cents each in lesser amounts.

4. *Hybrid Seed Corn* shall be seed of  
 the first generation of a cross involving two,  
 three or four different inbred lines of corn  
 or their combinations, and shall be restricted  
 to seed of single crosses, these in turn being  
 defined as follows: 1. Single cross—The  
 first generation of a hybrid between two in-  
 bred lines. 2. Three-way cross—The first  
 generation of a hybrid between a single cross  
 and an inbred line. 3. Double cross—The  
 first generation of hybrid between two  
 single crosses.

The name or number by which the hybrid  
 seed corn is designated shall be plainly  
 written or printed on the label of every lot,  
 parcel or bag of seed corn sold as hybrid  
 seed, in addition to the labeling require-  
 ments specified in Section 3594.

The pedigree of hybrid corn and the name  
 of breeder who developed each inbred line  
 involved in the cross shall be filed with the  
 Montana Grain Inspection Laboratory of the  
 Montana Agricultural Experiment Sta-  
 tion at Bozeman by the wholesaler or vendor  
 of every lot of hybrid seed corn before such  
 is offered for sale in Montana for seeding  
 purposes.

## NEBRASKA

### Act As Revised to 1940, Rules and Regulations to 1940

#### INFORMATION REQUIRED ON ANALYSIS TAG

(All tags to be approved by Department of  
 Agriculture and bear printed words, "State of  
 Nebraska approved Official Label.")

##### (A) Agricultural Seeds. Ten pounds or more.

1. Commonly accepted name.
2. Percentage of pure seed.
3. Percentage of weed seed.

4. Percentage of other crop seed (regulation not in the law.)
5. Percentage of inert matter (regulation not in the law.)
6. Name and number per ounce of noxious weed seeds present singly or collectively in excess of:
  - (a) One seed in each 5 grams.  
(See page 106, group A.)
  - (b) One seed in each 25 grams.
  - (c) One seed in each 100 grams.
7. Percentage of:
  - (a) Germination.
  - (b) Hard seeds. (Regulation.)
  - (c) Month and year of test.
8. Where grown.
9. Name and address of vendor.

**(B) Mixtures of agricultural seeds of not more than 2 kinds. Ten pounds or more.**

1. That such seed is a mixture.
2. Name and percentage of each agricultural seed present in excess of 5% of total mixture.
3. Percentage of weed seed.
4. Percentage of other crop seed (regulation not in the law.)
5. Percentage of inert matter (regulation not in the law.)
6. Name and number per ounce of each noxious weed present singly or collectively in excess of one seed in each 15 grams.
7. For each kind of agricultural seed present in excess of 5% give:
  - (a) Percentage of germination.
  - (b) Percentage of hard seeds. (Regulation.)
  - (c) Month and year of test.
8. Where grown.
9. Name and address of vendor.

**(C) Special Mixtures. Four ounces or more.**

1. That such seed is a mixture.
2. Name of each kind of agricultural seed present in proportion of 5% or more of the total mixture.
3. Percentage of weed seed.
4. Percentage of inert matter.
5. Name and number per ounce of each noxious weed present singly or collectively in excess of one seed in each 15 grams.
6. Where grown.
7. Name and address of vendor.

**(D) Vegetable seeds not included in law.**

**(E) Hybrid Seed Corn.**

It shall be unlawful to sell any seed corn as "hybrid" unless it answers to the following description:

Hybrid seed corn shall be seed of the first generation of a cross involving two, three or four different inbred lines of corn or their combinations and shall be restricted to seed of single crosses, three way crosses and double crosses.

1. Single cross—The first generation hybrid between two inbred lines.

2. Three way cross—The first generation hybrid between a single cross and an inbred line.
3. Double cross—The first generation hybrid between two single crosses. The cross mentioned above shall be produced by cross fertilization, controlled either by hand or by detasseling under isolation at the proper time.

The cross mentioned above shall be produced by cross fertilization, controlled either by hand or by detasseling under isolation at the proper time.

**NOXIOUS WEEDS**

PROHIBITS SEED, GRAINS, OR FEED CONTAINING:

Bind weed—*Convolvulus arvensis*; Canada thistle—*Carduus arvensis*; leafy spurge—*Euphorbia esula*; puncture vine—*Tribulus terrestris*; perennial peppergrass—*Lepidium draba*; Russian knapweed—*Centaurea pennis.*

GIVE NAME AND NUMBER PER OUNCE OF THE FOLLOWING WEEDS WHEN PRESENT SINGLY OR COLLECTIVELY IN EXCESS OF THE ALLOWANCE UNDER (A) 6; (B) 6; (C) 5.

Quack grass—*Agropyron repens*; Dodder—*Cuscuta spp.*; Wild oats—*Avena fatua* and charlock or wild mustard—*Brassica arvensis.*

**SEED LABORATORY AND TESTS**

Seed Laboratory—In Department of Agriculture, State Capitol Building, Lincoln, Nebraska.  
R. C. Kinch—Analyst.

Tests—Not more than 5 samples for purity (including only one special mixture, bluegrass, red top, or orchard grass) and 5 samples for germination are free in any one month.

For additional tests, the charges are as follows:

All germination tests.....	\$ .25
Purity tests—special mixtures.....	2.00
bluegrass, redtop or orchard grass.....	1.00
cereals, sorghums, grasses and crops not otherwise listed.....	.50
Examination for noxious weeds.....	.25

**ENFORCEMENT**

Enforcement under Department of Agriculture & Inspection, Capitol Building, Lincoln, Nebraska.  
Allen G. Burke, director.

**REGULATIONS**

(April, 1940)

*Hard Seed.* In labeling legumes, the germination must be kept separate from the hard seeds and can only include the percentage of seeds that actually sprout and produce normal seedling. Hard seeds are to be shown under a separate heading. A total of the germination and hard seeds may be shown but this total must be designated as "total of germination and hard seeds" and never as "total" or "total live seed."

**NEVADA**

*Law 1941*

**INFORMATION REQUIRED ON ANALYSIS TAGS OR CONTAINERS**

**(A) Agricultural Seeds. One pound or more.**

1. Commonly accepted name and bushel weight.
2. Percentage of other crop seeds.
3. Total number and kind of secondary noxious and common weed seeds present in each pound.
4. Percentage of inert matter.
5. Name and number per pound of each secondary noxious weed either singly or collectively present in excess of,
  - (a) one seed in each 5 grams (see page 106 group A).
  - (b) one seed in each 25 grams.
  - (c) one seed in each 100 grams.
6. Commonly accepted name of each discernible disease and the percentage of seeds infected by such disease and percentage of spores, sporeballs or other propagating organs of fungi responsible for disease present.
7. Percentage of germination, together with the month and year tested.
8. No noxious weeds present.
9. Name and address of vendor.

**(B) Mixtures of Alsike and Timothy, Alsike and White Clover, Red Top and Timothy, or Alsike and Red Clover. One pound or more.**

1. That such seed is a mixture.
2. Name and percentage of each kind of agricultural seed present in excess of 5% of the total mixture.
3. Total number and kind of secondary noxious and common weed seeds present in each pound.
4. Percentage of inert matter.
5. Name of each secondary noxious weed present either singly or collectively in excess of one seed in each 15 grams of such mixture.
6. Commonly accepted name of each discernible disease and the percentage of seeds infected by such disease and percentage of spores, sporeballs or other propagating organs of fungi responsible for disease present.
7. Percentage of germination of each kind of agricultural seed present in excess of 5%, together with the month and year tested.
8. No noxious weeds present.
9. Name and address of vendor.

**(C) Special Mixtures. One pound or more.**

1. That such seed is a special mixture.
2. Name and percentage of each kind of agricultural seed present in the proportion of 5% or more of the total mixture.
3. Total number and kind of secondary noxious and common weed seeds present in each pound.
4. Percentage of inert matter.
5. Name of each secondary noxious weed present either singly or collectively in excess of one seed in each 15 grams.
6. Commonly accepted name of each discernible disease present and the percentage of seeds infected by such disease and percentage



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Best for your business are the dog foods that are best for your customers' pets—Spratt's Dog Biscuit Foods! They have been the choice of breeders and experts for generations, because they are made with fine quality ingredients only to a formula that provides a complete, correct dog diet. You make satisfied customers with Spratt's!

**FIBO\***—Granulated biscuit food for dogs, young and old . . . nourishing, appetizing!

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**CHARCOAL OVALS\***—Aid in eliminating stomach gases and impurities. Popular with all breeds.

**ASSORTED BISCUITS\***—A package containing a variety of small biscuits particularly attractive to the dog.

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San Francisco, Cal.



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We Specialize in—  
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OUR SEED  
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**NORTHWESTERN  
 SEED GROWERS, INC.**

Producers  
 and  
 Wholesale Dealers

ALFALFAS  
 CLOVERS  
 GRASSES  
 PEAS

\*

Contract Growers  
 Small Seed

**MOSCOW IDAHO**

- of spores, sporeballs or other propagating organs of fungi responsible for disease present.
- Percentage of germination of each kind of agricultural seed present in excess of 5% together with the month and year tested.
  - No noxious weeds present.
  - Name and address of vendor.

**(D) Vegetable included as agricultural seed. Label as under (A) above.**

**(E) White or Irish potatoes sold, offered or exposed for sale as Certified Seed. One pound or more.**

- Variety.
- Percentage of inert matter.
- That the potatoes have passed field and bin inspections necessary to qualify as BLUE TAG, BLUE TAG single drop or RED TAG field inspected seed.

**PROHIBITS FROM SALE**

Seed containing noxious weed seeds. No tolerance allowed.

**NOXIOUS WEEDS. NO TOLERANCE ALLOWED**

Camel thorn—*Alhagi camelorum*; White top or Hoary cress—*Lepidium draba*, *L. repens*, *Hymenophyllum pubescens*; Klamath weed—*Hypericum perforatum*; Russian knapweed—*Centaurea repens*; Leafy spurge—*Euphorbia esula*; Sow thistle—*Sonchus arvensis*; Canada thistle—*Cirsium arvense*; Iberian star thistle—*Centaurea iberica*; Purple star thistle—*Centaurea calcitrapa*; Yellow star thistle—*Centaurea solstitialis*; Morning-glory—*Convolvulus arvensis*; Austrian field cress—*Roripia austriaca*; Buffalo-bur—*Solanum rostratum*.

**SECONDARY NOXIOUS WEEDS**

Five-hooked bassia—*Bassia hyssopifolia*; Crabgrass—*Digitaria sanguinalis*, *D. ischaemum*; Charlock—*Brassica arvensis*; Fanweed—*Thlaspi arvense*; Sandbur—*Cenchrus pauciflorus*; Horse-

nettle—*Solanum carolinense*, *S. elaeagnifolium*. Puncture vine—*Tribulus terrestris*; Dodders—All species.

**SEIZURE OF SEED.** Whenever the state quarantine officer or his deputies receive information that agricultural seeds, or mixtures of the same, are being sold, offered or exposed for sale in the state in violation of any of the provisions of this act, and are of the opinion that such seed endangers the agriculture of the state, they shall condemn and seize same. Any seed so condemned and seized shall be promptly recleaned, processed into feed or fertilizer, or completely devitalized, as ordered by the state quarantine officer and under his supervision.

**SCREENINGS OR CLEANINGS** from any commercial grain or agricultural seed as defined in this act, which is offered for sale or sold, or returned to the owner, shall be ground, heated or otherwise processed, so as to completely devitalize same in a manner approved by the state quarantine officer, before leaving the cleaning establishment.

**SEED LABORATORY AND TESTS**

College of Agriculture, Reno, Nevada.  
 P. A. Lehenbauer—Analyst.

No charge will be made for tests for Nevada growers and seed dealers unless the privilege is being abused.

Charges for tests for out of state dealers and individuals.

- Corn, peas, beans, cereals and seed of similar type or mixtures of the same, 25c; retests, 25c.
- Alfalfa, clover, timothy, blue grass, red top and seeds of similar type, 50c; retests, 50c.
- For mixtures of seeds in (b), 75c; retests, 75c.

**ENFORCEMENT**

Under State Department of Agriculture, P.O. Box 1027, Reno, Nevada.  
 Division of Plant Industry, L. M. Burge,  
 Supervising Inspector.

**NEW HAMPSHIRE**

*Law of 1921*

**INFORMATION REQUIRED ON ANALYSIS TAG**

**(A) Agricultural Seeds. One pound or more.**

- Commonly accepted name.
- Percentage of pure seed.
- Percentage of germination together with the month and year tested.
- Name and address of vendor.

**(B) Special mixtures. One pound or more.**

- Name and percentage of each kind of agricultural seed present in excess of 5% of the total mixture.
- Percentage of germination of each kind of agricultural seed in excess of 5%, together with the month and year tested.
- Name and address of vendor.

**(C) Vegetable seeds—Turnips, rutabagas, and mangels are considered**

**agricultural seeds (A). Vegetable seed and Flower seed in tied or sealed packages must be marked with the year tested.**

**NOXIOUS WEEDS**

None.

**SEED LABORATORY**

Agricultural Experiment Station,  
 Department of Agronomy,  
 Durham, New Hampshire,  
 Mrs. Bessie G. Sanborn, Analyst.

*Tests*

Citizens may submit samples of agricultural seeds for test and analysis, subject to rules and regulations adopted by the Commissioner.

**ENFORCEMENT**

State Department of Agriculture,  
 Concord, New Hampshire,  
 Commissioner of Agriculture.

**NEW JERSEY**

**INFORMATION REQUIRED ON ANALYSIS TAGS**

**(A) Agricultural seeds. Ten pounds or more.**

- Commonly accepted name.
- Percentage of pure seed.
- Number per pound of each noxious weed seed present in excess of one seed in each 5 grams or 90 seeds per pound.
- Percentage of germination together with the month and year tested.
- Name and address of vendor.

**(B) Mixtures. Every lot.**

- That such seed is a mixture.
- Name of each kind of agricultural seed present in excess of 5% of the total mixture.

**(C) Vegetable seeds. One pound or more.**

- Name of seed.
- Percentage of germination together with the month and year tested.
- Percentage of inert matter if in excess of 5%.
- Name and address of vendor.

**NOXIOUS WEEDS**

Quack grass—*Agropyron repens*; horse nettle—*Solanum carolinense*; dodder—*Cuscuta* species; Canada thistle—*Carduus arvensis*; Russian knapweed—*Centaurea picris*.

## SEIZURE

The State Seed Analyst, or his deputies, may seize and hold any lot, parcel or package of agricultural or vegetable seed found in violation of any provisions of this act or rules and regulations hereunder, until the law or such rules and regulations have been complied with, or said violation otherwise disposed of as herein provided:

- (a) Worthless seed forfeited to the state, to be disposed of. Worthless seed shall be:
1. Seed of no seeding or feeding value.
  2. Seed containing in excess of 1 noxious weed in every five grams of such seed or 90 per pound.
- (b) Seed not properly labeled shall be with-

held until the proper analysis and tags have been provided.

- (c) Seed found to be misrepresented as to kind shall be condemned and its sale prohibited.

## SEED LABORATORY AND TESTS

Seed Laboratory, Agricultural Experiment Station, New Brunswick, New Jersey.  
Jessie G. Fiske, State Seed Analyst.  
Tests—Any citizen of the state may receive a limited number of tests without charge.

## ENFORCEMENT

Board of Managers of the New Jersey Agricultural Experiment Station.

## NEW MEXICO

### Law of 1919

#### INFORMATION REQUIRED ON ANALYSIS TAGS

(Not less than 8 point Gothic caps)

#### (A) Agricultural seeds. One pound or more.

1. Commonly accepted name of kind and variety.
2. Percentage of all foreign seeds combined in such agricultural seeds.
3. Percentage of inert matter.
4. Percentage of each noxious weed present.
5. Percentage of germination of such agricultural seed together with the month and year tested.
6. County where grown if in this state.
7. Name and address of vendor.

#### (B) Mixture not mentioned.

#### (C) Vegetable seed not included under law.

#### NOXIOUS WEEDS

Quack grass; fanweed or French weed; mustard; wild oats; dodder.

## SEED LABORATORY AND TESTS

Seed Laboratory, New Mexico State College of Agriculture and Mechanical Arts, Department of Agronomy, at State College, New Mexico.

J. C. Overpeck, Professor Agronomy.

Tests—Residents of the state may send samples for tests to the New Mexico College of Agriculture which shall be reported upon free of charge not to exceed 6 tests in any calendar month.

## ENFORCEMENT

Board of Regents of the New Mexico College of Agriculture and Mechanic Arts.

## NEW YORK

### Law of 1922 As Amended 1940

#### INFORMATION REQUIRED ON ANALYSIS TAG OR CONTAINER

#### (A) Agricultural seeds. Every lot.

1. The commonly accepted name.
2. Percentage of pure seed.
3. Percentage of weed seeds. Prohibited if in excess of 1.5%.
4. Name and number per pound of each noxious weed present singly or collectively in excess of:
  - (a) one seed in each 5 grams.  
(See page 106, group A.)
  - (b) one seed in each 25 grams.
  - (c) one seed in each 100 grams.
5. Percentage of:
  - (a) Germination, exclusive of hard seeds.
  - (b) Hard seeds. (Regulation.)
  - (c) Month and year of test.
6. Name and address of vendor.

#### (B) Mixtures. Every lot.

1. That such seed is a mixture.
2. Name and percentage of each kind of agricultural seed present in excess of 5% of the total mixture.
3. Percentage of weed seeds. Prohibited if in excess of 1.5%.
4. Name and number per pound of each kind of noxious weed present singly or collectively in excess of one seed in each 15 grams.
5. For each kind of agricultural seed present in excess of 5% give:
  - (a) Percentage of germination, exclusive of hard seed.
  - (b) Percentage of hard seeds. (Regulation.)
  - (c) Month and year of test.
6. Name and address of vendor.

#### (C) Special mixtures. Every lot.

1. That such seed is a mixture.
2. Name and percentage of each kind of agricultural seed present in proportion of 5% of the total mixture.
3. Percentage of weed seeds. Prohibited if in excess of 1.5%.
4. Percentage of inert matter. Prohibited if in excess of 20%.
5. Name and number per pound of each kind of noxious weed present singly or collectively in excess of one seed in each 15 grams.
6. For each kind of agricultural seed present in excess of 5% give:
  - (a) Percentage of germination, exclusive of hard seeds.

(b) Percentage of hard seeds. (Regulation.)

(c) Month and year of test.

7. Name and address of vendor.

#### (D) Vegetable seeds. Each separate container.

1. Kind of seed and the variety.
2. Percentage of germination together with the year seed was tested (using type not smaller than 10 point).
3. Name and address of person or firm that packeted the seed and labeled the same.

#### (E) Flower seeds. Each separate container.

1. Kind of seed and variety.
2. Name and address of person or firm that packeted the seed and labeled the same.

#### (F) Tree and Shrub Seeds. Each separate container.

1. The kind of seed, and the variety.
2. The approximate percentage by weight of pure seed.
3. The approximate percentage of germination.
4. The year of collection of such seed.
5. The specific locality (state and county in the United States, or nearest equivalent political unit in the case of foreign countries) in which the seed was collected.
6. The name and address of the vendor of such seeds.

#### (G) Potatoes. Each separate container.

1. The variety or varietal type.
2. U.S. grade of the contents.
3. Name and address of grower or vendor.

## NOXIOUS WEEDS

Quack grass—*Agropyron repens*; wild mustard—*Brassica arvensis* and other *Brassica* species; Canada thistle—*Cirsium arvense*; dodder—*Cuscuta* species; crabgrass—*Digitaria* species; docks—*Rumex* species.

### "STOP SALE."

The commissioner or his authorized agents may remove from further sale or prohibit from sale, any unlabeled seed or any seed which is found to be grossly unclean as to be unfit for seeding purposes until it has been properly recleaned, and may prohibit further sale or destroy after due process of law, seeds which are found to be so weak or low in germination as to be useless for seeding purposes.

# COMSTOCK FERRE & CO.

Established 1820

GROWERS  
and  
WHOLESALE DEALERS

GARDEN SEED  
FLOWER SEED  
PEAS AND BEANS  
ONION SEED  
ONION SETS  
SWEET CORN

Wethersfield, Conn.

# Michigan Grown Farm Seeds

Alfalfa  
Red Clover  
Alsike  
Hybrid Corn

Roscoe J. Carl  
& Son

LANSING, MICHIGAN

# SEEDS

originating in

**MONTANA—DAKOTA**

Northern Minnesota and Western Canada move in transit through this natural gateway.

We specialize in Straight and Assorted Cars of these origins.

Phone—Wire or Write for Prices

**NEWDAY SEEDS, INC.**

FARGO, N. D.

We Specialize

in

## CARLOADS

ALFALFA

LESPEDeza

SOY BEANS

COW PEAS

SUDAN GRASS

CANE SEED

SEED CORNS

**RUSSELL-HECKLE  
SEED COMPANY**

MEMPHIS, TENNESSEE

### SEED LABORATORY AND TESTS

Seed Laboratory.  
New York State Agricultural Experiment Station,  
Geneva, New York.  
M. T. Munn, State Seed Analyst.

### ENFORCEMENT AND REGULATIONS

Enforcement—Department of Agriculture, Albany, New York. Holton V. Noyes, Commissioner of Agriculture.

Regulations—Use of word "certified" limited to seed which has been certified by an official of a State or Federal agency (part of the law).

Misrepresentations prohibited (part of law).

"Commonly accepted name" shall mean the complete botanical designation commonly accepted by the public and seed trade as Leaming corn, Ithacan oats, Grimm alfalfa, not simply corn, oats and alfalfa.

Germination shall mean the percentage of seeds which are capable of sprouting promptly into normal seedlings. *Hard seeds* as found in legumes may be stated separately and shall not be added to the percentage of germination or used in such a way as to be misleading.

"Seed unfit for seeding purposes" shall be understood to mean those lots which contain noxious weeds in excess of the average commercial grades for that particular season or mixtures containing in excess of 1.5% of troublesome weeds or special lawn seed mixtures containing in excess of 20% of inert matter. These are subject to removal from sale.

Seed stocks showing less than one-half the so-called standard germination as accepted in seed control and seed trade practices shall be considered *too low in germination and unfit for sale*.

The term "hybrid" must not be used in connection with any kind of seed corn unless such stock is the seed of the first generation of a controlled cross between strains of different parentage and involving one or more inbred lines of corn or their combinations.

### NORTH CAROLINA

Law of 1941, Regulations of 1941

### INFORMATION REQUIRED ON ANALYSIS TAGS

Use North Carolina state tags.

(A) **Agricultural seeds. Ten pounds or more.**

- Commonly accepted name of:
  - Kind or
  - Kind and variety.
- Lot number or other identification number.
- Percentage of purity.
- Percentage of inert matter.
- Percentage of weed seeds. Prohibit if in excess of 3%. Dallis grass and carpet grass 5%.
- Percentage of other agricultural seeds.
- Percentage of:
  - Germination, exclusive of hard seed.
  - Hard seed.
  - Month and year of test. The test for germination shall have been completed within nine months prior to sale or exposure for sale.
- Origin, if unknown it must be so stated.
- Name and address of person labeling seed, or who sells, offers or exposes seed for sale.
- Name and number per pound of secondary noxious weed seeds. (Regulation.) Requirements under 3, 4, 5, 6 and 10 shall not apply to cotton, corn and tobacco.

(B) **Mixed agricultural seeds. Ten pounds or more.**

Same as for unmixed seed, except that it must be called "mixed" or a "mixture" and the information required under 1, 3, and 7 shall be given for each agricultural seed present in excess of 5%.

(C) **Vegetable seeds. Ten pounds or more.**

- Name of kind and variety.
- Seed which germinates equal to or above the standard last established, the words "NORTH CAROLINA STANDARD" may be used in lieu of the actual germination. For standards see page 102.
- For seed which germinates less than the standard last adopted give:
  - Percentage of germination, exclusive of hard seeds.
  - Percentage of hard seeds.
  - Month and year of test. The test for germination shall have been completed within nine months prior to sale or exposure for sale.
  - The words "BELOW STANDARD."
- Name and address of person labeling seed, or who sells, offers or exposes seed for sale.

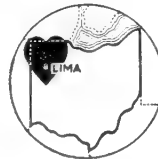
(D) **Vegetable seeds.**

In containers of less than ten pounds which

# Farm Seeds

From Northwestern  
Ohio are better

Highest  
Purities



Hardest  
Origin

When Refined by

**THE ACKERMAN CO.**

WHOLESALE FIELD SEEDS

Lima

Ohio

SWEET CLOVER  
CRESTED WHEAT GRASS

NORTHERN ALFALFA  
BROMUS

GOLDEN VIKING FLAX

WALSH FLAX

VICLAND SEED OATS

IMPROVED REGENT WHEAT

PILOT SEED WHEAT

SEED POTATOES

•  
ASK

FOR QUOTATIONS

•  
**INTERSTATE  
SEED & GRAIN CO.**  
FARGO, N. D.



# BUYERS & SELLERS

## QUALITY FIELD SEED

**YOUNG & CONWAY**  
MORGANFIELD, KY.

1867-1943  
76 YEARS OF  
SEED SERVICE

**Barteldes**  
SEEDS

Featuring  
Kansas Alfalfa Seed  
All Garden Seeds  
Flower Seeds  
All Field Seeds  
Grain Sorghums  
T.N.T. POPCORN

The most complete stocks of all  
seeds in the middle west.

**THE BARTELDES SEED CO.**  
Lawrence, Kansas  
Denver, Colorado

germinate less than the standard last adopted, shall show the actual germination.

### PROHIBITS THE SALE OF—

1. Seed, unless the germination test shall have been completed within a nine month period.
2. Seed containing Primary noxious weeds subject to the tolerances prescribed in the rules and regulations.
3. Small grains (wheat, oats, rye and barley) containing more than 100 Secondary noxious weed seeds per pound.
4. Seed containing more than 2,500 dodder per pound.
5. Seed containing in excess of 3% of weed seeds except carpet grass and Dallis grass which shall not exceed 5%.

### NOXIOUS WEEDS

**PRIMARY NOXIOUS WEEDS. PROHIBITED.**  
Johnson grass—*Sorghum halepense*; bindweed—*Convolvulus arvensis*.

**SECONDARY NOXIOUS WEEDS.**  
Wild onion—*Allium vineale*; corncockle—*Agrostemma githago*; cheat—*Bromus secalinus*; dodder—*Cuscuta* spp.

“STOP SALE.” The Commissioner of Agriculture or his authorized agents shall issue “Stop Sale” orders which shall prohibit further sale of any lot of seed which he has reason to believe is being offered or exposed for sale in violation of any provisions of this act, until the law has been complied with, or said violation otherwise legally disposed of.

**WITHDRAWAL FROM SALE.** The Commissioner of Agriculture may withdraw from sale seed not having a reasonable viability or that are extremely impure, or that are of distinct low quality otherwise, notwithstanding they may be properly labeled, when such withdrawal is in the interest of normal crop production.

### SEED LABORATORY AND TESTS

Seed Laboratory, Department of Agriculture, Raleigh.  
J. W. Woodside, Botanist.  
*Tests*—Free to citizens of the state. To non-residents the fee for purity 25 cents and for germination 25 cents.

### ENFORCEMENT

Enforcement—Department of Agriculture, Raleigh, North Carolina.  
D. S. Coltrane, Assistant to Commissioner.

*Licensing.*  
Each seed dealer selling, offering or exposing for sale in, or for export from this state, of any agricultural, vegetable or flower seed, other than packet or package seeds, for seeding purposes, shall register with the Department of Agriculture the name of such dealer, and shall on the first of January annually obtain a license paying:

- (1) \$25.00 if a wholesaler or a wholesaler and retailer
- (2) \$10.00 if a retailer with sales in excess of \$100.00 for the calendar year. Each branch of any wholesaler or retailer shall obtain a retail license.
- (3) \$1.00 if a retailer at a permanent location with sales not in excess of \$100.00. (Owners or operators of harvesting or threshing machines operating on a share basis and selling only seed obtained in this manner shall be exempt from obtaining a license.)

*Stamps.*  
Inspection stamps of \$1.00 shall be purchased from the Department of Agriculture for each 72 dozen packets or packages of vegetable or flower seeds or portion thereof.

- (1) Stamps shall be secured by the producer, grower, jobber or other person, firm or corporation shipping such seed into the state before shipment to agent or retailer, and furnished to said agent or retailer for attachment.
- (2) Producer, grower or jobber or other person, firm or corporation, residing within this state shall secure said stamps and attach to the display case before said seed is offered for sale.
- (3) When package seed of one kind or variety are offered or exposed for sale in boxes or display cases not in excess of three dozen packages, a ten cent stamp shall be purchased and attached to said box.

### Taxs.

- (1) A North Carolina seed analysis tag purchased from the Department of Agriculture for 1 cent each shall be attached to each container of 10 pounds or more. If shipped into the state, said tag shall be secured by person shipping such seed.
- (2) Seed containing more than 500 dodder seed per pound shall be designated as “Low Grade Seed” and shall be labeled with a red tag.



*Timothy*  
*Red Clover*  
*Alsike*  
*Sweet Clover*  
*Hardy*  
*Alfalfas*

Car Lots or Less

**NORTHERN**  
**Field Seed Co.**  
Winona - Minnesota

# CRESTED WHEAT GRASS

Standard and Fairway Strain

# BROME

Slender Wheat Grass

Western Wheat Grass

Sweet Clover Seed

Northern Alfalfa



VALKER-CHRISTENSEN  
CO.

Minot, North Dakota

Wholesale Dealers  
in

SWEET CLOVER  
ALFALFA  
TIMOTHY  
ALSIKE

BROME GRASS  
CRESTED WHEAT  
GRASS

Write for Prices  
and Samples

**GOLDBERG SEED  
& FEED COMPANY**

Phone 3-1098

FARGO, NORTH DAKOTA

## NORTH DAKOTA

Act of 1931 Regulations of 1939,  
Amended 1941

### INFORMATION REQUIRED ON ANALYSIS TAGS

#### (A) Agricultural seeds. Every lot.

1. Commonly accepted name.
2. Lot number or other lot identification.
3. Percentage of purity.
4. Percentage of inert matter.
5. Percentage of weed seeds.
6. Percentage of other agricultural seeds.
7. Percentage of germination, together with the month and year of test.
8. Where grown—state and county in case of corn, and state in case of alfalfa and clovers.
9. Name and address of vendor.
10. Seed containing noxious weed seeds shall be labeled to show their presence if present, singly or collectively, in excess of: "Prohibited Noxious Weed Seeds"—1 seed in 90 grams. "Primary Noxious Weed Seeds"—1 seed in 20 grams.

#### (B) Mixtures of two kinds. Every lot.

1. That such seed is a mixture.
2. Name and percentage of each kind present in excess of 5% of total mixture.
3. Name and number per pound of each kind of noxious weed present singly or collectively in excess of one seed in each 15 grams.
4. Percentage of germination of each kind present in excess of 5% together with the month and year tested.
5. Where grown, state and county in case of corn, and state in case of alfalfa and clover.
6. Name and address of vendor.

#### (C) Special Mixtures. Every lot.

1. That such seed is a mixture.
2. Name of each seed which is present in proportion of 5% or more of the total mixture.
3. Percentage of weed seed.
4. Percentage of inert matter.
5. Name and number per pound of each kind of noxious weed present singly or collectively in excess of one seed in each 15 grams.
6. Name of county and state where each variety of seed corn in mixture was grown.
7. Name and address of vendor.

#### (D) Vegetable and Flower Seed in lots five pounds or less are excluded from label requirements.

### NOXIOUS WEEDS

#### PROHIBITED NOXIOUS WEEDS

- Leafy spurge (*Euphorbia esula*).
- Field bindweed (*Convolvulus arvensis*).
- Perennial peppergrass or White top (*Lepidium draba*, *L. repens*, *Hymenophyllum pubescens*).

#### Russian knarweed (*Centurea picris*).

#### PRIMARY NOXIOUS WEEDS

- Quack grass (*Agropyron repens*).
- Canada thistle (*Cirsium arvense*).
- Perennial sow thistle (*Sonchus arvensis*).
- Dodder (*Cuscuta* spp. except *coryli*).

### SEED LABORATORY AND TESTS

Seed laboratory, State College Station, Fargo.  
Miss Edith Higgins, Analyst.  
Any resident of North Dakota may have three free tests per year, additional test fees are:

<i>Purity Tests</i>	
Clovers, alfalfa, cereals, flax, corn, beans, peas, etc	\$0.50
Grass seeds, or mixtures of grass and/or clover seeds	\$1.00
<i>Germination Tests</i>	
Each test	\$0.50
<i>Fees for non-residents</i>	
Purity	\$1.50
Germination	1.00

### ENFORCEMENT AND REGULATIONS

Enforcement is under  
State Seed Dept., State College Station,  
Fargo.  
R. C. Hastings, Seed Commissioner.

### REGULATION (March 11, 1949).

Sweet clover shall be considered properly labeled:

1. As "White Blossom Sweet Clover" provided the mottled seed content is less than 2%. Such mottled seed may be included in the percentage of purity but must be shown on the tag.
2. As "White Blossom TYPE Sweet Clover" provided the mottled seed content is less than 5%. Such mottled seed will be included in the percentage of purity.
3. As "Sweet Clover" or "Mixed Sweet Clover" provided the mottled seed content is 5% or more. Such mottled seed will be included in the percentage of purity.
4. As "Yellow Blossom Sweet Clover" provided the mottled seed content is 11% or more. Such mottled seed will be included in the percentage of purity.

# SEEDS

## Field Flower Vegetable



Immediate Delivery on Most Items

Prompt, careful  
service to the re-  
tail dealer trade.

ASK HOLMES FIRST!

**Holmes Seed Co.**  
CANTON, OHIO

## SWEET CLOVER ALFALFA

BROMUS INERMIS

CRESTED WHEAT GRASS

SLENDER WHEAT GRASS

WESTERN WHEAT GRASS

TIMOTHY

ALSIKE CLOVER

GARDEN SEEDS

In Bulk and Packets

**Magill & Co.**

Since 1887 Operating

**Fargo Seed House**

FARGO

NO. DAKOTA

# TIMOTHY CLOVER

and all kinds of

## • FIELD SEEDS

Fancy Grasses  
White Clover  
POP CORN

Buyers and Sellers  
Carlots or Less

•  
**CRAVER - DICKINSON  
SEED COMPANY**  
BUFFALO NEW YORK

*Wholesale*

SEED CORN  
GROWERS

Since  
1878



NORTHERN  
OHIO GROWN

SWEET  
DENT, FLINT  
ENSILAGE  
POP-CORN



**C. S. CLARK & SONS**  
WAKEMAN, OHIO

5. As "Yellow Blossom TYPE Sweet Clover" provided the mottled seed content is in excess of 7%. Such mottled seed will be included in the percentage of purity. Any other sweet clover labelled as a specific variety, such as Artic, Alpha, or Madrid, shall conform to the characteristics of that variety.

### HYBRID CORN

#### Regulatory Announcement No. 17

- a. The use of the term "hybrid", in connection with seed corn offered or exposed for sale shall be restricted to first generation stock of a cross, the percentage of which involves one or more inbreds.
- b. An *Inbred Line* shall consist of a line of corn that has been developed as a result of about five generations of controlled self-fertilization and selection, and/or when the inbred line is relatively uniform and homozygous.
- c. A *Foundation Hybrid* (single cross) shall consist of the first generation of a hybrid between two inbred lines to be used in the production of hybrids containing more than two inbred lines, and/or an advance generation single cross (hybrid) which has been grown under controlled conditions, certified and designated to be used as a foundation hybrid.
- d. A *Commercial Hybrid* is the first generation cross to be planted for the production of feed or for any other commercial or farm use except for seed. It may be any one of the following:
  - (1) A *Double Cross*—the first generation of a cross between two foundation hybrids (single crosses).
  - (2) A *Three-Way Cross*—the first generation of a cross between a foundation hybrid (single cross) and an inbred line.
  - (3) A *Single Cross*—when the single cross is to be used for commercial production and not for the production of double or three-way crosses.
  - (4) A *Top Cross*—the first generation of a cross between an inbred line and an open-pollinated variety.

The State Seed Commissioner is authorized to be guided by such rules as have been adopted by the Corn Certification Committee of the International Crop Improvement Association and by suggestions received from the North Dakota Agricultural Experiment Station. The Seed Commissioner is authorized to conduct all work in connection with the registration and certification of hybrid corn on a cost basis.

- FEES
- a. Field inspection fee for each field: First acre, \$3.00; each additional acre up to 25 acres, 75 cents per acre; and each additional acre OVER 25 acres, 50 cents per acre.
  - b. Certification tags will be supplied at the rate of one and one-half cents per bushel.
  - c. The entire acreage of inbred lines and foundation hybrids (including pollen parent) will be considered as one combination for the purpose of determining charges on these. However, the charge for these will equal one and one-half times the amount indicated in the above table.

The vendor of hybrid seed corn shall be responsible for there being on file with the State Seed Commissioner an affidavit giving the name or number by which it is to be sold, and further that the inbreds involved in the hybrid are the same each time the hybrid is so designated.

In addition to labeling requirements ((A) above), every lot, package, parcel or bag of seed corn sold as "Hybrid" corn shall have on the tag the name and/or number by which the hybrid is designated.

### OHIO

*As Amended 1937*

#### INFORMATION REQUIRED ON ANALYSIS TAGS

##### (A) Agricultural seeds. Every lot.

1. Commonly accepted name.
2. Percentage of pure seed.
3. Percentage of weed seed.
4. Name and number per ounce of each kind of noxious weed present singly or collectively in excess of (Prohibit 3% or over)
  - (a) one seed in each 5 grams.
  - (b) one seed in each 25 grams.
  - (c) one seed in each 100 grams.
5. Percentage of:
  - (a) Germination, exclusive of hard seeds.
  - (b) Hard seeds.
  - (c) Month and year of test. Test date shall not be over 300 days old. Tolerance of not over 10% allowed.
6. Where grown on red clover and alfalfa.
7. Name and address of vendor.

HEADQUARTERS

for

ALFALFAS



CLOVERS



GRASSES



FORAGES



**RUDY-PATRICK  
SEED CO.**

**KANSAS CITY, MO.**

# ROSS SEED CO.

INCORPORATED

Established 1895

LOUISVILLE, KY.



48  
Years

The  
Best

Wholesale Field and  
Grass Seeds

Jobbers of

Orchard Grass . . Bluegrass . .  
Redtop . . Clovers . . Timothy  
. . Korean (Lespedeza) . . Soy-  
beans . . Cowpeas, Etc.

Car lots or less

ROSS SEED CO.

INCORPORATED

15th and Lytle

Louisville, Ky.

# MOORE

FARM

FLOWER

VEGETABLE

# SEEDS

A WHOLESALE BROKERAGE  
SERVICE THAT IS JUST A  
LITTLE DIFFERENT  
COMMERCIAL BEANS  
MUSTARD SEED

Correspondence invited with grow-  
ers and wholesalers considering a  
profitable brokerage connection.

38 years' personal experience in the  
Cincinnati market

CHARLES R. MOORE

Chamber Commerce Bldg.

CINCINNATI, OHIO

Telephone—Main 4246

Cables—Morseed

## (B) Mixtures. Every lot.

1. That such seed is a mixture.
2. Name and percentage of each kind of agricultural seed present in excess of 5% of the total mixture. (If any agricultural seed named on the label is present in amount less than 5%, the percentage of such seed shall be given.)
3. Percentage of weed seeds. (Prohibit 3%.) (If inert matter exceeds 15% sale is prohibited.)
4. Name and number per ounce of each kind of noxious weed seed present singly or collectively in each 15 grams.
5. For each kind of agricultural seed named on the label give:
  - (a) Percentage of germination, exclusive of hard seed.
  - (b) Percentage of hard seed.
  - (c) Month and year of test. Test date shall not be over 300 days old. Tolerance of not over 10% allowed.

## (C) Vegetable seeds.

1. In containers of less than one pound, if germination is equal to or above germination standards. (See page 102.)
  - (a) Kind and variety.
  - (b) Name and address of person, firm or corporation responsible for labeling on the container.
2. In containers of one pound or more and container of less than one pound when the seed germinates less than the Ohio germination standard. (See page 102.)
  - (a) Kind and variety.
  - (b) Percentage of germination with the month and year of test.
  - (c) Name and address of person, firm or corporation responsible for labeling on the container.
3. Packet seed prohibited if germination is below Ohio standard. (See page 102.)

## (D) "Certified" limited to seed certified by an approved agency—certification tag attached to container must show

1. Grower's name and address or his number registered with the Department of Agriculture.
2. Name of certifying agency.
3. The state of production.
4. Such other information as pertains to certification.

## Prohibits the sale offering or exposing for sale of—

1. Agricultural seed containing in excess of 3% of noxious weeds.
2. Seed with a germination date test of more than 300 days old prior to date of sale.
3. Packet seed prohibited if germination is below Ohio standard.
4. Mixtures of agricultural seed containing over 15% inert matter.

## NOXIOUS WEEDS

Canada thistle—*Cirsium arvensis*; Wild garlic—*Allium vineale*; quack grass—*Agropyron repens*; dodder—*Cuscuta* species; plantains—*Plantago* species (includes buckhorn); wild carrot—*Daucus carota*; ox-eye daisy—*Chrysanthemum leucanthemum*; corn cockle—*Agrostemma githago*; docks—*Rumex* species (including *Rumex acetosella* or sorrel); chicory—*Cichorium intybus*.

## SEED LABORATORY AND TESTS

State Department of Agriculture.  
Division of Plant Industry.  
Columbus, Ohio.  
C. N. McIntyre, State Seed Analyst.  
Free tests—purity and germination 4 samples of red clover or similar seed, two samples of redtop or similar seed or one sample of lawn mixture or five germinations of vegetable seeds. Additional samples will be charged at the rate of 25 cents for all germinations.  
Purity tests—clovers, alfalfa timothy, etc. \$ .50  
grasses as bluegrass, redtop... 1.00  
mixtures of lawngrass..... 2.00

## ENFORCEMENT

Enforcement—Department of Agriculture.  
Division of Plant Industry.  
Columbus, Ohio.  
Stanley E. Laybourne, Chief.  
License—Each person or company shall pay a license fee to the Director of Agriculture for each separate place of business, according to quantities sold.  
Quantities not exceeding 8 ounces for each \$25.00 wholesale value—\$.25 tax stamp  
Quantities not to exceed 10 pounds for any container...\$.25  
Quantities up to and exceeding 10 pounds for any container...\$5.00

## REGULATIONS

Hard seeds must not be added to sprouted seed and designated as "total germination" or "total viable seed" or "total live seed."

# GRAIN WOOL

# SEED

DONLEY'S

Super-Cleaned

FIELD

and

LAWN SEED

J. L. DONLEY  
& BRO.

ASHLAND

OHIO

# INTERNATIONAL SEED, INC.

11 Park Place, New York City

Cable Address: "Seedtest New York"

E. E. PATTISON, President

Specialists in

Grass, Field, Vegetable Seed,  
Spice and Feed Seed

Representatives  
Consultants—Analysts

Maintaining our own Complete Seed Testing Laboratories  
Open to the Seed Trade  
Testing Accounts Solicited

MEMBERS OF THE AMERICAN SEED TRADE ASSOCIATION  
MEMBERS [ASSOCIATE] SOUTHERN SEEDSMEN'S ASSOCIATION  
MEMBERS ASSOCIATION OF COMMERCIAL ANALYSTS  
MEMBERS (ASSOCIATE) PACIFIC SEEDSMEN'S ASSOCIATION

GENUINE

# ALFALFA

## ARIZONA GROWN

Known for Its  
**HIGH PURITY and  
GERMINATION**

## BERMUDA GRASS SEED

*a Specialty*

Write for Samples & Prices

**E. F. SANGUINETTI**

Established 55 yrs.

YUMA,

ARIZONA



## THE BELT SEED COMPANY INCORPORATED BALTIMORE

Better Lawn Grasses  
and  
Farm Seeds

By Royal Command  
Purveyors to His Majesty  
The American People



"Other Crop Seeds" must not be added in with the total purity percent on the label. The word "Hybrid" as applied to field, sweet or popcorn, shall not be used unless the "hybrid" corn represents the first generation of a cross involving (one, two, three or four) different inbred lines of corn or their combinations. **Hybrid Seed Corn**—The word "Hybrid" as applied to field, sweet or popcorn, shall not be used unless the "hybrid" represents the first generation of a cross involving one, two, three or four different inbred lines of corn or their combinations. In addition to labeling requirements (A) every lot, package, parcel or bag of seed corn sold as hybrid shall have plainly written or printed on the tag or label the name and number by which the hybrid is commonly designated. The vendor shall be responsible for registering with the Director of Agriculture, the pedigree of the hybrid and name of person, firm or corporation who developed each inbred involved in the cross.

### OKLAHOMA

Statutes of 1931 Rules and  
Regulations 1941

#### INFORMATION REQUIRED ON ANALYSIS TAGS

##### (A) Agricultural Seeds. Every lot.

1. Commonly accepted name.
2. Percentage of pure seed.
3. Percentage of weed seed.
4. Name and number per pound of each kind of noxious weed seed present singly or collectively in excess of:
  - (a) One seed in each 5 grams.  
(See page 106, group A.)
  - (b) One seed in each 25 grams.
  - (c) One seed in each 100 grams.
5. Percentage of germination, together with the month and year tested.
6. Name of state and county where grown; if unknown mark "origin unknown."
7. Name and address of vendor.

##### (B) Mixtures. Every lot.

1. That such seed is a mixture.
2. Name and percentage of each kind of agricultural seed present in excess of 5% of the total mixture.
3. Percentage of weed seeds.
4. Percentage of inert matter.
5. Name and number per pound of each kind of noxious weed seed present singly or collectively in excess of one seed in each 15 grams.
6. Percentage of germination of each kind of agricultural seed present in excess of 5%, together with the month and year tested.
7. Name of state and county where grown. If unknown, label "origin unknown."
8. Name and address of vendor.

##### (C) Vegetable seeds.

The term agricultural seeds includes stock beets, sugar beets, cabbage, tomatoes, onions, and all other field crops grown in Oklahoma; hence, all vegetable and truck seeds sold would come under labeling requirements (A).

#### NOXIOUS WEEDS

(February, 1940)

- Bindweed (*Convolvulus arvensis*)
- Blueweed (*Echium vulgare*)
- Bracted plantain (*Plantago aristata*)
- Buckhorn (*Plantago lanceolata*)
- Buffalo-burr (*Solanum rostratum*)
- Bullnettle (*Jatropha stimulosus*, *Solanum carolinense*)
- Cheese or Cheat (*Bromus secalinus*)
- Coco grass or nut grass (*Cyperus rotundus*)
- Corncockle (*Agrostemma githago*)
- Dock, curly (*Rumex crispus*)
- Dodder (*Cuscuta arvensis*, *C. epithymum*)
- Hedge bindweed (*Convolvulus sepium*)
- Horsenettle (*Solanum carolinense*)
- Johnson-grass (*Sorghum halepense*, syn. *Andropogon halepense*)
- Mustard, wild (*Brassica arvensis*)
- Oats, wild (*Avena fatua*)
- Onion, wild (*Allium vineale*)
- Russian-thistle (*Salsola pestifer*, syn. *Salsola kali* var. *tenuifolia*)
- Sow thistle, perennial (*Sonchus arvensis*)
- Sorrel, red (*Rumex acetosella*)
- Thistle, Canada (*Cirsium arvense*)
- Wild buckwheat (*Polygonum convolvulus*)

#### STOP SALE ORDER

Any seed in violation of the Oklahoma Seed Law or Rules and Regulations shall be subject to a "Stop Sale Order." Seed on which such an order has been issued cannot be moved, sold or offered for sale until the violation has been corrected to the satisfaction of the inspector or otherwise disposed of, and released by the inspector.



Wholesale Dealers in

ALSIKE

RED CLOVER

ALFALFA

SWEET CLOVER

TIMOTHY

SOYBEANS

**STOLLERS SEED HOUSE**

211 W. PERRY ST.

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# OSTBERG SEED CO.

7301 Woodlawn Avenue

Telephone Dorchester 0314

CHICAGO

#

Wholesalers of Imported  
and Domestic

## FIELD SEEDS

Blue Grass

Clovers

Red Top

Rye Grass

Fancy Grasses

Lawn Mixtures

# Wholesale Field Seeds

## Specialties

Alsike  
 Red Clover  
 White Clover  
 Ladino Clover  
 Yellow Hop Clover  
 Hairy Vetch  
 Spring Vetch  
 Hungarian Vetch  
 Austrian Peas  
 Crimson Clover  
 Poa Bulbosa  
 Domestic Rye Grass  
 Perennial Rye Grass  
 Chewings Fescue  
 Seaside Bent Grass  
 Astoria Bent Grass  
 Oregon Highland Bent  
 Reed Canary Grass

**JENKS WHITE SEED CO.**  
 SALEM OREGON

## TRANSCONTINENTAL SEED, INC.

Grass and Field Seeds

20 Vesey Street  
 New York City

Chewings Fescue

Bentgrasses

Orchard Grass

Blue Grass

Red Top

Ryegrasses

Timothy

Red Clover

Alsike Clover

White Clover

Wild White Clover

Alfalfa

Rape Seed

and all other kinds of Grass and Field Seeds.

Car lots, Truck lots, Bag lots.

IMPORT—EXPORT

Cable Address: TRANSEEDS, New York  
 Phone: WOrth 2-6428

## SEED LABORATORY AND TESTS

State Seed Laboratory, State Board of Agriculture, Oklahoma City, Oklahoma.

Parks A. Yeats, State Seed Analyst and Plant Quarantine Officer.

*Tests*—Each resident allowed 8 free samples in one year. Additional tests will be 50 cents for a complete test and 30 cents for either purity or germination. Non-resident fee 50 cents for each sample.

## ENFORCEMENT AND REGULATIONS

Enforcement under State Seed Analyst and Quarantine Officer who is responsible to the State Board of Agriculture.

A quarantine regulation was issued August 1935, on all field seeds entering Oklahoma unless tagged with a complete label as (A) and accompanied by a Waybill showing the names of the consignor and consignee, the state and town of origin and the point of destination.

*Cotton seed*—To ship cotton seed into Oklahoma, an affidavit of location where grown and freedom from communicable disease must be filed with the Board of Agriculture—Permits for shipment charged at rate of 25 cents for all out-of-state dealers or shippers of agricultural seed shall secure a permit each year, before shipping seed into the state. If the seed is in bags the permit number shall appear on the tag, and if in bulk on the waybill or bill of lading.

All out-of-state dealers shipping seed into Oklahoma shall notify the State Department of Agriculture of each shipment giving:

1. Date of shipment.
2. Kind of seed or plants.
3. Amount in shipment.
4. To whom shipped.

No Hybrid seed corn shall be permitted entry into the state unless the Breeder has secured a special permit. The Breeder must meet the following requirements:

1. He must be officially recognized as a breeder in his state.
2. The Hybrid seed corn must be registered with the enforcing officer of the State Department of Agriculture giving:
  - a. Name and number by which the Hybrid is designated.
  - b. Pedigree of each component inbred, single cross, or open-pollinated variety.
  - c. The name of the Breeder who developed each inbred line, single cross, or open-pollinated variety in the hybrid parent stock.

Trucks and other motor conveyors, transporting seed on the public highways shall have available at all times for inspection, a bill of lading, waybill or delivery receipt showing:

1. Name of the shipper or party from whom purchased.
2. Name and address of party to whom the seed are to be delivered.
3. Kind and amount of each separate kind of seed.
4. Name of driver and truck line making delivery.

## OREGON

Law 1937

### INFORMATION REQUIRED ON ANALYSIS TAGS

(A) **Agricultural or turf seed. Tag each lot. Not less than 8 point type.**

1. Commonly accepted name.
2. Percentage by weight of pure seed.
3. Percentage by weight of weed seed.
4. Percentage by weight of other crop seeds.
5. Percentage by weight of inert matter.
6. Name and number per pound of noxious weed seeds present.
7. Percentage of germination together with year tested.
8. Percentage of hard seed when present.
9. Country or state where grown.
10. The name and address of the vendor of such seeds.

(B) **Mixtures. Tag each lot.**

1. That such seed is a mixture.
2. The name and per cent of each kind present in excess of 5% by weight of the total.
3. Percentage of weed seeds.
4. Percentage of inert matter.
5. Name and number per pound of each noxious weed seeds present.
6. Percentage of germination of each kind present in excess of 5% by weight of the total, together with the year tested.
7. The name and address of vendor.

(C) **Vegetable seeds.\* Each separate container.\*\***

1. Kind and variety of seed.

## BENT GRASSES

Astoria  
 Seaside  
 Colonial

Growers—Shippers

**LEWIS & CLARK**  
**SEED CO.**

Astoria Oregon

## GOODING

IDAHO

All Varieties

Idaho

Clovers

and

Alfalfas

*Inquiries Solicited*

**The Gooding Seed Co.**  
 Gooding, Idaho

# KING

headquarters

for

MICHIGAN

GROWN

SEEDS

RED CLOVER

ROSEN RYE

VETCH

H. C. KING & SONS, INC.

BATTLE CREEK MICHIGAN

Noxious Weed Free  
High Germination  
NEW CROP FANCY  
KENTUCKY BLUE GRASS

Harvested, cured, and  
processed under our per-  
sonal supervision to insure  
maximum germination.

Specially Cleaned to elimi-  
nate noxious weeds.

Your critical trade will ap-  
preciate our product.



**KELLOGG - KELLY  
SEED CO.**

**ST. JOSEPH, MISSOURI**

- Percentage of germination together with year tested, or in lieu of this requirement the words "Oregon standard germination" may be used, when the percentage of germination is equal to or greater than the established Oregon standards. (See page 102 for standards.)
- Name and number per pound of each noxious weed seed present.
- Name and address of person or firm who put up or packeted the seeds and labeled same.

\*Beets, Mangels, Turnips, and Rutabagas are classed as agricultural seeds; hence, lots over ½ pound should be tagged as such.

\*\*Exceptions which do not need to be tagged:

- Certified or registered seed.
- Vegetable varieties of Peas, Beans, Corn and seed of similar size in packages weighing less than 5 pounds.
- Other vegetable seeds in packets weighing not more than ½ pound each.

#### NOXIOUS WEEDS—Give Name and Number Per Pound

##### Group I—Prohibited.

White tops—*Lepidium draba*, *Lepidium repens*, *Hymenophyllum pubescens*; Russian knapweed—*Centaurea picris*; leafy spurge—*Euphorbia esula*.

##### Group II

Prohibited when in excess of one in 50 grams of Alfalfa, Rye Grass and other seeds approximately the same number per pound, or when in excess of one in 25 grams of Alsike, Orchard Grass or other seed of approximately the same number per pound. Dodders—*Cuscuta* spp.; Canada Thistle—*Cirsium arvense*; Johnson grass—*Sorghum halepense*; Quack grass—*Agropyron repens*.

##### Group III

Prohibited when in excess of four seeds in 5 grams of Red Clover, Sweet Clover or Alfalfa.  
Buckhorn plantain—*Plantago lanceolata*.

##### Group IV

Wild morning glory or bindweed—*Convolvulus arvensis*; blue lettuce—*Lactuca pulchella*; death weed or sumpweed—*Iva axillaris*; Austrian field cress—*Radicula austriaca*; perennial sow thistle—*Sonchus arvensis*; puncture vine—*Tribulus terrestris*; toad flax—*Linaria vulgaris*; alkali mallow—*Sida hederacea*; corn cockle — *Agrostemma githago*; Australian burnweed or fire weed—*Erechtites prenanthoides*; star thistle—*Centaurea melitensis*; *Centaurea solstitialis*, *Centaurea iberica*; St. Johnswort or goat weed—*Hypericum perforatum*; wild garlic — *Allium vineale*; ox-eye daisy—*Chrysanthemum leucanthemum*; cow cockle—*Vaccaria pyramidata*.

##### Group V—Weeds noxious only in turf seeds and lawn and turf mixtures.

Field madder—*Sherardia arvensis*, spotted catsear—*Hypochaeris radicata*; dandelions—*Leontodon* spp.; chickweed or big mouse ear—*Cerastium vulgatum*; yarrow — *Achillea millefolium*; rippleseed plantain — *Plantago major*.

"STOP SALE." The Director of Agriculture shall seize any lot or parcel of agricultural, turf or vegetable seeds possessed, sold, offered or exposed for sale for planting purposes that appear to be in violation of any provisions of this act and to hold same until it is determined that the provisions of this act are being complied with. When any seed is found in violation of this act the Director or his assistants shall give written notice of such violation to the owner or person in possession of such seed and may set a time and method by which it may be relabeled, reconditioned or disposed of. If after receiving such notice, the seeds are not relabeled, reconditioned or disposed of within the given specified time, in accordance with the provisions of this act, the enforcing officer shall file a complaint in any justice court or court of competent jurisdiction. The seed may be condemned and destroyed or disposed of, or released upon such condition as the court may impose to insure that such seeds will not be sold, offered, or exposed for sale, in violation of this act.

SCREENINGS AND OTHER MATERIAL, removed in the cleaning or processing of agricultural, turf and vegetable seeds containing any noxious weed seeds shall be destroyed or ground, or treated in a manner or by a method, established and approved by the director, that will destroy the viability of all noxious weed seeds therein. Screenings or other material containing noxious weed seeds may be moved under permit issued by the director or his duly designated deputies, to another place or conditioning plant for further cleaning or processing.

#### LABORATORY AND TESTS

Seed Laboratory at Corvallis is under the Dean of Oregon State College of Agriculture, co-operating with the U. S. Department of Agriculture.

# ALFALFA

Montana  
Nebraska

Dakota  
Wyoming

Kansas

(U. S. Verified Origin)

## Sweet Clover

Yellow

White

(Mustard and Thistle Free)

## Cane Millet Sudan

Ask for Prices and Samples  
Carloads or Less

## Griswold Seed & Nursery Co.

Lincoln, Nebr.

# HAMILTON SEED and COAL COMPANY

Cedar Rapids, Iowa

Wholesale Dealers

## TIMOTHY

## ALSIKE

## RED CLOVER

## ALFALFA

## HYBRID CORN

# Wholesale Seeds

Farm Seeds  
Imported Grasses  
Lawn Mixtures  
Hybrid Corn



Seaboard Seed  
Company  
Philadelphia, Penna.

## NORTHERN GROWN FARM SEEDS

Alfalfa  
Brome Grass  
Sweet Clover  
Red Clover

★  
**MILLETS**

German  
Hungarian  
Early Fortune  
White Proso

★  
**STORAGE**

Best of Warehousing facilities available for the storing and distribution of seed stocks.

★  
**LESLIE EDGERTON**

334 North 1st Street  
MINNEAPOLIS MINN.

G. R. Hyslop, Head of Division of Plant Industry.  
Mrs. Louisa Kanipe, Analyst, U. S. Department of Agriculture.  
*Free Tests to farmers*—1 Purity and 1 Germination Test per year. (Between Dec. 1 and June 30 of succeeding year.)

**Charges:**

(a) *Purity Tests:*

1. Lawn or pasture mixtures and special mixtures .....\$5.00
2. Alfalfa, clovers (including sweet and bur clover), black medic, crested wheatgrass, winter bluegrass, ryegrass, meadow and tall fescues, millet, rape, timothy, phalaris, velvet grass, and vetches (except mixtures).. 1.05
3. Peas, cereals, beets, and flax.. .85
4. Mixtures of vetches..... 1.50
5. Bermuda, bromes, crested dog-tail, fine fescues, Johnson grass, vernal, and Sudan grass..... 1.55
6. Bentgrasses, red top, and alkali grasses ..... 2.00
7. Bluegrass (except winter bluegrass), oatgrass, orchard grass, meadow foxtail, and Rhodes grass ..... 2.50
8. Very dirty samples requiring an unusual amount of work or screenings at 60 cents per hour.

(b) *Germination Tests:*

1. Paspalum, bluegrass, fescues (except meadow), orchard grass,

- Johnson grass, sugar beet (sprout test), Bermuda, bentgrasses, red top, meadow foxtail, tree seeds, and fluorescence tests on English ryegrass..... 1.05
2. All seeds not listed above.... .55
3. Where more than one germination is made on mixed vetch 55 cents will be charged for the first and 50 cents for each extra test.
- (c) Any seed not listed will be charged the fee in the appropriate class above.
- (d) Examinations and identifications.. .50
- (e) Extra copies of reports will be charged for at 10 cents each.

### ENFORCEMENT

Under the Director of the State Department of Agriculture, J. D. Mickle, Salem, Oregon. Enforcing officer, Frank McKennon, chief Bureau of Plant Industry.

License fee \$2.50 per calendar year. Secured from State Director of Agriculture. Separate license fee is required for each branch, plant or warehouse.

**Exemptions from license—**

- (1) Any grower selling seeds of his own production exclusively.
- (2) Retailer selling only vegetable and flower seeds in packets not in excess of 1/2 pound which were packeted by a licensed company.

## PENNSYLVANIA

### Law of 1921

#### INFORMATION REQUIRED ON ANALYSIS TAGS

(A) **Agricultural Seeds. 10 pounds or more.**

1. Commonly accepted name.
2. Percentage of pure seed.
3. Percentage of weed seed. (Prohibit 3%)
4. Name and number per ounce of each noxious weed present singly or collectively in excess of:

(a) One in 5 grams.

(See page 106, group A.)

(b) one in each 25 grams.

(c) one in each 100 grams.

5. Percentage of germination together with month and year tested.
6. Where grown in case of Turkestan and Italian grown alfalfa or Italian and Chilean grown red clover.
7. Name and address of vendor.

(B) **Mixtures. 10 pounds or more.**

1. That such seed is a mixture.
2. Name and percentage of each kind of agricultural seed present in excess of 5% of the total mixture.
3. Percentage of weed seeds (Prohibit 3%).
4. Name and number per ounce of each kind of noxious weed present in excess of one seed in each 15 grams.
5. Percentage of germination of each agricultural seed present in excess of 5%, together with the month and year tested.
6. Where grown if Turkestan or Italian alfalfa or Italian or Chilean red clover.
7. Name and address of vendor.

(C) **Special Mixtures. 8 ounces or more.**

1. That such seed is a mixture.
2. Name of each kind of agricultural seed present in excess of 5% of total mixture.
3. Percentage of weed seeds (Prohibit 3%).
4. Percentage of inert matter.
5. Name and number per ounce of each kind

of noxious weed seed present singly or collectively in excess of one in each 15 grams.

6. Where grown if Turkestan or Italian alfalfa and Italian or Chilean red clover.
7. Name and address of vendor.

(D) **Vegetable seeds defined but excluded from labeling.**

**Prohibits the sale, offering or exposing for sale agricultural seeds—**

- (a) Containing in excess of 3% of weed seeds.
- (b) Containing in excess of one or more seeds of dodder and Canada thistle to each five grams of seed.

#### NOXIOUS WEEDS

Wild onion or garlic—Allium species; quack grass—Agropyron repens; devil's paint brush—Hieracium aurantiacum; king devil—Hieracium species; perennial sow thistle—Sonchus arvensis; horse nettle—Solanum carolinense; bindweed—Convolvulus species.

**PROHIBITED IF MORE THAN 1 IN 5 GRAMS.**

Dodder—Cuscuta species; Canada thistle—Cirsium arvense.

#### SEED LABORATORY AND TESTS

Seed Laboratory, State Department of Agriculture, Harrisburg, Pennsylvania.

Mrs. Mary Mowry, Analyst.

*Tests*—Not more than five samples will be tested in any one month for any one person, firm or corporation, a fee of 25 cents must accompany the sample.

#### ENFORCEMENT

Department of Agriculture, Bureau of Plant Industry, Harrisburg, Pennsylvania.

## RHODE ISLAND

### Law of 1929

#### INFORMATION REQUIRED ON ANALYSIS TAGS OR CONTAINER

(A) **Agricultural Seeds. Every lot.**

1. Commonly accepted name.
2. Percentage of pure seed.
3. Percentage of weed seed.
4. Name and number per ounce of each noxious weed seed present in excess of:

(a) One in 5 grams.

(See page 106, group A.)

(b) One in 25 grams.

(c) One in 100 grams.

(B) **Mixtures of not more than 2 kinds. Every lot.**

1. That such seed is a mixture.
2. Name and percentage of each kind of agricultural seed present in excess of 5% of the total mixture.
3. Percentage of weed seeds.
4. Name and number per ounce of each noxious weed seed present singly or collectively in excess of one seed in each 15 grams.



**Headquarters**  
FOR  
**High Quality**

**NORTHERN  
MINNESOTA**

**SWEET CLOVER**

**ALFALFA**

**Timothy**

**Red Clover**

**Alsike Clover**

**Land O'Lakes Creameries, Inc.**

SEED DIVISION

**Minneapolis, Minnesota**

**A. ERTAG, Inc.**

**730 Fifth Avenue  
NEW YORK, N. Y.**



IMPORTERS—EXPORTERS



Always BUYERS and SELLERS  
of

RED CLOVER

WHITE CLOVER

ALSIKE

ALFALFA

TIMOTHY

RYEGRASS

REDTOP

BLUEGRASS

RAPE SEED

CHEWINGS FESCUE

BENTGRASS

MUSTARD SEED

GREEN PEAS

SPLIT PEAS

SUDAN GRASS

CARROT SEED

etc.

5. Percentage of germination of each kind of agricultural seed present in excess of 5%, together with the month and year tested.
6. Name and address of vendor.

**(C) Special mixtures. Every lot.**

1. That such seed is a mixture.
2. Name of each kind of agricultural seed present in proportion of 5% of the total mixture.
3. Percentage of weed seeds.
4. Percentage of inert matter.
5. Name and number per ounce of each noxious weed seed present singly or collectively in excess of one in each 15 grams.
6. Name and address of vendor.

**(D) Vegetable seed. Every lot.**

1. Kind of seed and variety.
2. Name and address of vendor or packeter.

**NOXIOUS WEEDS**

Quack grass—Agropyron repens; Canada thistle—Cirsium arvense; dodder—Cuscuta species; wild mustard—Brassica arvensis and other wild brassica species; crab grasses—Digitaria species; docks—Rumex species; corn cockle—Lychnis githago; buckhorn—Plantago lanceolata; wild carrot—Daucus carota.

"STOP SALE." Whenever the Commissioner of Agriculture receives information that agricultural seeds are being offered or exposed for sale in violation of any requirements of this act, and is of the opinion that the interests of the public so require, he may apply to the superior court of the counties of Providence and Bristol for an injunction to restrain such violation, and thereupon such court being satisfied that such seed is for sale in violation of this act, shall issue an injunction to restrain any person, firm or corporation from selling, offering or exposing for sale such seed.

**SEED LABORATORY AND TESTS**

Department of Agriculture, Providence, Rhode Island. George H. Geddes.

Any citizen of Rhode Island may have 5 free tests during the year.

Fees for additional tests.

Germination—All seeds except grasses other than timothy 30 cents. Grasses, except timothy, 50 cents.

Purity—Cereals 50 cents, timothy and other crop seeds, except grasses, 75 cents. Grasses and mixtures of not more than two kinds \$1.00. Special mixtures, the actual cost of work, minimum \$1.25.

**ENFORCEMENT**

Under State Department of Agriculture and Conservation, Dr. G. W. Breed, Director.  
310 State House, Providence, Rhode Island.

**SOUTH CAROLINA**

Law of 1940—Regulations of 1941

**INFORMATION REQUIRED ON  
ANALYSIS TAGS OR CONTAINER.**

**(A) Agricultural Seeds (Unmixed). Every lot (Sec. 2). Every lot of 10 pounds or more (Sec. 18).**

- (1) Commonly accepted name.
- (2) Percentage of pure seed.
- (3) Percentage of inert matter.
- (4) Percentage of weed seeds. Prohibited if in excess of 5%, carpet grass 10%. (Regulations.)
- (5) Percentage of other agricultural seeds.
- (6) Percentage of germination together with the month and year tested.
- (7) State where grown, when known, if in the United States.
- (8) Name and address of vendor.
- (9) Name and number of noxious weed seeds per ounce, present singly or collectively, if less than 15 per ounce. (Regulations.)
- (10) Net weight. (Weight and measure law.)

**(B) Mixed Agricultural Seeds. Every lot (Sec. 7). Every lot of 10 pounds or more (Sec. 18).**

- (1) That such seed is a mixture.
- (2) Name, kind of each seed entering into the mixture in excess of 5%.
- (3) Percentage of inert matter.
- (4) Percentage of weed seeds. Prohibit if in excess of 5%, carpet grass 10%. (Regulations.)
- (5) Percentage of other agricultural seeds.
- (6) Name and address of vendor.
- (7) Name and number of noxious weed seeds per ounce, present singly or collectively, if less than 15 per ounce. (Regulations.)
- (8) Net weight. (Weight and measure law.)

**THE  
PHILADELPHIA  
SEED CO., INC.**

ARCH & FRONT STREETS  
PHILADELPHIA, PA.

•  
*Importers*

*Exporters*

*Refiners*

•  
**GRASS SEEDS  
FIELD SEEDS  
PIGEON GRAINS  
BIRD SEEDS**

• **IMPORTERS**  
• **EXPORTERS**  
• **REFINERS**

Red Clover

White Clover

Alsike Clover

Timothy

Redtop

Blue Grass

Orchard Grass

Rye Grass

Fancy Grasses

Lawn Seed

Vetches

Bird Seed

**DURYEA SEED CO., Inc.**

Office and Warehouse: 18 Desbrosses St.  
**NEW YORK, N. Y.**

Cable address—

**DURYEASEED—NEW YORK**

# WM. G. SCARLETT & CO.

Office and Seed Cleaning Plant

729-743 E. Pratt St.  
BALTIMORE, MD., U. S. A.

Cable Address,  
"Scarlett, Baltimoremd"

◆  
**Grass &  
Field Seeds**

◆  
**Bird Seeds**

◆  
**Lawn Seeds**

# WHOLESALE BROKER

IN

CLOVER SEEDS  
GRASS SEEDS  
RAPE SEEDS

From the Production to the  
Consuming sections.

Write, wire or phone for quotations

**H. J. MAYER**

99 Hudson St., New York, N. Y.

## (C) Vegetable Seeds. Every package (Sec. 9). Every parcel or package of 10 pounds or more (Sec. 18).

- (1) Variety.
- (2) Percentage of purity
- (3) Percentage of weed seeds. Prohibit if in excess of 5%. (Regulations.)
- (4) Percentage of germination.
- (5) For seed which germinates less than the established standard. (Regulations.) (See standards, page 102.)
  - a. Percentage of:
    1. Germination, exclusive of hard seeds.
    2. Hard seeds.
    3. Month and year of test. Not more than 5 months shall elapse between the month the test is completed and the date of transportation or delivery for transportation in interstate commerce.
  - b. The words "BELOW STANDARD" in not less than 8-point type.

## (D) Flower Seeds. Every package (Sec. 9). Every parcel or package of 10 pounds or more (Sec. 18).

- (1) Variety.
- (2) Percentage of purity.
- (3) Percentage of germination.

## Prohibits the sale, offering or exposing for sale of agricultural vegetable or flower seeds if—(Regulations)

- (1) Containing in excess of 5% of weeds, carpet grass 10%.
- (2) Containing 15 or more noxious weed seeds, singly or collectively, per ounce.

## NOXIOUS WEEDS—Prohibit 15 or more per ounce, singly or collectively, label if less.

Wild Onion or Wild Garlic, all Dodders, Corn Cockle, Cheat or Chess, Wild Oats, Johnson Grass, Wild Mustard, Canada Thistle, Black Mustard, Sand Bur, Nut Grass.

## CONFISCATION AND DISPOSITION OF SEIZED SEEDS.

Any agricultural, vegetable or flower seeds offered or exposed for sale which do not comply with the requirements of the seed act shall be seized and condemned, sold or destroyed by the Commissioner of Agriculture, Commerce, and Industry or his duly authorized representative, the proceeds from such sale shall be converted into the State Treasury. The sale shall be made at the court house door in the county in which the seizure was made, and shall be advertised for thirty days in a newspaper in the county, or if no newspaper be published in the county, then it shall be published in the nearest county. The advertisement shall state:

- (1) Name and variety of the seed.

- (2) The quantity.
  - (3) Why seized and offered for sale.
  - (4) Time and place of sale.
- The Commissioner may release seed so withdrawn from sale when the requirements of this act have been complied with and upon payment of all costs or expenses incurred in such seizure and withdrawal.

## SEED LABORATORY AND TESTS

Department of Agriculture, Columbia, South Carolina.  
Commissioner may limit the number of free tests to residents.  
Fee for purity tests \$2.00, germination tests \$1.00 to non-residents.

## ENFORCEMENT AND REGULATIONS

Commissioner of Agriculture, J. Roy Jones, Columbia, South Carolina.  
License—Payable January 1st annually.  
\$ 1.00—Where only boxed package vegetable or flower seed are handled.  
2.50—Where gross business is less than \$200, with or without package vegetable or flower seeds.  
5.00—Where gross business is over \$200 and less than \$500.  
10.00—Where gross business is over \$500 and less than \$1,000.  
25.00—Where gross business is \$1,000 or more.

Commissioner may withdraw from sale seed not having reasonable germination or that are extremely impure, notwithstanding they may be properly labeled, if such withdrawal is in the interest of normal crop production.

Agricultural seeds shall have a germination of 75% (except legumes), if the germination is below 75% and above 49% they shall be marked "BELOW STANDARD IN GERMINATION," if the germination is less than 50% (except legumes) the seed cannot be sold.

Germination standards of cotarlararia and lespezea shall be 60% calculated as "pure live seed." If below 60% and above 39% "pure live seed" it must be labeled "BELOW STANDARD." If less than 40% "pure live seed" it cannot be sold.

Germination standards for other legumes shall be 75% calculated as "pure live seed." If below 75% and above 49% "pure live seed" it shall be labeled "BELOW STANDARD." If below 50% "pure live seed" it cannot be sold.

Variety. The vendor will be held responsible for declaring the variety of all seed not clearly distinguishable from other varieties.

Quantity to be labeled. All agricultural, vegetable or flower seed offered or exposed for sale, shall bear standard tag or label except seed sold across the counter from bin or container when such container carries standard label in full view.

A mixture means seed consisting of more than one kind or variety each present in excess of 5% of the whole.

Certified and registered seed must have been produced in accordance with the procedures and in compliance with the rules and regulations of an officially recognized seed certifying agency.

## SOUTH DAKOTA

Act of 1941

## INFORMATION REQUIRED ON ANALYSIS TAGS OR CONTAINERS.

### (A) Agricultural Seeds. Every lot.

- (1) Commonly accepted name of:
  - a. Kind or,
  - b. Kind and variety or,
  - c. Kind and type.
- (2) Lot number or other lot identification.
- (3) Percentage of purity.
- (4) Percentage of inert matter.
- (5) Percentage of weed seeds.
- (6) Percentage of other agricultural seeds.
- (7) Percentage of:
  - a. Germination, exclusive of hard seeds.
  - b. Hard seeds.
  - c. Month and year of test. Test shall have been completed within a nine month period, exclusive of the month in which it was completed.

Following a and b "Total germination and hard seed" may be given if desired.

- (8) State and county where grown, for alfalfa, red clover and field corn (except hybrid).
- (9) Name and address of person who labels the seed, or who sells, offers or exposes said seed for sale.
- (10) Name and number of each kind of secondary noxious weed seed, per ounce in groups B1 and B2 and per pound in B3 and B4 when present singly or collectively in excess of:
  - a. 1 seed in each 10 grams.  
(See page 106, Group B.)
  - b. 1 seed in each 25 grams.

- c. 1 seed in each 50 grams.
- d. 1 seed in each 100 grams.

### (B) Mixed agricultural seeds. Every lot.

Same as for unmixed seed, except that it must be called "Mixed" or a "Mixture" and the information required under items (A) 1, 3 and 7 shall be given for each agricultural seed present in excess of 5% in the order of its predominance.

### (C) Vegetable seeds. Every lot.

- (1) Name of kind and variety.
- (2) For seed which germinates less than the minimum standard established by the State Secretary of Agriculture. (See page 102 for standards.)
  - a. Percentage of germination, exclusive of hard seed.
  - b. Percentage of hard seed.
  - c. Month and year test was completed. Test shall have been completed within a nine month period, exclusive of the month in which it was completed.
- d. Words "BELOW MINIMUM STANDARD" in not less than 8-point type.
- (3) Name and address of person who labels the seed, or who sells, offers or exposes said seed for sale.

## Prohibits the sale, offering or exposing for sale, of agricultural or vegetable seed.

- a. Unless the test for germination has been completed within a nine month period.
- b. Containing primary noxious weeds subject to tolerances.

## NOXIOUS WEEDS

### Primary noxious weed seeds

#### PROHIBITED IN SEED SUBJECT TO TOLERANCES

Field bindweed—*Convolvulus arvensis*; Leafy spurge—*Euphorbia esula*, and *E. lucida*; Perennial peppergrass—*Lepidium draba*; Russian knapweed *Centaurea repens*; Perennial sow thistle—*Sonchus arvensis*; Canada Thistle—*Cirsium arvense*; Quack grass—*Agropyron repens*; Horse nettle—*Solanum carolinense*.

### Secondary noxious weeds.

Wild oats—*Avena fatua*; Dodders—*Cuscuta* spp.; Wild mustards—*Brassica arvensis*, *B. nigra*, *B. juncea*; Penny cress—*Thlaspi arvense*; Ivy leaved morning glory—*Ipomea hederacea*; Hedge bindweed—*Convolvulus sepium*; Wild carrot—*Daucus carota*.

FARMERS are exempt from complying with provisions of this act when selling corn, wheat, oats, barley, rye, flax, spelt, emmer, buckwheat, sorghum, beans and peas when grown, sold and delivered on his premises to the purchaser.

"STOP SALE" order may be issued and enforced by the State Secretary of Agriculture to the owner or custodian of any lot of agricultural or vegetable seed which he finds in violation of any of the provisions of this act. No such order shall be issued or enforced without first having given the owner or custodian an opportunity to comply with the act or withdraw the seed from sale. If the seed has been denied sale as provided in this paragraph, the owner or custodian shall have the right to appeal from such order to a court of competent jurisdiction where the seeds are found, praying for a judgment as to the jurisdiction of said order and a discharge of such seed from the order prohibiting the sale in accordance with the findings of the court.

SEIZURE. Any lot of agricultural or vegetable seed not in compliance with the provisions

of this Act shall be subject to seizure on complaint of the State Secretary of Agriculture to a court of competent jurisdiction in the area in which the seed is located. If the court finds the seed to be in such violation of the Act and orders the condemnation of said seed, it shall be processed, destroyed, relabeled, or otherwise disposed of in compliance with the rules of the State Secretary of Agriculture; Provided, that in no instance shall such disposition of said seed be ordered by the court without first having given the claimant an opportunity to apply to the court for the release of said seed or permission to process or relabel it to bring it into compliance with this act.

### SEED LABORATORY AND TESTS

Department of Agronomy, South Dakota, State College of Agriculture, Brookings, South Dakota.  
E. L. Erickson—Ass't Agronomist in charge of Seed Laboratory.

#### Tests. Charges for laboratory services—

Most purity and germination tests .....	50 per sample.
Chaffy grasses and mixtures.....	80 " "
Corn germination .....	25 " "
Noxious weed examination.....	20 " "
Disease tests .....	20 " "

Uncleaned seed will be tested and charged for on the basis of time required.

### ENFORCEMENT AND REGULATIONS

Enforcement under Commissioner of Agriculture.

### CERTIFIED SEED.

The Secretary of Agriculture has authority to:

1. Establish a seed certification system and make rules and regulations necessary.
2. Designate the names of kinds, varieties and strains, and establish the grades and standards of quality allowed in seed stock which may become eligible for field registration or certification of the seed crop.

3. Prescribe all labels, seals or certificates that shall be used in relation to seed grown, handled or offered for sale in South Dakota as "registered," "certified," "pedigreed," "elite," "foundation seed," or "inspected seed."
4. Cooperate with managers of any seed cleaning, treating or processing plants, or individual or person within or without the state that has proper facilities and equipment to handle seed which is eligible for registration or certification.
5. Cooperate and assist in selection, testing and growing of seed for certification purposes, and in the arrangement for increase and distribution of improved and foundation seed stock.
6. To fix and establish an equitable schedule of fees and charges which shall be uniform throughout the state for the inspection and certifying of South Dakota seed, and to collect all such fees and charges.

### Labeling and Representing Registered and Certified Seed.

All seed grown in South Dakota or transported into this state must have the approval and authorization of the Secretary of Agriculture before it may be offered for sale as "registered," "certified," "pedigreed," "elite," "foundation stock" or "inspected seed."

### Hybrid Seed Corn

Any seed corn sold as hybrid must represent the first generation of a cross between strains of different parentage and involve lines of corn of a high degree of inbreeding or close breeding or their combinations. Such cross shall be produced by cross-fertilization controlled either by hand or by detasseling at the proper time.

Any person or firm desiring to sell hybrid seed corn is required to register with the South Dakota State Department of Agriculture, and to furnish the pedigree of such hybrid seed corn, and when called for by the Department of Agriculture, shall furnish a sample not to exceed one quart for the purpose of testing.



### Registered—Certified

## ALFALFA SEED

Stocks Available for Immediate Shipment—  
Spot or Future Delivery

*All of Our Seed Tested and Graded*

## BERMUDA GRASS SEED

**High Purity and Germination**

We are equipped with the latest type machines to hull Bermuda. By using hulled seed, germination occurs within ten days.

*Your inquiries and orders cordially invited.*

# The Yuma Co. Farmers Marketing Ass'n

BOX 169

YUMA, ARIZONA

# ARIZONA FIELD SEEDS

ALFALFA

BERMUDA

CLOVERS

HEGARI

MILO MAIZE

MARTIN MILO

ARIZONA'S

LARGEST & MOST

RELIABLE SEED HOUSE

ATLAS SORGO

SESBANIA

SUDAN

**CAPITAL FUEL FEED & SEED**  
INSECTICIDES  FERTILIZERS

## TENNESSEE

*Act Effective July 1, 1939*

### INFORMATION REQUIRED ON ANALYSIS TAGS

#### (A) Agricultural Seeds. On half bushel or more.

1. Commonly accepted name.
2. Percentage of pure seed.
3. Percentage of weed seed.
4. Percentage of other crop seed.
5. Percentage of inert matter.
6. Name and number per pound of noxious weed seeds which are present.
7. Percentage of germination and hard seeds together with the month and year tested.
8. Where grown.
9. Name and address of person or firm responsible for the information on tag, as well as consignee's name and address.

#### (B) Mixtures.

1. That such seed is a mixture.
2. The kind and percentage of each kind of agricultural seed present in excess of 10% or more of the mixture, and items 3, 4, 5, 6, 7, 8 and 9; section (A).

#### (C) Vegetable and Flower Seed.

Mentioned only under annual \$1.00 license fee.

#### (D) Hybrid Corn.

Any seed of field, sweet or popcorn may not be offered as "hybrid corn" unless such seed represents the first generation of a cross between strains of different inbred parentages and involving two or more lines of corn or their combinations. Require names of originator(s) and pedigree, including name or variety or parentage of said hybrid corn, to be registered with the Commissioner of Agriculture.

#### NOXIOUS WEEDS

Canada Thistle  
Corn Cockle  
All Dodders\*  
Oxeye Daisy  
Quack Grass  
Johnson Grass { Prohibited except in unhulled  
Wild Onion { crimson clover.  
Commissioner of Agriculture may prescribe a maximum number of noxious weeds per pound.

\* Regulation Feb. 24, 1941. Maximum dodder in lespedeza 100 per pound.

#### CERTIFIED

Use of word "Certified" limited to seed certified by a certifying agency or to seed registered by the International Crop Improvement Association.

Certification tag must show:

1. Grower's name or number and address.

2. Name and address of certifying agency.
3. The state, province, territory or county where grown.

#### LABORATORY

State Department of Agriculture, Nashville, Tenn. F. H. Spanier, Analyst.

#### ENFORCEMENT

C. C. Flanery, Commissioner of Agriculture; V. L. Fuqua, Supt. and State Chemist.

The Commissioner of Agriculture is authorized to:

- (1) Prescribe the type of tag or label.
- (2) prescribe the type of stamp or other evidence of payment of the inspection fee.
- (3) Fix the minimum percentages of purity and germination for agricultural seeds and mixtures.
- (4) Fix the maximum number of noxious weed seeds per pound.
- (5) Make and promulgate such rules and regulations as may be necessary for the enforcement of this act.

There shall be an inspection fee of 2 cents per bushel on the following: Red Clover, White Clover, Crimson Clover, Lespedeza, Alfalfa, Kentucky Blue Grass, Timothy, Bromo Grass, Orchard Grass, Redtop, Meadow Fescue, Oat Grass, Rye Grass, Millet, Bermuda Grass, Sudan Grass; together with a \$1.00 license fee, per annum. The \$1.00 license fee shall apply to vegetable and flower seed.

## TEXAS

Law of 1941

### INFORMATION REQUIRED ON ANALYSIS TAGS OR CONTAINER

#### (A) Agricultural Seeds. (Unmixed) Every lot. Use Texas tags.

- (1) Commonly accepted name of:
  - a. Kind or
  - b. Kind and variety or
  - c. Kind and type.
- (2) Lot number or other lot identification.
- (3) Percentage of purity.
- (4) Percentage of inert matter.
- (5) Percentage of weed seeds.
- (6) Percentage of other agricultural seeds.
- (7) Percentage of:
  - a. Germination, exclusive of hard seed.
  - b. Hard seeds.
  - c. Month and year of test. Test shall have been completed within a twelve month period, exclusive of month in which test was completed.

Following a & b "Total germination & hard seed" may be given if desired.

- (8) Origin of alfalfa, red clover and field corn. If origin is unknown, it must be so stated.
- (9) Name and address of person who labeled seed, or who sells, offers or exposes seed for sale.
- (10) Name and number of secondary noxious weeds per ounce in groups B1 & B2 and per pound in B3 & B4 if present singly or collectively in excess of:
  - a. 1 in each 5 grams.
  - (See page 106, group B.)
  - b. 1 in each 10 grams.
  - c. 1 in each 25 grams.
  - d. 1 in each 100 grams.

#### (B) Mixed Agricultural Seeds. Every lot. Use Texas tags.

Same as unmixed seed, except that it must be called "MIXED" or a "MIXTURE" and the information required under items, 1, 3 and 7 shall be given for each agricultural seed present in excess of 5% in the order of its predominance.

#### (C) Vegetable seeds. Every lot.

- (1) Name of kind and variety.
- (2) For seed which germinates less than the standard last established by the Commissioner of Agriculture. (See page 102 for standards.)

- a. Percentage of germination, exclusive of hard seed.
- b. Percentage of hard seed.
- c. Month and year of test. Test shall have been completed within a twelve month period, exclusive of the month in which the test was completed.
- d. Marked "BELOW STANDARD" in not less than 8 point type.
- (3) Name and address of person who labeled seed, or who sells, offers or exposes seed for sale.

#### Prohibits the sale, offering or exposing for sale of,

- A. Agricultural or vegetable seed containing primary noxious weeds subject to tolerances.
- B. Agricultural or vegetable seed unless the test for germination shall have been completed within a twelve month period, exclusive of the month in which the test was completed.

#### NOXIOUS WEEDS

##### (A) Primary Noxious Weeds.

PROHIBITS SEED CONTAINING ANY SUBJECT TO TOLERANCES.

Johnson grass—*Andropogon halepensis*  
Bindweed—*Convolvulus* spp.  
Blue Weed—*Helianthus ciliaris*  
Dodder—*Cuscuta* spp.

##### B) Secondary Noxious Weeds.

Russian thistle—*Salsola kali*  
Wire grass—*Paspalum distichum*  
Bermuda grass—*Cynodon dactylon*  
Wild oats—*Avena fatua*  
Chess or cheat—*Bromus secalinus*  
Buckhorn plantain—*Plantago lanceolata*  
Purple nightshade—*Solanum elaeagnifolium*  
Darnel—*Lolium temulentum*  
Wild mustard—*Brassica sinapistrum*  
Curly dock—*Rumex crispus*

"STOP SALE" orders may be issued by the Commissioner of Agriculture for any lot of agricultural or vegetable seed which he has reason to believe is in violation of any of the provisions of this act which shall prohibit the further sale of said seed until the law has been complied with. The owner or custodian of said seed may appeal from such order to a court of competent jurisdiction where the seed is found, praying for a judgment as to the justification of said order and for the discharge from such order in accordance with the finding of the court.

#### SEIZURE.

Any lot of agricultural or vegetable seed not in compliance with the provisions of this act shall be subject to seizure on complaint of the Commissioner of Agriculture to a court of competent jurisdiction in the area in which the seed is located. In the event that the court finds the seeds to be in violation of the act and orders its condemnation, it shall be denatured, processed, destroyed, re-labeled or otherwise disposed of in compliance with the laws of the state. In no instance shall such disposition be ordered by the court without first having given the claimant an opportunity to apply to the court for its release or permission to process or relabel it to bring it into compliance with the act.

#### HYBRID CORN.

The first generation seed of a cross produced by controlling the pollination, and by combining two, three or four inbred lines, or by combining one inbred line or a single cross with an open-pollinated variety. Hybrid designations shall be treated as variety names.

#### SEED LABORATORY AND TESTS

State Seed Laboratory, Department of Agriculture, Austin, Texas.

Miss Wynona Robbins—Chief Analyst.

Fees for tests—Residents of Texas: Agricultural seeds free; vegetable and flower seed purity 25c, germination 25c. Out of state firms: Purity 25c, germination 25c.

#### ENFORCEMENT AND REGULATIONS

Enforcement is under the Department of Agriculture, Austin, Texas.

J. E. McDonald, Commissioner.

Linden E. Jones, Chief of Seed Laboratory Division.

*Certified Copy* of the information required on the tag, (see (A) above) shall be filed with the Commissioner of Agriculture covering the lot of seed to be sold.

*Inspection tax* of not over 1 cent for each 100 pounds or fraction thereof shall be paid to the Commissioner and a tag furnished by the Commissioner shall be attached to the container of the seed offered for sale.

(These tags constitute the "tested" seed labels and must bear the analysis (Sec. A).)

To ship *Cotton seed*—a certificate of field inspection made by county or state authorities must be filed with Seed Laboratory Division,

Department of Agriculture, Austin. If fields were inspected, the per cent must be stated on the certificate. Over 2% denied entry. *Cotton, Alfalfa, Corn and Sorghum seed* (either sweet or grain) must meet the requirement set forth by the Commissioner of Agriculture and shall bear a special tag issued by him. He shall have authority to refuse permission to ship such seed into Texas when the records and information of his agents show the seed to be inferior quality, lacking prescribed varietal purity or from diseased fields. All planting seed shipped into Texas bearing labels denoting *Registered or Certified* seed shall have been produced under standards equal to standards in Texas for such class of seed. If not approved they may bear Registration or

Certification tags issued by the state of origin provided such tags are plainly marked—"These tags do not meet the requirements of Registration or Certification in Texas."

Prohibit use of *Red or Blue Tags* except when used by duly qualified plant breeders or certified seed growers unless such tags are marked in bold type, "Non-Registered" or "Non-Certified" seed.

Where such terms as "from officially inspected fields," "State Inspected," "Approved Seed," "Inspected Fields," "first year from Certified Seed," "as good as Certified" and similar terms are used, such written material shall plainly show the words, "Non-Registered" or "Non-Certified."

# GARDEN, FIELD and FLOWER SEEDS

MERCHANTS OF THE SOUTHWEST have at their command large stocks of Garden, Field and Flower Seeds, centrally located for receipt of overnight shipments.

NICHOLSON'S SEEDS have set the standard of quality in the Southwest for more than 50 years. If you do not receive our wholesale list, please send us your name.

## ROBERT NICHOLSON SEED CO.

DALLAS - - TEXAS

## UTAH

### Revised Statutes of 1939 and Regulations

#### INFORMATION REQUIRED ON ANALYSIS TAG

##### (A) Agricultural Seed. Every lot.

1. Commonly accepted name.
2. Lot number or designation.
3. Percentage of pure seed.
4. Percentage of weed seed (Prohibit over 1% by Regulation 5).
5. Name and number per pound, not to exceed 90 per pound, of secondary noxious weeds.
6. Percentage of germination together with the month and year tested.
7. Where grown.
8. Name and address of vendor.

##### (B) Mixtures of not more than two kinds. Every lot.

1. That such seed is a mixture.
2. Lot number or designation.
3. Name and percent of each kind of agricultural seed present in excess of 5% of the total mixture.

4. Percentage of weed seeds (Prohibit over 1% by Regulation No. 5).
5. Name and number per pound, not to exceed 90 per pound of secondary noxious weeds.
6. Percentage of germination of each kind of agricultural seed in excess of 5% together with the month and year tested.
7. Where grown.
8. Name and address of vendor.

##### (C) Special mixtures. Every lot.

1. That such seed is a mixture.
2. Lot number or designation.
3. Name of each kind of agricultural seed present in excess of 5% of the total mixture.
4. Percentage of weed seeds (Prohibit over 1% by Regulation No. 5).
5. Percentage of inert matter.
6. Name and number per pound, not to exceed 90 per pound of secondary noxious weeds.
7. Where grown.
8. Name and address of vendor.

# SNELSON SEED CO.

Main Office  
Savannah, Ga.

Jacksonville  
Florida

Chester  
South Car.

Ask for quotations, stating quantities wanted

Abruzzi Rye	Corn, field	Oats
Austrian Winter Peas	Cotton	Peanuts
Bahia Grass	Cowpeas	Popcorn
Beardless Barley	Crotalaria	Rape (Dwarf Essex)
Beggarweed	Crowder Peas	Redtop
Bene	Dallis Grass	Rice
Bermuda Grass	Egyptian Wheat	Ryegrass
Buckwheat	Hegari	Sesbania
Carpet Grass	Kudzu	Sorghums
Clover	Lespedeza	Soybeans
Alyce	Lupine	Sudan Grass
Burr	Millets	Sunflower
Crimson	(Cattail and	Velvet Beans
White	Brown Top)	Vetch
Chufas	Mung Beans	Wheat

## Wholesale Field and Grass Seed

...BLUE  
MOUNTAIN  
SEED  
GROWERS  
ASSOCIATION . . . . .

Ontario, Oregon

Hardy Idaho and Oregon  
Northern Grown Seeds

#### ALFALFAS

Ladak	Orestan
Grimm	Common

#### GRASSES

Chewings fescue	Orchard grass
Bulbous bluegrass	Timothy
Bromus inermis	Fall fescue
Meadow fescue	Poa ampla
	Standard crested wheatgrass
	Fairway crested wheatgrass
	Red creeping fescue
	Slender wheatgrass

#### CLOVERS

Fancy red clover	White Dutch
Strawberry clover	Ladino clover
Yellowblossom Sweet	Alsike clover

Austrian Field Peas  
CARLOTS OR LESS

# Growers

of

CROTALARIA RICE

CATTAIL MILLET

BLUE LUPINE

SEED CORN

SOY BEANS

OTOOTANS - PALMETTO

CLEMSON - AVOYELLES

MACOUPIN - MAMLOXI

All Seed Graded and A-1 Quality

We Will Appreciate Your  
Inquiries for Sample and Prices

Wholesale Only

## Riemers' Farms

ELBERTA ALABAMA



# COKER'S

*famous Strains of*

VICTORGRAIN OATS

FULGRAIN OATS

STANTON OATS

ABRUZZI RYE

HARDIRED WHEAT

REDHART WHEAT

*as well as Coker's  
improved strains of*

**Cottonseed & Cornseed.**

**Also Soybeans, Cowpeas,**

**Velvet Beans, etc.**

*Shuler & Smoak*  
SERVICE AND SATISFACTION

Wholesale Seedsmen

Orangeburg, S. C.

"Serving the South Since 1919"

(D) **Vegetable seeds same as agricultural seeds. See (A) above.**

**Prohibit the sale, offering or exposing for sale agricultural or vegetable seeds containing**

- Primary noxious weeds.
- In excess of 90 secondary noxious weed seeds per pound.
- In excess of 1% of weed seeds.

### NOXIOUS WEEDS

#### Primary—Prohibited.

White top, *Lepidium draba*; Wild Morning Glory, *Convolvulus arvensis*; Canada thistle, *Cirsium arvense*; Russian Knapweed, *Centaurea picris*; Perennial Sow Thistle, *Sonchus arvensis*; Perennial Ragweed, *Ambrosia Psilostachya*; Leafy spurge, *Euphorbia esula*; Puncture vine, *Tribulus terrestris*; Night shade (Ground cherry), *Physalis heterophylla*; Blue flowering lettuce, *Lactuca pulchella*; Quack grass, *Agropyron repens*; Bermuda grass, *Cynodon dactylon*.

#### Secondary

Give name and number per pound if not to exceed 90 per pound; prohibited if over. Whorled or Poison milkweed, *Asclepias galioides*; Burdock (great), *Arctium lappa* (small), *A. minus*; bull thistle, *Cirsium lanceolatum*; Cockle bur, *Xanthium orientale*; Alfalfa dodder, *Cuscuta* spp.; Perennial ground cherry, *Physalis longifolia*; Poverty weed, *Iva axillaris*; Larkspur, *Delphinium menziesii*; Delphinium cuculatum; Water Hemlock, *Cicuta maculata*; Buckhorn Plantain, *Plantago lanceolata*.

### SEED LABORATORY AND TESTS

State Seed Laboratory.  
Department of Agriculture.  
Salt Lake City, Utah.  
Georgeanna Cameron, Analyst.  
Tests—subject to rules by the State Board of Agriculture.

### REGULATIONS

- Screenings must be ground or otherwise de-vitalized under supervision of State Board of Agriculture. Screenings of Alfalfa, Clover or Timothy or other seed of sufficient value

which do not contain noxious weeds may be released by authority of State Board of Agriculture.

- Use the *Rules for Seed Testing* recommended by the Official Seed Analysts Assn.
- Primary Noxious Weeds are prohibited in any quantity.
- Secondary Noxious Weeds prohibited when more than 90 per pound.
- Total of more than 1% of weed seeds prohibited.
- Quarantine and disposal of any seed, feed or hay containing any primary noxious weed, plant or seeds, to be made by District Agricultural Inspectors.
- Seeds or Feeds Quarantined because of primary noxious weeds not permitted to be transported within or without the state. May be cleaned under supervision of an official representative of State Board of Agriculture. If found free from primary noxious weed seeds, may be released for distribution, otherwise must be destroyed.

**Packet Seeds**—Seeds commonly sold in small package or from bulk in small amounts may be exempt from the labeling provisions, provided the container containing such packages or seeds is labeled. The vendor's name and address must appear on each smaller container in said lot of seeds.

**Original Label**—The analysis label of original seller may be retained for a period not to exceed 3 months from the date of delivery.

### Quarantine No. 9A

**Certificate of freedom from primary noxious weeds**—All agricultural and vegetable seeds, hay, straw and hay or straw products of any nature must bear a certificate of the complete absence of the seeds of all "Primary noxious weeds," issued by an authorized inspector at the point of origin, before such seeds can be entered into interstate commerce for shipment into Utah.

**Carrier to hold for inspection**—All agricultural and vegetable seeds, hay, straw and hay or straw products of any nature, arriving in the state from points outside, shall be held by the carrier until released by an authorized inspector of the Utah State Board of Agriculture. Any agricultural product imported in violation of this quarantine must either be returned to the point of origin or be destroyed by the owner under the supervision of an authorized inspector of the State Board of Agriculture.

## VERMONT

### Law of 1926 As Reprinted 1933

### INFORMATION REQUIRED ON ANALYSIS TAG

(A) **Agricultural Seeds. Ten pounds or more.**

- The commonly accepted name.
- Percentage of pure seed.
- Percentage of weed seed.
- Name and number per ounce of each noxious weed present singly or collectively in excess of:
  - one seed in each 5 grams. (See page 106, group A.)
  - one seed in each 25 grams.
  - one seed in each 100 grams.
- Percentage of germination together with the month and year tested.
- Where grown in case of imported alfalfa, clover, alfalfa and orchard grass.
- Name and address of vendor.

(B) **Mixtures of not more than two kinds. Ten pounds or more.**

- That such seed is a mixture.
- Name and percentage of each kind of agricultural seed present in excess of 5% of the total mixture.
- Percentage of weed seeds.
- Name and number per ounce of each noxious weed seed present singly or collectively in excess of one seed in each 15 grams.
- Percentage of germination of each kind of agricultural seed present in excess of 5% together with the month and year tested.
- Where grown in case of imported alfalfa, red clover and orchard grass.
- Name and address of vendor.

(C) **Special mixtures. Eight ounces or more.**

- That such seed is a mixture.

- Name of each kind of agricultural seed present in proportion of 5% of the total mixture.
- Percentage of weed seeds.
- Percentage of inert matter.
- Name and number per ounce of each kind of noxious weed seeds present singly or collectively in excess of one seed in each 15 grams.
- Where grown in case of imported alfalfa, red clover or orchard grass.
- Name and address of vendor.

(D) **Vegetable seed not included in law.**

### NOXIOUS WEEDS

Quack grass; wild mustard and other brassicas; Canada thistle; dodder; ergot; corn cockle; poison hemlock.

### LABORATORY AND TESTS

Seed Laboratory.  
Agricultural Experiment Station.  
Burlington, Vermont.  
Mrs. Anna Lutman, Analyst.  
Number of free tests and charges for additional samples to be fixed by the Director of Agricultural Experiment Station.

### ENFORCEMENT AND REGULATIONS

J. L. Hills, Director of Agricultural Experiment Station at Burlington, Vermont.  
License.

In January of each year each vendor must pay \$5.00 license fee for each brand of agricultural seed or mixture of agricultural seeds.

Regulation.  
License fee not required on:  
Mixed seed used solely or primarily for lawns and golf courses.

43 YRS. OF SERVICE

# Gold Medal FIELD SEED



OUR SPECIALTIES

REDTOP TIMOTHY  
ORCHARD GRASS  
BLUE GRASS  
KOREAN LESPEDEZA  
SOY BEANS COW PEAS



## LOUISVILLE SEED COMPANY

LOUISVILLE, KENTUCKY  
Branch Office and Warehouse  
LOUISVILLE, ILLINOIS

# HARDY! WESTERN CANADIAN GROWN

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BROME  
ALSIKE  
ALFALFA  
TIMOTHY  
RED CLOVERS  
SWEET CLOVERS  
CRESTED WHEAT GRASS  
SLENDER WHEAT GRASS

• LEADING VARIETIES •  
WHEAT - OATS - BARLEY  
FLAX - RYE

Carlot or L.C.L.

Write, phone or wire  
for Quotations

## McCABE BROS. GRAIN CO., Ltd.

980 Grain Exchange Bldg.  
WINNIPEG • CANADA

## VIRGINIA

Amended and Re-enacted 1938  
Regulations 1942

### INFORMATION REQUIRED ON ANALYSIS TAG

#### (A) Agricultural seeds. Every lot of 10 pounds or more.

1. Commonly accepted name.\*
2. Percentage of pure seed.
3. Percentage of weed seed. (Prohibit sale if over 3%.)
4. Name and number per pound of each noxious weed seed present.
5. Percentage of:
  - (a) Germination, exclusive of hard seeds.
  - (b) Hard seeds. (Regulation.)
  - (c) Month and year of test.
6. Name and address of vendor.

\*Seed containing more than one variety or varieties, singly or collectively must be labeled as follows:

- (a) If as much as 10% of another variety or varieties singly or collectively are present the word "mixed" must follow kind as "mixed soybeans" or "mixed cowpeas." The approximate percentage of each variety may be given.
- (b) Seed containing as few as 5% or less than 10% of another variety or varieties singly or collectively must be labeled as to kind only as "soybeans" or "cowbeans."
- (c) Seed containing less than 5% of another variety or varieties singly or collectively may be labeled as a single variety.

#### (B) Mixtures. Every lot.

1. That such seed is a mixture.
2. (a) Name of each kind of agricultural seed present in excess of 5% of the total mixture.
- (b) Mixtures containing two kinds only, of agricultural seeds, must also be labeled with the percentage of each.
- (c) If agricultural seeds present in quantities less than 5% of the total are named on label the percentage of each must be given.
3. Percentage of weeds. (Prohibit sale if over 3%.)
4. Percentage of inert matter.
5. Name and number per pound of each kind of noxious weed seed present.
6. For each kind of agricultural seed present in excess of 5% give:
  - (a) Percentage of germination, exclusive of hard seeds.
  - (b) Percentage of hard seeds. (Regulation.)
  - (c) Month and year of test.
7. Name and address of vendor.

#### (C) Vegetable Seed. Every separate container.

1. Kind of seed and variety.
2. Year for which packeted, words "packed for" shall precede the year.
3. Percentage of germination, together with the month and year tested, provided the germination is less than the Virginia standards. (See page 102.)
4. Name and address of person or firm who packed the seeds and labeled the same.

#### NOXIOUS WEEDS

Wild onion—Allium vineale; Bermuda grass—Cynodon dactylon; quack grass—Agropyron repens; Canada thistle—Cirsium arvense; hawkweed—Hieracium species; dodder—Cuscuta species (prohibited if 12 or more to one ounce of seed); Johnson grass—Sorghum halepense (prohibited if one to two ounces of seed).

#### SEIZURE OF SEED.

The Commissioner of Agriculture and Immigration may cause to be seized and held any lot of agricultural and vegetable seeds or mixtures of same, found to violate any of the provisions of this act until the law has been complied with or said violation otherwise legally disposed of; provided, however, that such person, firm or corporation shall have the right immediately to apply to the circuit court of the city or county in which seizure is made, for release of the same from seizure.

#### SEED LABORATORY AND TESTS

1112 State Office Building, Richmond, Virginia.  
In charge of G. T. French, State Entomologist and Chief Botanist.  
The Commissioner of Agriculture may fix the maximum number of samples tested free of charge for any one period of time for any individual firm or corporation.

# SEEDS

FROM



Idaho

★ LEWISTON

STRAINS FROM  
SINGLE PLANTS

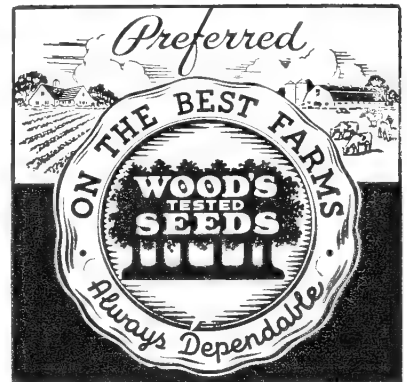
## PEAS AND BEANS

OF *highest* QUALITY

EXPERTLY GROWN  
CAREFULLY ROGUED  
PROPERLY PROCESSED

SPOT OR FUTURES

**MARK MEANS CO.**  
LEWISTON, IDAHO



South's Largest  
Grower and Distributor  
of

## Field & Hybrid Corn

Also carry complete line of  
Field & Garden Seeds

Write for Prices

**T. W. WOOD & SONS**  
SEEDSMEN SINCE 1879  
RICHMOND, VIRGINIA

SHENANDOAH  
VALLEY'S  
SEED  
HOUSE  
Car Lot Buyers  
FIELD  
AND  
GARDEN SEEDS

Write for Prices on

ORCHARD GRASS, BLACK WILSON  
SOYBEANS & KOREAN LESPEDEZA  
IN CAR LOTS AND LESS



The WETSEL SEED COMPANY, Inc.  
HARRISONBURG, VIRGINIA  
ESTABLISHED 1911

DAKOTA IMPROVED SEED CO.

*Disco*

Mitchell and Redfield, Emmetsburg,  
S. Dakota Iowa

**Alfalfa**

South Dakota, Wyoming  
Common, Grimm, Cossack

U. S. Verified and State Sealed

**Crested Wheat  
Grass**

Canadian and Domestic  
Standard and Fairway

**Brome Grass**

Canadian and Dakota Grown

**Kentucky Bluegrass**  
Idaho Grown Dwarf Essex Rape

**ENFORCEMENT AND REGULATIONS**

Enforcement—Commissioner of Agriculture.  
Regulations—*Hard seeds* shall not be included in the percentage of germination but may be shown on the analysis tag in the following manner:

Germination .....	85%
Hard seed .....	10%
Total .....	95%

*Broken sprouts*—seedlings of crimson clover and other legumes having both cotyledons broken off or a broken hypocotyl shall not be counted as germinated.  
Local vendor may use the wholesaler's tag for only 90 days from date of delivery.  
*Bermuda grass* may be sold as an agricultural seed when so marked. When present in other kinds of seeds is a noxious weed.

**WASHINGTON**

*Law As Amended to 1941*

**INFORMATION REQUIRED ON ANALYSIS TAG OR CONTAINER**

**(A) Agricultural Seeds (Unmixed) Every lot.**

- Commonly accepted name of
  - Kind or
  - Kind and variety or
  - Kind and type.
- Lot number or other lot identification.
- Percentage of purity.
- Percentage of inert matter.
- Percentage of weeds.
- Percentage of other agricultural seeds.
- Percentage of
  - Germination, exclusive of hard seed.
  - Hard seed.
  - Month and year of test. Test shall have been completed within a nine month period exclusive of the month in which test was made.

Following (a) and (b) "Total germination and hard seed" may be given if desired.

- Origin of alfalfa, red clover and field corn (except hybrid). If origin is unknown it must be so stated.
- Name and address of person who labeled seed, or who sells, offers or exposes said seed for sale.
- Name and number of each secondary noxious weed per pound when present singly or collectively in excess of
  - One seed or bulblet in each 10 grams of *Agrostis* spp., *Poa* spp., *Bermuda* grass, timothy, orchard grass, fescue (except meadow), alsike and white clover, reed canary grass and other agricultural seeds of similar size and weight or mixtures within this group.
  - One seed or bulblet in each 25 grams of ryegrass, meadow fescue, millet, alfalfa, red clover, sweet clover, lespedeza, smooth brome grass, crimson clover, *Brassica* spp., flax, *Agropyron* spp., and other agricultural seeds of similar size and weight, or mixtures within this group, or of this group with (a).
  - One seed or bulblet in each 100 grams of wheat, oats, rye, barley, buckwheat, sorghums, vetches, and other agricultural seeds of a size and weight similar to or greater than those within this group or any mixtures within this group.

**(B) Mixed Agricultural Seeds. Every lot.**

Same as for unmixed seed except that it must be called "Mixed" or a "Mixture" and the information required under items (A) 1, 3 and 7 shall be given for each agricultural seed present in excess of 5% in the order of its predominance.

**(C) Vegetable Seeds. Every lot.**

- Name of kind and variety.
- For seeds which germinate less than the standard last established by the Director of Agriculture. (See page 102 for standards.)
  - Percentage of germination, exclusive of hard seed.
  - Percentage of hard seed.
  - Month and year of test. Test shall have been completed within a nine month period exclusive of the month in which it was completed.
  - The words "BELOW STANDARD."
- Name and number per pound of secondary noxious weeds.
- Name and address of the person who labeled seed, or who sells, offers or exposes said seed for sale.

**Prohibits the sale, offering or exposing for sale of agricultural and vegetable seeds.**

- Unless the test for germination shall have been completed within a 9-months period, exclusive of the month in which the test was completed.
- Containing primary noxious weeds subject to tolerances prescribed in the rules and regulations.

**NOXIOUS WEEDS**

- Primary noxious weeds. Prohibits seed containing any subject to tolerances.
  - Quack grass—*Agropyron repens*; Canada thistle—*Cirsium arvense*; Bindweed—*Convolvulus arvensis* and *C. sepium*; Perennial sow thistle—*Sonchus arvensis*; Hoary cress or White top—*Lepidium draba*, *L. repens* and *Hymenophyza pubescens*; Yellow toadflax—*Linaria vulgaris*; Russian knapweed—*Centaurea picris*; Blue flowering lettuce—*Lactuca pulchella*; Leafy spurge—*Euphorbia esula*; Camelthorn—*Alhagi pseudalhagi*; Austrian field cress—*Radicula austriaca*; Perennial peppergrass—*Lepidium latifolium*.
- Secondary noxious weeds.
  - Alkali mallow—*Sida hedracea*; Corn cockle—*Agrostemma githago*; Docks—*Rumex* spp.; St. Johnswort—*Hypericum perforatum*; Dodder—*Cuscuta* spp.; Fanweed—*Thlaspi arvense*; Poverty weed—*Iva axillaris*; Wild mustard—*Brassica* species; Plantain—*Plantain* species; Perennial ground cherry—*Physalis subglabrata*.

"STOP SALE" orders for any lot of agricultural or vegetable seeds may be issued and enforced by the Director of Agriculture if he finds or has reason to suspect the seed is in violation of any of the provisions of this act, prohibiting further sale of said seed until he has evidence that the law has been complied with. No "Stop Sale" order shall be issued or attached without first giving the owner or custodian an opportunity to comply with the law or to withdraw the seed from sale. The owner or custodian shall have the right to appeal from such order to a court of competent jurisdiction, praying for a judgment as to the justification of said order and for the discharge of said seed from the order in accordance with the findings of the court.

**SEIZURE.** Any lot of agricultural or vegetable seed not in compliance with the provisions of the seed law shall be subject to seizure on complaint of the Director of Agriculture to a court of competent jurisdiction in the area in which the seed is located. If the court finds it in such violation and orders the condemnation of said seed it shall be denatured, processed, destroyed, relabeled or otherwise disposed of in compliance with the laws of the state. No such disposition of said seed shall be ordered without first having given the claimant an opportunity to apply to the court for the release of said seed or permission to process or relabel it to bring it into compliance with the act.

**SCREENINGS.** Any screenings or other material removed in the cleaning of agricultural, turf or vegetable seeds containing "Noxious weed" seeds are declared to be a menace to agriculture, and by agreement with the owner may be destroyed. Said screenings may be ground or treated in a manner approved by the Director of Agriculture that will destroy the viability of the seed before it can be used for feeding purposes. Any screenings not ground or treated may be removed from the cleaning establishment only under permit issued by the Director of Agriculture and shall be labeled "SCREENINGS CONTAINING NOXIOUS WEEDS. UNFIT FOR PLANTING OR FEEDING PURPOSES IN WASHINGTON."

**SEED LABORATORY AND TESTS**

Seed Laboratory, Dept. of Agronomy, State College of Washington, Pullman, Washington, E. G. Schafer in charge. Dwight D. Forsyth, see analyst. State Dept. of Agriculture, Olympia, Wash. Tests. One free test (purity and germination) will be made per year for any person residing in the state. Additional tests will be charged as follows:

**FOR PURITY**

- Peas, beans, vetches, cereals, beets, mustards, cabbage, melons, parsnips and carrots ..... \$0.50
- Alfalfa, clovers, wheatgrasses, ryegrasses and timothy ..... 1.00
- Bentgrasses, bluegrasses, orchard grass, fine fescues ..... 2.00



# HOLLENBACH'S SEED STORE

DEALERS  
ONION SETS

GROWERS  
ONION SEED

Also General  
Seed Line

808 W. LAKE ST.  
CHICAGO

# Good SEED

Louisiana Grown  
WHITE  
DUTCH  
CLOVER

(more plants per pound)

Other Grass Seeds  
Soy Beans

3401 acres chiefly seed crops

One of the best equipped clean-  
ing plants in Louisiana

W. T. NOLIN  
HAMBURG, LOUISIANA

- (4) Seed mixtures containing two species when the lesser of the two species consists of more than five percent (5%) of the total. . . . . 3.00
- (5) Charges shall be made according to time required to make tests of mixtures of more than two species, for dirty samples and screenings.

#### FOR GERMINATION TESTS

- (1) Seeds in purity groups (1) and (2) . . \$0.50
- (2) Seeds in purity group (3) . . . . . 1.00
- (3) Charges for germination of mixtures shall be the sum of the charges for germinating each single species as given above.

#### ENFORCEMENT AND REGULATIONS

Director of Agriculture, Walter J. Robinson, Olympia, Washington.

Charles D. Gaines, State Seed Inspector.

#### License

An annual license, fee \$10.00, must be obtained from the Director of Agriculture for each separate place of business. License expires Dec. 31st of each year.

Merchants selling only seeds in sealed packages of 8 ounces or less are exempt from license fee provided seed packages bear name and address of packeter who is licensed.

#### WEST VIRGINIA

Law 1937 Regulations of 1942

#### INFORMATION REQUIRED ON ANALYSIS TAG OR CONTAINER

##### (A) Agricultural Seeds. Every lot.

- (1) Commonly accepted name of: (Regulation.)
  - (a) Kind,
  - (b) Variety, or
  - (c) Type.
- (2) Percentage of pure seed.
- (3) Percentage of weed seed (prohibit 3%).
- (4) Percentage of other agricultural seeds. (Regulation.)
- (5) Percentage of: (Regulation.)
  - (a) Germination, exclusive of hard seeds.
  - (b) Hard seeds.
  - (c) Month and year of test.
 Following a & b "Total" may be shown if desired.
- (6) Origin of red clover, alsike clover and alfalfa.
- (7) Name and address of vendor.
- (8) Name and number per ounce of each kind of noxious weed seeds present in excess of:
  - (a) One in each 5 grams. (See page 106, group A.)
  - (b) One in each 25 grams.
  - (c) One in each 100 grams.

##### (B) Mixtures (All mixtures — Regulations). Every lot.

- (1) That such seed is a mixture.
- (2) Name and percentage of each kind of agricultural seed present in excess of 5% of the total mixture.
- (3) Percentage of weed seeds (prohibit 3%).
- (4) For each kind of agricultural seed mentioned in (2) give percentage of:
  - (a) Germination, exclusive of hard seeds.
  - (b) Hard seeds.
  - (c) Month and year of test.
 Following a & b "Total" may be given if desired.
- (5) Origin of red clover, alsike clover and alfalfa. (Regulation.)
- (6) Name and address of vendor.
- (7) Name and number per ounce of each kind of noxious weed seed present. (Regulation.)

##### (C) Vegetable seeds included in agricultural seed. Label as under (A).

- (See page 102 for germination standards.)
- Prohibits the sale, offering or exposing for sale of agricultural seed:**
- (1) Containing quack grass, Canada thistle, dodder and perennial sow thistle if present in excess of one seed in five grams.
  - (2) Containing in excess of 3% of weed seeds.

#### NOXIOUS WEEDS

Wild onion—Allium vineale; Johnson grass—Sorghum halepense; hawk weed—Hieracium species; buckhorn—Plantago lanceolata; English charlock or wild mustard—Brassica arvensis; corn cockle—Agrostemma githago; ox-eye daisy—Chrysanthemum leucanthemum; Indian mustard—Brassica juncea; star thistle—Centaurea solstitialis; wild carrot—Daucus carota; galinsoga—Galinsoga parviflora.

PROHIBITED WHEN IN EXCESS OF ONE IN 5 GRAMS:

Quack grass—Agropyron repens; Canada thistle—Carduus arvensis; dodder—Cuscuta species; sow thistle—Sonchus species.

# HARDY SELECTED NORTHERN GROWN SEED

ALFALFA SWEET CLOVER  
RED and ALSIKE CLOVER  
TIMOTHY  
TIMOTHY and ALSIKE  
SEED CORN

SHIPPERS OF  
CARLOTS - - MIXED CARS



Pride of the North Brand  
Guaranteed Highest Quality Field  
Seeds

WRITE FOR SAMPLES AND PRICES

#### TWIN CITY SEED CO.

STANLEY FOLSOM, Mgr.  
130 2nd St., N.E. Minneapolis, Minn.



Since 1873

KENTUCKY BLUE GRASS

# BRENT'S PREMIUM SEEDS

Field Seeds

Garden Seeds

Seed Grain

Newer Worth While Grains

Balbo Rye

Ky. No. 1 Winter Hardy Bearded  
Barley

Hardy Beardless Winter Barley

Fulwin and Tennex Hardy Winter  
Oats

Tobacco Seed

The  
G. S. Brent Seed Co.

Incorporated

LEXINGTON KENTUCKY

**CERTIFIED WISCONSIN**

# HYBRID SEED CORN

**14 STRAINS**

We have varieties adapted  
to every section of the  
northern corn belt from  
Illinois to Montana.

*Also Producers  
of the Famous*

# VICLAND SEED OATS

**CARLOTS OR LESS**

WRITE FOR PRICES AND SAMPLE

**TRACY & SON FARMS**

Phone 9671R2

JANESVILLE

WIS.

**HIGH QUALITY**

## Field Seeds



# BIG CHIEF BRAND



*In the Heart  
of the Belt*  
**GROWING  
TIMOTHY, CLOVERS**

**NORTHWESTERN  
SEED CO.  
INC.**

KEOKUK,

IOWA

## SEED LABORATORY

Department of Agriculture, Charleston, West  
Virginia.  
Marvin H. Snyder, Seed Analyst.

### TESTS

No charge will be made for the first ten tests for any farmer, dealer, person or firm. All in excess of 10, the following charges shall be made. Purity, 50c for red, white and mammoth clovers, alsike, wheat, alfalfa, timothy, corn, soybeans, rye, buckwheat, oats, flax, kafir corn, millet, sorghum, field peas and vetch. Purity, \$1.00 for red top, Kentucky and Canada blue grass, fescues, rough-stalk meadowgrass. Purity, \$2.00 for lawn grass mixtures and complex field seed mixtures. All germination tests, 25c each.

### ENFORCEMENT AND REGULATIONS

Department of Agriculture.  
J. B. McLaughlin, Commissioner.  
Certificates of Registration must be obtained from the Commissioner of Agriculture for each kind of agricultural or vegetable seed offered for sale. Application for certificate must be accompanied by fee of \$5.00 for each kind and a certified copy of the complete information required on the analysis tag. Certificates are void on June 30th, next—succeeding the issuance thereof. Registration may be refused or cancelled (1) if the application does not contain the complete information required; (2) if vegetable seeds do not meet the minimum requirements of germination. (See page 102 for germination standards), (3) If agricultural seed or mixtures contain quack grass, Canada thistle, dodder species or perennial sow thistle in excess of five per ounce. (4) If such seeds or mixtures contain more than 3% by weight of weed seeds. (5) If seeds found on the market are improperly labeled or do not meet the

guarantee of the seedsman. (6) If it is found by the Department laboratory that the labels do not show the correct purity germination and noxious weed seed content. (7) Any seed registered in violation of the law or rules and regulations.

**CERTIFIED SEED.** Seed that has been produced and labeled in accordance with the procedures and in compliance with the rules and regulations of an officially recognized seed-certifying agency.

**HYBRID SEED CORN.** The following definitions and eligibility requirements are established for hybrid corn:

1. An **INBRED LINE** is a line of corn that has been developed as a result of not less than five generations of controlled self-pollination.
2. A **SINGLE CROSS** is the first generation of a hybrid between two inbred lines.
3. A **FOUNDATION HYBRID** is a "single cross" which is to be used in the production of hybrids containing more than two inbred lines.
4. A **COMMERCIAL HYBRID** is one to be planted for the production of feed or for any other commercial or farm use except for seed. It may be any one of the following:
  - (a) A **Double Cross**—the first generation of a cross between two "foundation hybrids" (single crosses).
  - (b) A **Three-Way Cross**—the first generation of a cross between a "foundation hybrid" and an "inbred line."
  - (c) A **Single Cross**—when the single cross is to be used for commercial production and not for the production of "double" or "three-way" crosses.
  - (d) A **Top-Cross**—the first generation of a cross between an "inbred line" and an open-pollinated variety.

## WISCONSIN

### Law and Regulations of 1941

#### INFORMATION REQUIRED ON ANALYSIS TAG OR CONTAINER

##### (A) Agricultural Seeds (Unmixed). Every lot.

- (1) Commonly accepted name or kind, variety or type.
- (2) Lot or identification number.
- (3) Percentage of purity.
- (4) Percentage of inert matter.
- (5) Percentage of weed seeds. Prohibits, if in excess of 5%, except ragweed and foxtail which may be present up to 10%, including other weeds, singly or collectively.
- (6) Percentage of other agricultural seed.
- (7) Percentage of:
  - a. Germination, including hard seeds.
  - b. Hard seeds.
  - c. Month and year of test. Test shall have been completed within a twelve month period, exclusive of the month in which it was completed.
- (8) Origin of alfalfa, seed grains and corn.
- (9) Name and address of the person who labeled the seed, or who sells, offers or exposes said seed for sale.
- (10) Name and number per ounce of each kind of secondary noxious weed seeds present singly or collectively in excess of:
  - a. 1 in each 25 grams of redbud, Canada blue grass, Kentucky blue grass and seeds of similar size and weight, or smaller, and mixtures of such seeds.
  - b. 1 in each 50 grams of timothy, orchard grass, reed canary grass, smooth brome grass, alsike, white and red clovers, rape, alfalfa, sweet clover, rye grasses, millets, flax and seeds of similar size and weight and mixtures of such seeds.
  - c. 1 in each 150 grams of sudan, proso, and seeds of similar size and weight, and mixtures of such seeds.
  - d. 1 in each 300 grams of sorghums, buckwheat and seeds of similar size and weight, and mixtures of such seeds.
  - e. 1 in each 500 grams of vetches, cereals, field corn, beans, field and canning peas, cowpeas and seeds of similar size and weight and mixtures of such seeds.

##### (B) Mixed Agricultural Seeds. Every lot.

Same as for unmixed agricultural seed, except that it must be called "Mixed" or a "Mixture," and the information required under items (A) 1, 3 and 7 shall be given for each agricultural seed present in excess of 5%.

##### (C) Vegetable seeds. Every lot.

- (1) Name of kind and variety.
- (2) For seed which germinates less than the

standard last established by the department. (See page 102 for standards.)

- a. Percentage of germination.
  - b. Month and year of test. Test shall have been completed within a twelve month period, exclusive of the month in which it was completed.
  - c. Marked "BELOW STANDARD" in not less than 8-point type.
- (3) Name and address of the person who labeled the seed, or who sells, offers or exposes said seed for sale.

##### Prohibits the sale, offering or exposing for sale of—

- (A) Agricultural seeds containing primary noxious weeds subject to tolerances.
- (B) Agricultural seeds containing secondary noxious weeds, singly or collectively, in excess of:
  - 1 seed in 5 grams of the agricultural seeds listed in A-10-a.
  - 1 seed in 10 grams of the agricultural seeds listed in A-10-b.
  - 1 seed in 25 grams of the agricultural seeds listed in A-10-c.
  - 1 seed in 50 grams of the agricultural seeds listed in A-10-d.
  - 1 seed in 100 grams of the agricultural seeds listed in A-10-e.
- (C) Any agricultural seed containing in excess of 5% of weed seeds, except ragweed (*Ambrosia elatior*) and foxtail (*Chaetochle spp.*), which may be present either singly or collectively at a rate not to exceed 10%, if the total weed seed content does not exceed 10%.
- (D) Any agricultural or vegetable seed unless the test for germination shall have been completed within a 12 month period, exclusive of the month in which the test was completed.
- (E) Any alfalfa seed represented to be Grimm, Cossack or Ladak variety and any field seed corn represented to be hybrid, unless such seed is certified as to variety by a seed certifying agency which is approved by the department as satisfactory for the performance of seed certification and the official tag of such agency is properly attached to each container.

## NOXIOUS WEEDS

### (A) Primary Noxious Weeds.

PROHIBIT SEED CONTAINING ANY SUBJECT TO TOLERANCES.

Field bindweed—*Convolvulus arvensis*; Leafy spurge—*Euphorbia esula*; Canada thistle—*Cirsium arvense*; Quack grass—*Agropyron repens*.

### (B) Secondary Noxious Weeds.

Doddars—*Cuscuta spp.*; Wild mustard—*Brassica arvensis*; Indiana mustard—*Brassica juncea*; Buckhorn—*Plantago lanceolata*; Ox-eye daisy—*Chrysanthemum leucanthemum*; Perennial sow thistle—*Sonchus arvensis*.

# Purcell Seed Co. Inc.

EVANSVILLE, IND.



## SPECIALTIES:

FANCY RED TOP

UNHULLED RED TOP

SOY BEANS

COW PEAS



and a General Field Seed Line



CARLOTS OR LESS

*For 26 Years*

WE HAVE BEEN PRODUCING

FAVORABLY KNOWN

# IDAHO

GROWN

# SEED

PEAS & BEANS

UNDER IRRIGATION IN  
HIGH MOUNTAIN VALLEYS



## FILER SEED COMPANY

BLACKFOOT, IDAHO

### "STOP SALE"

Whenever the department or any of its duly qualified inspectors shall find in any warehouse, store, freight depot, car, truck or place of business, a lot of seed which appears to be offered for sale in violation of the seed laws of this state or regulations promulgated by this department, the inspector shall obtain fair and representative samples of such seed, mark the same for identification, and forward the same to the department for analysis. At the time of obtaining the samples, the inspector shall notify the owner or custodian of such seed in writing that the sale thereof appears to be in violation of law. The lot of seed shall not thereafter be sold or removed from the premises without permission or release by the department. The department shall cause an analysis to be made of such seed and report its findings to the owner or custodian of the seed. The analysis and report shall be made within 15 days of the date of taking the sample.

If it shall appear, from the official laboratory examination of any lot of seed, that it does not meet the requirements of the statute or is not labeled in accordance with the provisions of the seed law of the state or regulations promulgated by the department, the vendor of such seed shall be notified and be given an opportunity for a hearing under the rules and regulations of the department.

### SEED LABORATORY AND TESTS

State Seed Laboratory, Agronomy Building, Madison, Wisconsin.

Henry Lunz, Analyst in charge.

Fees for testing seed—25 cents, except mixtures which shall be 25 cents for each component present in excess of 5%.

### ENFORCEMENT

Department of Agriculture and Markets, Ralph E. Ammon, Director, State Capitol, Madison, Wisconsin.

Seed and Weed Control Section, Henry Lunz.

#### Permit.

No person shall sell, offer or expose for sale in Wisconsin any agricultural or vegetable seeds without securing a permit from the Department of Agriculture, a separate permit is required for each place of business, fee \$1.00.

Permit not required for:

- Persons selling, offering or exposing for sale, seed of their own production, provided it is sold and delivered to the purchaser only on the farm or premises where grown.
- Persons selling seed which has been packaged and distributed by seedsmen having permit.

### REGULATIONS

- The Wisconsin Agricultural Experiment Association is approved as the agency satisfactory for the performance of seed certification in Wisconsin. In other states and in Canada the department approves that agency officially recognized by the department of agriculture of that state or province as satisfactory for the performance of seed certification.
- White Blossom Sweet Clover seed containing 5% or more of mottled seed shall not be labeled as White Blossom Sweet Clover seed but shall be labeled Sweet Clover seed.
- Seed containing hard seed shall be labeled by one of the following methods:
  - Germination ....% including ....% hard seed.
  - Germination including hard seed .....%  
Hard seed .....%
  - Germination .....%  
Hard seed .....%  
Germination and hard seed.....%
- The methods and procedures used in making purity analyses and germination tests shall be those adopted by the U. S. Department of Agriculture in the administration of the Federal Seed Act.

### WYOMING

Law of 1941

### INFORMATION REQUIRED ON ANALYSIS TAG OR CONTAINER.

(A) Agricultural Seeds. Five pounds or more.

- Commonly accepted name of:
  - Kind and variety or,
  - Kind and type.

# QUALITY SEEDS

### Growers

Wisconsin Seed Barley

Certified Seed Corn

Hybrid Seed Corn

### Distributors

Northern Grown Clovers

Hardy Alfalfas

Reed Canary Grass

Canadian Bromus

CAR LOTS OR LESS

WE SOLICIT YOUR INQUIRIES

# L. L. OLDS Seed Company

MADISON

WISCONSIN

### BUYERS — SELLERS

Timothy Clover

Alfalfa Alsike

Seed Corn

Lawn Grasses

Garden Seed

We solicit your offers and inquiries



ARTHUR R. CONE  
Buffalo, New York

# LA GERMINADORA

Hijos de S. V. Bellotti Co.

Largest Growers of

CERTIFIED

Vegetable and  
Field Seed

in the

Argentine Republic

Importers and Exporters  
of All Kinds of Seed

5459 Guanacache  
Buenos Aires,  
Republica Argentina

# Ladino

The GIANT  
WHITE

## CLOVER SEED

Grows from three to four times as fast and as large as ordinary white clover.

Makes an excellent pasture and will handle more stock per acre than any other crop.

All seed certified, sealed and shipped under State supervision.

Write for Samples and Prices

**JOSEPHINE**  
**GROWERS COOP. ASSN.**

Largest Growers of Certified Ladino Seed  
in the United States

GRANTS PASS OREGON

- (2) Lot number or other lot identification.
- (3) Percentage of pure seed.
- (4) Percentage of inert matter.
- (5) Percentage of common weed seeds.
- (6) Percentage of other agricultural seeds.
- (7) Percentage of:
  - a. Germination.
  - b. Hard seeds.
  - c. Month and year of test.
- (8) Origin of seed.
- (9) Full name and address of person, firm or corporation selling, offering, exposing or transporting seeds for sale.

### (B) Mixed Agricultural Seeds. Five pounds or more.

Same as for unmixed agricultural seeds, except that the requirements under items (A) 1, 3 and 7 shall be given for each kind or variety present in excess of 5%.

### (C) Vegetable Seeds. Five pounds or over.

Label as agricultural seeds. (A)

### Prohibits the sale, offering or exposing for sale or distribution of—

Agricultural or vegetable seed containing any of the seeds of the named perennial noxious weed seeds.

### NOXIOUS WEEDS

Cocoa grass—*Cyperus rotundus*; horse nettle—*Solanum carolinense*; Austrian field cress—*Roripa austriaca*; camel thorn—*Alhagi camelorum*; Canada thistle—*Cirsium arvense*; field bindweed—*Convolvulus arvensis*; leafy spurge—*Euphorbia esula*; perennial ragweed—*Ambrosia psilostachya*; perennial sow thistle—*Sonchus arvensis*; quack grass—*Agropyron repens*; Russian knapweed—*Centaurea repens*; St. John's wort—*Hypericum perforatum*; whitetop—*Lepidium repens* and draba; flowering spurge—*Euphorbia corollata*; ox-eye daisy—*Chrysanthemum leucanthemum*; spreading dogbane—*Apocynum androsaemifolium*; yellow cress—*Roripa sylvestris*;

White leaved *Franseria*—*Franseria discolor*; Austrian peaweed—*Swainsona salsula*; lance-leaved sage, *Salvia lanceolata*.

"STOP SALE" any agricultural or vegetable seeds containing noxious weed seeds shall be removed from sale and impounded by the Commissioner of Agriculture, his duly authorized seed inspectors or agents and shall be released only upon the following conditions:

- a. Complete destruction.
- b. Removal outside the boundaries of the state.
- c. Recleaned so that no noxious perennial weed seeds are present.

SCREENINGS of any seeds or grains offered or exposed for sale shall be labeled as such and not sold as seed. They shall be free of noxious, perennial weed seeds. Screenings found to contain noxious weed seeds shall be subject to seizure and destruction by the Commissioner of Agriculture, his duly authorized agents or inspectors.

### LABORATORY AND TESTS

Agricultural Experiment Station, Laramie, Wyoming. Lambert C. Erickson, analyst.

Charges of fifty cents will be made for each test, however ranchers and farmers may secure two tests free each calendar year.

CERTIFICATE OF REGISTRATION shall be obtained by each person, firm, or corporation before selling, offering or exposing for sale or distribution any agricultural or vegetable seed, such certificate expiring December 31st of each year.

Applications for certificate of registration shall be accompanied by:

- a. Name and address of the person, firm, or corporation to which the certificate is to be issued.
- b. The location of the place of business.
- c. Payment of one dollar (\$1.00).

STATE TAG. The authorized labeling tag may be furnished by the State Department of Agriculture at a cost of one cent each.

## FEDERAL SEED ACT—INTERSTATE COMMERCE

August 1939

### INFORMATION REQUIRED ON ANALYSIS TAG OR CONTAINER

#### (A) Agricultural seeds (unmixed)

Every lot, effective February 1940

1. Name of:
  - (a) Kind or
  - (b) Kind and variety or
  - (c) Kind and type.
2. Lot number or other identification.
3. Percentage of pure seed.
4. Percentage of other crop seed.
5. Percentage of inert matter.
6. Percentage of weed seeds.
7. Name of noxious weed seed and rate of occurrence expressed in accordance with and not to exceed the rate allowed by the law and regulations of the State into which the seed is transported.
8. Percentage of germination exclusive of hard seeds.
9. Percentage of hard seeds if present.
10. Calendar month and year germination test was completed. No more than 5 calendar months shall have elapsed between the last day of the month in which the germination test was completed and the date of transportation or delivery for transportation in interstate commerce. (Regulation.)
11. Origin of alfalfa, red clover and field corn except hybrid corn; if unknown, that fact shall be stated. Whenever such seed originates in more than one State, the name of each State and the percentage of seed originating in each State shall be given in the order of its predominance. (Regulation.)
12. Name and address of person transporting the seed in interstate commerce or the name of person to whom the seed is shipped together with the code designation of the shipper.

#### (B) Mixtures

As unmixed except that the information required under items 1, 3, 8, 9, 10 and 11 shall be given for each agricultural seed component present in excess of 5% of the whole.

#### (C) Vegetable seeds—Effective August, 1940

1. Name of kind and variety.
2. Name and address of person who transports the seed in interstate commerce or the per-

son to whom the seed is shipped, together with the code designation of the shipper.

For seed which germinates less than the Standard established by the Secretary of Agriculture:

3. Percentage of germination exclusive of hard seed.
4. Percentage of hard seed, if present.
5. Calendar month and year the test was completed. No more than 5 calendar months shall have elapsed between the last day of the month in which the germination test was completed and the date of transportation or delivery for transportation in interstate commerce. (Regulations.)
6. The words "Below Standard" in 8 point type.

CERTIFIED OR REGISTERED SEED.—The terms "certified seed" and "registered seed" mean seed that has been produced in accordance with the procedures and in compliance with the rules and regulations of an officially recognized seed-certifying agency.

HYBRID SEED CORN.—The term "Hybrid seed corn" means the first-generation seed of a cross produced by controlling the pollination, and by combining two, three, or four inbred lines, or by combining an inbred line or a single cross with an open-pollinated variety. Hybrid designations shall be treated as variety names.

RECORDS.—Each person handling agricultural seed subject to the act shall keep for a period of 3 years a complete record of each lot of agricultural seed handled, except that any seed sample may be discarded 1 year after the entire lot represented by such sample has been disposed of by such person.

SCREENINGS.—Screenings of any seed subject to this Act, unless they are not intended for seeding purposes; and it is stated on the label, if in containers, or on the invoice if in bulk, that they are intended for cleaning, processing, or manufacturing purposes, and not for seeding purposes, shall not be shipped in interstate commerce. The term "screenings" means chaff, sterile florets, immature seed, weed seed, inert matter, and any other materials removed in any way from any seeds in any kind of cleaning or processing and which contains less than 25% of live agricultural or vegetable seeds.

### AGRICULTURAL MARKETING SERVICE ANNOUNCEMENTS:

Aug. 24, 1940—The use of "Affidavit Grimm Alfalfa" phrase is prohibited. The word

"affidavit" is not a part of the name of the kind, type or variety which is required to be stated on the label.

Sept. 23, 1940—Labeling Sweet Clover: If there is any uncertainty as to the proportion of sweet clover that is white blossom, the seed should be labeled as to kind only; namely, sweet clover. It is suggested that shippers of domestic sweet clover seed in interstate commerce will be adequately protected if they assume that yellow blossom sweet clover is present in the seed in a quantity four times the quantity of mottled seeds present. For example, if a sample of sweet clover contains 1.3% of mottled seed, it should be considered to contain 5.2% yellow blossom sweet clover. The seed, therefore, should be labeled as sweet clover or in such a manner as to show that it is a mixture consisting of white blossom and yellow blossom sweet clover and the percentage of each. Yellow blossom sweet clover is considered "other crop seed" when present in seed labeled "white blossom sweet clover."

Aug. 6, 1941—The importation of mixtures, in any combination, of seed of suckling clover (*Trifolium dubium*), white clover (*Trifolium repens*), or cluster clover (*Trifolium glomeratum*), for planting is not detrimental to the use of such seeds.

Sept. 1940—Service tests on seeds in the Washington laboratory of the Agricultural Marketing Service has been discontinued because of the amount of routine testing and other activities required in the administration of the Federal Seed Act. The extent of serv-

ice testing in the Federal-State seed laboratories is to be determined by the officials of the states in which the laboratories are located.

### UNIT WEIGHTS FOR USE IN INTERSTATE COMMERCE

Weights for PURITY TEST	Unit Weight for Noxious Weed Determination
1 gram Agrostis spp., Poa spp., Rhodes grass, Bermuda grass	25 grams
2 grams Timothy, orchard grass, fescues (except meadow fescue) alsike and white clover, carrot, reed canary grass, Dallis grass	50 grams
5 grams Rye grass, meadow fescue, foxtail millet, alfalfa, red clover, sweet clover, lespedeza	50 grams
10 grams Smooth brome, crimson clover, Brassica spp., flax, Agropyron spp.	50 grams
25 grams Proso, Sudan grass	150 grams
50 grams Sorghums, buckwheat, beet	300 grams
100 grams Vetches, cereals (except corn)	500 grams
500 grams Corn, beans, peas, cow-peas, soybeans	500 grams

### DISTRICT OF COLUMBIA

Federal Seed Act—Interstate Commerce 1939

#### INFORMATION REQUIRED ON ANALYSIS TAG.

(A) Agricultural seeds (unmixed). Every lot.

Same requirements as under the Federal Seed Act except for labeling: Noxious weeds. Give name and number per ounce.

(B) Mixtures of Agricultural Seeds. Every lot.

Same requirements as under the Federal Seed Act except for labeling: Noxious weeds. Give name and number per ounce.

(C) Vegetable Seeds. Every lot.

Same requirements as under the Federal Seed Act.

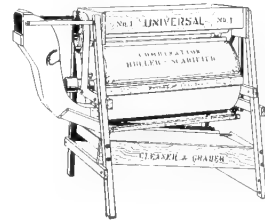
#### NOXIOUS WEEDS.

Bermuda grass—*Cynodon dactylon*  
Bindweed—*Convolvulus arvensis*  
Canada thistle—*Cirsium arvense*  
Quack grass—*Agropyron repens*  
Wild onion—*Allium vineale*

# UNIVERSAL

## COMBINATION

### HULLER - SCARIFIER CLEANER



A machine built especially for Seed Growers, Seed Houses. This machine will Hull, Scarify and Clean, Alfalfa, Sweet

Clover, Crotalaria, Lespedeza, Bermuda Seed, etc. Save your present losses which can now be avoided by owning one of these machines which will pay for itself many times each season.

WRITE FOR DESCRIPTIVE LITERATURE AND PRICES

**American Grain Separator Company**

MINNEAPOLIS

MINNESOTA

## Wholesale SEED CORN GROWERS

Hand Picked . . . Germination 90 to 100% . . . Car Lots or Assorted Cars . . . Early and Late Field Corn. Hybrid Seed Corn.

Also Several Varieties

**SUGAR CORN  
FLINT AND  
POPCORN**

WRITE OR WIRE US

**COUNCIL BLUFFS SEED COMPANY**

COUNCIL BLUFFS IOWA

## Idaho Grown Seeds

### SHIPPERS AND GROWERS

- ALFALFA
- RED CLOVER
- ALSIKE
- SWEET CORN
- FIELD CORN
- ONION SEED
- LETTUCE SEED
- LADINO WHITE CLOVER

**EDGAR L. OAKES & CO.**

CALDWELL IDAHO

## This Year, More Than Ever GROWERS NEED PENETROL

An Activator and Spreader for nicotine sulphate, a sticker and spreader for—

**THE ARSENATES  
THE SULPHATES  
BORDEAUX MIXTURE  
GROUND DERRIS**

## PENETROL

meets the urgent need for greater production by helping what insecticides are available do a better job. Being made wholly of non-critical materials, PENETROL is available without restriction.

## NICOTROL,

a companion product, is a complete, self-spreading nicotine insecticide.

Every up-to-date Seed Catalog should list PENETROL and NICOTROL. Send for leaflets and agency proposition.

**Kay-Fries Chemicals, Inc.**  
180 Madison Ave., New York  
Dept. B

# CYANOLOGAS

REG. U. S. PAT. OFF.  
CALCIUM CYANIDE



## CYANOLOGAS A-DUST DISPLAY CARTON

CYANOLOGAS\* is calcium cyanide, a material which liberates hydrocyanic acid gas (HCN) on exposure to the natural moisture in the air. A fine powder CYANOLOGAS A-DUST is adapted to use with a duster for rodent control and for various other purposes in the field of insect and rodent control. CYANOLOGAS ANT-KILLER is specially packed for treating ant nests in lawns and gardens. CYANOLOGAS G-FUMIGANT is comparable to sea-sand in the size of the particles, flows and sifts freely and is dustless in application; it is used for fumigation.

**FARMERS, RANGERS, POULTRYMEN** require CYANOLOGAS to kill destructive rodents such as RATS, MICE, WOODCHUCKS (GROUND-HOGS), MOLES, GROUND SQUIRRELS, GOPHERS and PRAIRIE DOGS.

**GARDENERS, HOME OWNERS** use CYANOLOGAS ANT-KILLER to rid lawns and gardens of ants.

**GREENHOUSES** use CYANOLOGAS G-FUMIGANT throughout the year for the control of many kinds of insect pests.

**FLOUR MILLS and GRAIN ELEVATORS** fumigate to control insects to produce clean flour and to save grain from damage.

**WAREHOUSES**, including seedsmen, fumigate with CYANOLOGAS regularly to control both insect and rodent pests.

**PEST CONTROL OPERATORS** are large purchasers of CYANOLOGAS A-DUST for use in their rat control activities.

**HEALTH OFFICERS** both endorse and use CYANOLOGAS for rat control in the U. S. A. and throughout the world.

**FOR FURTHER INFORMATION WRITE** AMERICAN CYANAMID & CHEMICAL CORPORATION A Unit of American Cyanamid Company Insecticide Department

30 Rockefeller Plaza, New York, N. Y.  
Kansas City, Mo. Azusa, Cal.

\*Reg. U. S. Patent Office

# CYANOLOGAS

REG. U. S. PAT. OFF.  
CALCIUM CYANIDE

# Corn Data

Charts, Tables and Miscellaneous Material to Growers, Processors and Retailers of Hybrid Corn. Material Supplied by Funk Bros. Seed Co.

## Labor and Power Requirements

(Requirements in Hours Per Acre)

Operation & Machine Used	Source of Power	Labor		
		Man	Horse	Tractor
Crop Residue Disposal				
Harrow, rake and burn rot. hoe	Row-crop tractor	.47		.38
Cut with 14 ft. disc harrow	Row-crop tractor	.23		.22
Primary Soil Preparation:				
2-16 in. plow 6" disc	20 H.P. tractor	.88		.84
rot. hoe	6 horses	1.83	10.57	
2-14 in. plow	20 H.P. tractor	1.02		1.00
6 ft. cover crop disc	20 H.P. tractor	.50		.50
11.5 ft. field cultivator	20 H.P. tractor			
8 ft. disc harrow and 10 ft. spike harrow	20 H.P. tractor	.86		.84
Secondary Soil Preparation:				
8' tandem disc harrow	20 H.P. tractor	.34		.33
10' spike-tooth harrow				
14' single disc harrow	Row-crop tractor	.22		.21
14' single disc harrow	4 horses	1.15	4.42	
30' spike-tooth harrow	Row-crop tractor	.08		.08
20' spike-tooth harrow	4 horses	.25	.98	
Planting:				
4-row planter	20 H.P. tractor	.25		.24
2-row planter	Row-crop tractor	.55		.50
2-row planter	2 horses	.79	1.55	
2-row lister	6 horses	.95	5.80	
2-row lister	15 H.P. tractor	.55		.55
Cultivation:				
21' spring-tooth weeder	Row-crop tractor	.14		.12
21' rotary hoe	Row-crop tractor	.16		.13
4-row cultivator	20 H.P. tractor	.25		.24
2-row cultivator	15 H.P. tractor	.44		.42
2-row cultivator	4 horses	.59	2.35	
1-row cultivator	2 horses	1.20	2.40	
Harvesting:				
Hand husking	2 horses	5.50	11.	
1-row picker	15 H.P. tractor	1.75		1.50
2-row picker	20 H.P. tractor	1.33		1.00
Cutting with binder	3 horses	1.5	4.5	
Cutting with field harvester	20 H.P. tractor	1.		1.
Hauling to silo	2 horses	5.	10.	
Filling silo	20 H.P. tractor	5.		1.

Hours are for one time over one acre with machine used. Harvest figures are based on average yields of 8 tons silage or 50 bushels ear corn per acre.

## How to Determine Acreage of Corn in the Field

Determine the number of acres in a field or trial plot as follows:

If the dimensions are known or measured, multiply the length in rods times the width in rods to get the area in square rods. Divide this area in square rods by 160 (number sq. rods in an acre). The result is the number of acres or fraction of acres.

If the dimensions are not known, multiply the number of rows times the average width between rows (in feet) times the length of the plot (in feet) to get the area in square feet. Divide this area in square feet by 43,560 (number sq. ft. in an acre). The result is the number of acres or fraction of acres.

To harvest or plant an approximate acre of corn, cover the number 80 rod rows or their equivalent shown below:

Row Spacing	No. of Rows	Row Spacing	No. of Rows
3 ft.	11 1/4	3 ft., 4 in.	10
3 ft., 2 in.	10 1/2	3 ft., 6 in.	9 2/3

To lay out one acre of land four times as long as the width the length is 417 feet, 4 inches, and the width is 104 feet, 4 inches. Depth of one acre plots for the following frontage widths is:

Frontage	Depth	Frontage	Depth
20 feet	2187 feet	40 feet	1089 feet
25 feet	1742 1/2 feet	50 feet	876 1/2 feet
33 feet	1320 feet	100 feet	435 1/2 feet

## Analysis and Feeding Value of Corn

Feedstuff	Percentage Composition by Weight							
	Moisture	Ash	Crude Protein	Ether Extract (fat)	Nitrogen Free Extract (carbohydrate)	Crude Fiber	Calcium	Phosphorus
Corn, Shelled	12.9	1.3	9.3	4.3	70.3	1.9	.01	.26
Corn (ear) Chop	10.7	2.0	8.2	3.4	66.5	9.2		
Corn Fodder (green, immature)	79.0	1.2	1.7	.5	12.0	5.6		
Corn Fodder (green, mature)	73.4	1.5	2.0	.9	15.5	6.7		
Corn Fodder (dried)	11.8	5.8	7.4	2.4	49.6	23.0		
Corn Stover (dried)	10.7	6.1	5.7	1.5	45.7	30.3	.45	.10
Corn Silage (immature)	79.1	1.4	1.7	.8	11.0	6.0		
Corn Silage (mature)	70.9	1.4	2.4	.9	17.5	6.9		
Corn Stover Silage	80.7	1.8	1.8	.6	9.5	5.6		

Digestible Constituents, Percent by Weight

	Digestible Protein								Total Digestible Nutrients			
	Cattle				Sheep				Cattle		Sheep	
	Cattle	Sheep	Hogs	Poultry	Cattle	Sheep	Hogs	Poultry	Cattle	Sheep	Hogs	Poultry
Corn, Shelled	5.2	7.5	7.2	7.9	78.3	73.9	80.0	80.0				
Corn (ear) Chop	4.8	5.7	6.2		68.6	75.6	70.2					
Corn Fodder (dried)	3.4				54.4							
Corn Stover (dried)	2.5	2.1			53.4	49.8						
Corn Silage	1.1	1.1			17.5	17.4						
Corn Stover (silage)	.9	.9			10.4	10.1						

## U. S. Corn Production

Acresage and Percent Hybrid

STATE	Bushels Produced for Grain 1941	Acresage Planted 1941	Yield Per Acre 1941	Percent Acreage Planted in Hybrid 1941
Iowa	442,527,000	9,114,000	51.	95
Illinois	387,292,000	7,645,000	52.5	87
Indiana	170,820,000	3,934,000	45.	80
Minnesota	158,240,000	4,410,000	46.	64
Nebraska	152,851,000	6,822,000	24.5	32
Ohio	152,559,000	3,252,000	49.5	74
Missouri	110,418,000	3,904,000	29.5	45
Texas	71,655,000	5,079,000	15.	2
Kentucky	71,484,000	2,610,000	28.	12
Tennessee	68,034,000	2,730,000	25.5	3
Kansas	53,204,000	2,624,000	23.5	13
No. Carolina	50,930,000	2,368,000	22.	2
Mississippi	50,541,000	3,093,000	17.	1
Alabama	50,298,000	3,305,000	15.5	1
Wisconsin	47,027,000	2,250,000	41.	64
Pennsylvania	42,538,000	1,282,000	41.5	20
Georgia	40,824,000	4,000,000	10.5	1
Arkansas	39,995,000	2,148,000	19.	6
So. Dakota	39,460,000	3,018,000	20.	19
Michigan	39,105,000	1,509,000	33.	42
Virginia	31,070,000	1,267,000	26.	5
Oklahoma	30,012,000	1,850,000	17.5	2
Louisiana	21,765,000	1,548,000	15.	4
So. Carolina	21,694,000	1,653,000	13.5	1
Maryland	14,144,000	446,000	34.	25
No. Dakota	12,875,000	1,123,000	25.	6
Colorado	12,050,000	1,008,000	16.9	5
West Virginia	11,811,000	397,000	31.	12
New York	6,480,000	676,000	40.	16
Florida	5,805,000	732,000	9.	1
New Jersey	5,248,000	181,000	41.	31
Delaware	3,870,000	133,000	30.	15
New Mexico	3,080,000	215,000	17.5	6
Idaho	1,840,000	53,000	46.	16
California	1,470,000	79,000	35.	2
Montana	1,418,000	182,000	22.5	2
Wyoming	1,122,000	160,000	16.5	2
Oregon	1,104,000	59,000	34.5	21
Washington	616,000	35,000	44.	24
Arizona	360,000	41,000	12.	2
Connecticut	336,000	47,000	42.	40
Massachusetts	287,000	41,000	41.	12
Utah	240,000	28,000	30.	8
Vermont	190,000	69,000	38.	18
Maine	164,000	17,000	41.	1
N. Hampshire	126,000	15,000	42.	10
Nevada	56,000	4,000	28.	2
Rhode Island	39,000	8,000	39.	20

## How to Compute Capacity of Cribs and Bins

**Square or Rectangular Cribs**—Multiply the length by the width by the depth of grain (all in feet). Multiply this sum by 2 and divide by 5. The result is the number bushels ear corn at 70 lbs. per bu. Correct for shelling percentage and moisture as directed on preceding pages.

**Round Cribs**—Multiply the diameter (distance across center) by the diameter. Multiply this sum by the depth (all in feet). Multiply the sum by .315. The result is bushels at 70 lbs. per bu. Correct for moisture and shelling percentages.

**Piles of Corn**—When heaped in form of a cone: Square the depth and square the inches of slant height (i.e. multiply each by itself). Subtract the lesser of these amounts from the greater. Multiply the difference obtained by the depth in inches. Multiply this product by .0024. The result is the bushels shelled corn at 70 lbs. bu. basis. Correct for moisture and shelling percentage. When corn is heaped against a straight wall divide this result by two.

The above formulas give bushels of 70 lb. basis ear corn. For shelled corn capacities in bushels double number bushels ear corn and correct for moisture content.

## How to Compute Yields of Corn in the Field

### Hill Planted Corn

Pick and weigh all corn from 25 consecutive hills in four representative locations. Multiply the weight of corn from these 100 hills by the correct factor in table below. Result is yield in bushels per acre, on 70-lb. per bu. basis, uncorrected for moisture and shelling percentage (see following pages).

Hill and Row Spacing	3'	3'2"	3'4"	3'6"
3 ft.	.69	.65	.62	.59
3 ft. 2 in.	.65	.62	.59	.56
3 ft. 4 in.	.62	.59	.56	.53
3 ft. 6 in.	.59	.56	.53	.51

### Drilled Corn

Take the weight of corn husked from the distance shown in the table below. Multiply by 100 and divide by 70. The result is yield in bushels per acre, 70 lb. basis (uncorrected for moisture, shelling %).

Row Spacing	Distance to Pick
3 ft., 6 in.	124 ft.
3 ft., 4 in.	131 ft.
3 ft., 2 in.	137 ft.
3 ft.	142 ft.

## Seed Planting Requirements

Table shows acres planted per bushel seed at 3 kernels per hill rate. At 2 kernels amount is  $\frac{2}{3}$  quantity shown. At 2 and 3 kernels amount is  $\frac{5}{6}$  quantity shown. At 4 kernels add  $\frac{1}{3}$  to quantity shown.

Check planted Row & Hill Spacing	Large Flat		Reg. Flat		Med. Small Flat		Large Round		Reg. Round		Med. Small Round	
	3'x3'	5.0	5.6	6.5	4.5	5.3	5.8					
3'x3'2"	5.2	5.8	6.7	4.8	5.5	6.0						
3'x3'4"	5.4	6.1	7.0	5.0	5.7	6.3						
3'x3'6"	5.7	6.3	7.3	5.1	5.8	6.5						
3'2"x3'2"	5.9	6.5	7.5	5.3	6.0	6.7						
3'2"x3'4"	6.1	6.7	7.8	5.5	6.2	6.5						
3'2"x3'6"	6.3	6.9	8.0	5.7	6.4	7.1						
3'4"x3'4"	6.5	7.1	8.3	5.9	6.6	7.4						
3'4"x3'6"	6.7	7.4	8.6	6.0	6.7	7.6						
3'6"x3'6"	6.9	7.6	8.9	6.2	6.9	7.8						

**Drilled** Based on 12-inch spacing of kernels in hill. For 6-inch spacing allow  $\frac{1}{2}$  of acres shown; for 8-inch  $\frac{2}{3}$ , for 18-inch spacing  $1\frac{1}{2}$ , etc.

	3'	5.0	5.6	6.5	4.5	5.3	5.8
3'2"	5.5	6.2	7.3	4.9	5.7	6.3	
3'4"	6.0	6.8	8.0	5.3	6.1	6.9	
3'6"	6.5	7.3	8.8	5.8	6.5	7.5	

Note: Planting rates based on average kernel sizes in each grade. Seed in the same grade, while uniform, may vary up to 10% in planting coverage according to screen sizes which are dependent upon size of kernels in any crop year.

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- Dunn, Arthur G.  
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- Gauvreau, Paul F.  
Quebec City, Canada
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- Johnston, W. B.  
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- Kittleman & Co., Chas. W.  
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- Loewith, Inc., Julius  
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- Irwin, Roman J.  
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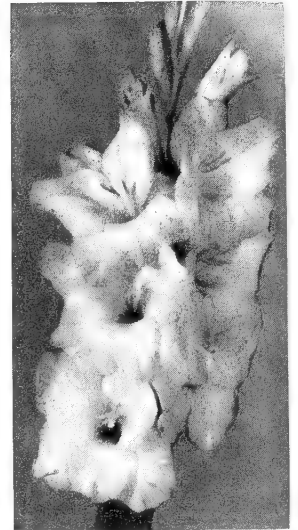
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Jackson & Perkins Co.  
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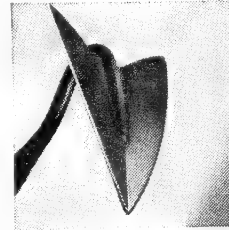
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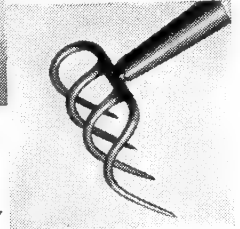
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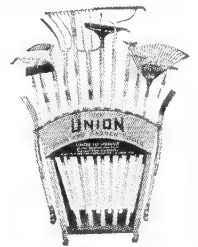
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Winnipeg, Man., Canada  
Minnesota Wild Rice Co.  
La Porte, Minn.  
Terrell's Aquatic Farms  
Oshkosh, Wis.

McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Planters Mfg. Co., Inc. (Field Tomato)  
Portsmouth, Va.  
Worcester Wire Novelty Co., Inc.  
Baltimore, Md.  
Vaughan's Seed Store  
Chicago, Ill.

#### BASKETS—HANGING

American Florist Supply Co.  
Chicago, Ill.  
Ionia Pottery Co.  
Ionia, Mich.  
Metal Products Co.  
Fredericksburg, Va.  
Michigan Wire Goods Co.  
Niles, Mich.  
Vaughan's Seed Store  
Chicago, Ill.  
Western Stoneware Co.  
Monmouth, Ill.

#### BEE BOOKS

Dadant & Sons  
Hamilton, Ill.  
Root Co., The A. I.  
Medina, Ohio  
Schell, Inc., Walter S.  
Harrisburg, Pa.

#### BEE SUPPLIES

American Cyanamid & Chemical Corp.  
New York, N. Y.  
Dadant & Sons  
Hamilton, Ill.  
Falconer Mfg. Co., W. T.  
Falconer, N. Y.  
Hamilton Seed & Coal Co.  
Cedar Rapids, Iowa  
Kelley & Co., Walter T.  
Paducah, Ky.  
Leahy Mfg. Co.  
Higginsville, Mo.  
Lewis Co., G. B.  
Watertown, Wis.  
Root Co., The A. I.  
Medina, Ohio  
Schell, Inc., Walter S.  
Harrisburg, Pa.

#### BEEES

Root Co., The A. I.  
Medina, Ohio  
Schell, Inc., Walter S.  
Harrisburg, Pa.

#### BIRD BOOKS

Flower's Tropical Bird Co.  
Van Nuys, Calif.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Schoemann & Mayer, Inc.  
New York, N. Y.  
Spratt's Patent, Ltd.  
Newark, N. J.

#### BIRD CAGES AND STANDS

Crown Products Co.  
Indianapolis, Ind.  
Flower's Tropical Bird Co.  
Van Nuys, Calif.  
Grand River Pet Supply Co.  
Detroit, Mich.  
Hendryx Co., Andrew B.  
New Haven, Conn.  
National Pet Shops  
St. Louis, Mo.  
Schell, Inc., Walter S.  
Harrisburg, Pa.  
Schoemann & Mayer, Inc.  
New York, N. Y.

#### BIRD FOOD

Audubon Workshop  
Glencoe, Ill.  
Battle Creek Dog Food Co.  
Battle Creek, Mich.

## Resale Merchandise

#### ANIMAL DIPS

Bonide Chem. Co., Inc.  
Utica, N. Y.  
California Spray Chemical Corp.  
Elizabeth, N. J.  
Carco Spray Co., Inc.  
Tacoma, Wash.  
Du Pont de Nemours & Co., Inc., E. I.  
Grasselli Chemicals Dept.  
Wilmington, Del.  
General Chemical Co.  
New York, N. Y.  
Good, Inc., James  
Philadelphia, Pa.  
Goulard & Olena, Inc.  
New York, N. Y.  
Lee Co., Geo. H.  
Omaha, Nebr.  
LeGear Medicine Co., Dr. L. D.  
St. Louis, Mo.  
Merck & Co., Inc.  
Rahway, N. J.  
Nicotine Mfg. Co.  
St. Louis, Mo.  
Tobacco By-Products & Chem. Corp.  
Louisville, Ky.

#### ANTHRACENE OIL

C-A Wood Preserver Co.  
St. Louis, Mo.

#### AQUARIUMS AND SUPPLIES

Grassyfork Fisheries, Inc.  
Martinsville, Ind.  
Jewel Aquarium Co.  
Chicago, Ill.  
Lakeview Ponds  
Mt. Airy, Cincinnati, Ohio  
Morrison, J. Lester (Baby Turtles, alligators, etc.)  
Florence, Ala.  
National Pet Shops  
St. Louis, Mo.  
Schoemann & Mayer, Inc.  
New York, N. Y.  
Tamms Silica Co. (Pebbles)  
Chicago, Ill.  
Tricker, Inc., Wm.  
Independence, Ohio  
Universal Crushed Shell Co.  
Muscatine, Iowa

#### AUGERS—TREE AND EARTH

Bartlett Mfg. Co.  
Detroit, Mich.  
Leonard & Son, A. M.  
Piqua, Ohio  
Vaughan's Seed Store  
Chicago, Ill.

#### BAIT—CUT WORM

Goulard & Olena, Inc.  
New York, N. Y.

#### BAIT—INSECT—WEEVIL

Agricultural Laboratories, Inc.  
Columbus, Ohio

#### BAMBOO STAKES

American Florist Supply Co.  
Chicago, Ill.  
Holmes Seed Co., The  
Canton, Ohio  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
McHutchison & Co.  
New York, N. Y.  
Schell, Inc., Walter S.  
Harrisburg, Pa.  
Vaughan's Seed Store  
Chicago, Ill.

#### BANDS—LEG

Brower Mfg. Co.  
Quincy, Ill.  
Cyclone Mfg. Co.  
Urbana, Ind.  
Garden Industries  
St. Louis, Mo.  
Illinois Supply Co.  
Aurora, Ill.  
Poultry Aid Products Co. (Delousing)  
Grand Rapids, Mich.

#### BANDS—PLANT

American Florist Supply Co.  
Chicago, Ill.  
Bird & Son, Inc.  
East Walpole, Mass.  
German Seed & Plant Co.  
Los Angeles, Calif.

#### BARROWS—GARDEN

American Florist Supply Co.  
Chicago, Ill.  
Leonard & Son, A. M.  
Piqua, Ohio  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Schell Inc., Walter S.  
Harrisburg, Pa.  
Thompson & Sons, O. E.  
Ypsilanti, Mich.  
Vaughan's Seed Store  
Chicago, Ill.

#### BASKETS

American Florist Supply Co.  
Chicago, Ill.  
Franklin Equipment Co. (Steel)  
Monticello, Iowa

Bishop, Welles L.  
Meriden, Conn.  
Burnett's, Inc.  
Newark, N. J.  
Dickinson Co., The Albert  
Chicago, Ill.  
Duryea Seed Co., Inc.  
New York, N. Y.  
Ferry-Morse Seed Co.  
Detroit, Mich., San Francisco, Calif  
Garden Products Co.  
St. Louis, Mo.

Grand River Pet Supply Co.  
Detroit, Mich.

Hinton & Co., Inc.  
New York, N. Y.

Justrite Co., The  
Milwaukee, Wis.

Loewith, Inc., Julius  
New York, N. Y.

Mangelsdorf & Bro., Inc., Ed. F.  
St. Louis, Mo.

McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio

National Pet Shops  
St. Louis, Mo.

Petpak Products Co.  
Milwaukee, Wis.

Philadelphia Bird Food Co.  
Philadelphia, Pa.

Philadelphia Seed Co.  
Philadelphia, Pa.

Prunty Seed & Grain Co.  
St. Louis, Mo.

Scarlett & Co., Wm. G.  
Baltimore, Md.

Schell, Inc., Walter S.  
Harrisburg, Pa.

Spratt's Patent, Ltd.  
Newark, N. J.

Von Damm, F. H. (Bird Food)  
Brooklyn, N. Y.

#### BIRD RAPE

Dickinson Seed Co., The Albert  
Chicago, Ill.

Duryea Seed Co., Inc.  
New York, N. Y.

Loewith, Inc., Julius  
New York, N. Y.

McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio

Philadelphia Seed Co.  
Philadelphia, Pa.

Scarlett & Co., William G.  
Baltimore, Md.

Schell, Inc., Walter S.  
Harrisburg, Pa.

Seaboard Seed Co.  
Philadelphia, Pa.

#### BIRDS

Bird Mart  
Fort Lauderdale, Fla.

Flower's Tropical Bird Co.  
Van Nuys, Calif.

Geisler Bird Co., Max  
New York, N. Y.

National Pet Shops  
St. Louis, Mo.

Robison, Ansel W.  
San Francisco, Calif.

Schell, Inc., Walter S.  
Harrisburg, Pa.

#### BIRD SEED CARTONS

Disbrow Mfg. Co., Inc.  
Newark, N. J.

Schmidt Lithograph Co.  
San Francisco, Calif.

#### BIRD SUPPLIES

Battle Creek Dog Food Co.  
Battle Creek, Mich.

Hamilton Seed & Coal Co.  
Cedar Rapids, Iowa

Holmes Seed Co.  
Canton, Ohio

Ken-L-Products Division  
The Quaker Oats Company  
Rockford, Ill.

McCullough Seed Co., The J. Chas.

Cincinnati, Ohio  
Scarlett & Co., William G.

Baltimore, Md.  
Schell, Inc., Walter S.

Harrisburg, Pa.  
Schoemann & Mayer, Inc.

New York, N. Y.  
Spratt's Patent, Ltd.

Newark, N. J.

#### BLEACHERS—CELERY

Ball-Biddle Co.  
Riverton, N. J.

Disbrow Mfg. Co., Inc.  
Newark, N. J.

Miller, Tompkins & Co.  
East Rutherford, N. J.

Schell, Inc., Walter S.  
Harrisburg, Pa.

#### BOOKS—FARMING AND GARDENING

American Florist Supply Co.  
Chicago, Ill.

DeLaMare Co., Inc., A. T.  
New York, N. Y.

Doubleday, Doran & Co., Inc.  
New York, N. Y.

Hamilton Seed & Coal Co.  
Cedar Rapids, Iowa

Lippincott Co., J. B.  
Philadelphia, Pa.

Little, Brown & Co.  
Boston, Mass.

McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio

Macmillan Co., The  
New York, N. Y.

Page Seed Co., The  
Greene, N. Y.

Orange-Judd Pub. Co.  
New York, N. Y.

Union Fork & Hoe Co., The  
Columbus, Ohio

#### BOOKS—ON TREES

American Florist Supply Co.  
Chicago, Ill.

Bartlett Mfg. Co.  
Detroit, Mich.

Doubleday, Doran & Co., Inc.  
New York, N. Y.

Herbst Bros.  
New York, N. Y.

Leonard & Son, A. M.  
Piqua, Ohio

McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio

Macmillan Co., The  
New York, N. Y.

#### BOWLS—BULB

American Bulb Co.  
Chicago, Ill.

American Florist Supply Co.  
Chicago, Ill.

Block, Inc., J. & I.  
New York, N. Y.

Brush Pottery Co.  
Zanesville, Ohio

Created Ideas, Inc.  
Cincinnati, Ohio

McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio

Metal Products Co.  
Fredericksburg, Va.

Morton Pottery Co.  
Morton, Ill.

Pittsburg Pottery Co.  
Pittsburg, Kansas

Vaughan's Seed Store  
Chicago, Ill.

Western Stoneware Co.  
Monmouth, Ill.

Zane Pottery Co.  
So. Zanesville, Ohio

## BALL-BIDDLE FARM & GARDEN SPECIALTIES

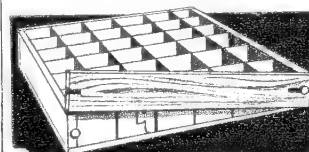
PROFITABLE ITEMS FOR SEED MERCHANTS

**B-B Craft Board Pot**—Square construction allows ample room for root growth, eliminates waste air space when in flat and insures uniform moisture. Eliminates damage from cut worms and leaves roots undisturbed as bottom unlocks.

**B-B Improved Celery Bleacher**—Exclusive design decreases labor and permits the circulation of air, thereby eliminating rot and mildew. Can be used repeatedly. Full details and distributor's prices on request.



B-B Celery Bleacher Patented



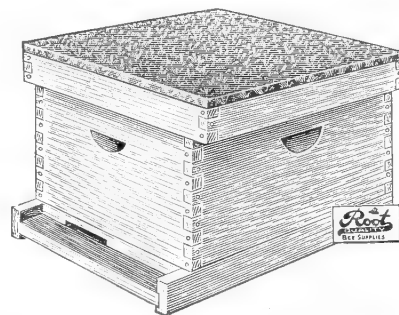
B-B Garden Flat Patented

**B-B Garden Flat**—A home grower's necessity. Made from choice lumber with removable front. Pots can be removed easily without disturbing roots. Write for distributor's prices.

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RIVERTON

NEW JERSEY



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**Root**  
QUALITY

BEE SUPPLIES

Will be made in just as large quantities as possible in line with the all-out war effort.

Write Now

THE A. I. ROOT COMPANY  
MEDINA, OHIO

Established 1869

"Best by the Bee Test"

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Chicago, Ill.  
American Florist Supply Co.  
Chicago, Ill.  
Bird & Son, Inc.  
East Walpole, Mass.  
Homecraft Specialty Mfg. Co.  
Mattoon, Ill.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Unadilla Silo Co., Inc.  
Unadilla, N. Y.  
Woodcraft Co.  
Dalton, N. Y.  
Yoho & Hooker (Cypress)  
Youngstown, Ohio

**BOXES—PARCEL POST**

Campbell Box & Tag Co.  
South Bend, Ind.  
Container Corp. of America  
Chicago, Ill.  
Disbrow Mfg. Co., Inc.  
Newark, N. J.  
Hinde & Dauch Paper Co.  
Sandusky, Ohio

**BOXES—TRANSPLANTING**

Ball-Biddle Co.  
Riverton, N. J.  
Bird & Son, Inc.  
East Walpole, Mass.

**BRAIDS—TYING**

Fricke Co., J. E.  
Philadelphia, Pa.

**BROODERS**

Brower Mfg. Co.  
Quincy, Ill.  
Buckeye Incubator Co.  
Springfield, Ohio  
Cyclone Mfg. Co.  
Urbana, Ind.  
Hoeft & Co.  
North Chicago, Ill.  
H. D. Hudson Mfg. Co.  
Chicago, Ill.  
Makomb Steel Products Co.  
Macomb, Ill.  
National Ideal Co.  
Toledo, Ohio  
Oakes Mfg. Co.  
Tipton, Ind.  
Poorman, John G. (Feather)  
Tinley Park, Ill.  
Royal Mfg. Co.  
Bowling Green, Ohio

**BULB EDGE GLASS**

Heller & Co.  
Montpelier, Ohio

**BURNERS—WEED**

Aeroil Burner Co., Inc.  
West New York, N. J.  
American Florist Supply Co.  
Chicago, Ill.  
Hauck Mfg. Co.  
Brooklyn, N. Y.

**CANS—WATERING**

American Florist Supply Co.  
Chicago, Ill.  
Leonard & Son, A. M.  
Piqua, Ohio  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
National Enameling & Stamping Co.  
Milwaukee, Wis.  
Vaughan's Seed Store  
Chicago, Ill.

**CARBOLINEUM—(ANTHRACENE OIL)**

C-A Wood Preserver Co.  
St. Louis, Mo.

**CARTS—GARDEN OR LAWN**

Budwig Mfg. Co.  
Burbank, Calif.  
Leonard & Son, A. M.  
Piqua, Ohio  
Masters Planter Co.  
Benton Harbor, Mich.  
Schell, Inc., Walter S.  
Harrisburg, Pa.  
Thompson & Sons, O. E.  
Ypsilanti, Mich.  
Vaughan's Seed Store  
Chicago, Ill.

**CAT FOOD AND SUPPLIES**

Battle Creek Dog Food Co.  
Battle Creek, Mich.  
Burnett's, Inc.  
Newark, N. J.  
Gabriel's Laboratories  
Tell City, Ind.  
Ken-L-Products Division  
The Quaker Oats Company  
Rockford, Ill.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Perfection Foods Co.  
Battle Creek, Mich.  
Reynolds Mfg. Co. (Catnip Mice)  
Fredericktown, Ohio  
Schell, Inc., Walter S.  
Harrisburg, Pa.  
Spratt's Patent, Ltd.  
Newark, N. J.  
Zenith Novelty Co.  
New York, N. Y.

**CHARCOAL**

American Florist Supply Co.  
Chicago, Ill.  
Cliffs Dow Chem. Co.  
Marquette, Mich.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Ouren Seed Co.  
Council Bluffs, Iowa  
Scarlett & Co., Wm. G.  
Baltimore, Md.  
Schell, Inc., Walter S.  
Harrisburg, Pa.

**CHICK BOXES**

Anderson Box Co.  
Indianapolis, Ind.

**CHICKS**

Atz's Mammoth Hatcheries  
Huntingburg, Ind.  
Colonial Poultry Farms  
Pleasant Hill, Mo.  
Graf Hatcheries, E. J.  
Evansville, Ind.  
Hayes Hatcheries, S. W.  
Centralia, Ill.  
Illinois Hatchery  
Metropolis, Ill.  
Martin's Ramsey Hatchery  
Ramsey, Ind.  
Mildred Bros. Hatcheries  
Warrenton, Mo.  
Miller Hatcheries, Inc.  
Lancaster, Mo.  
Miller Hatchery  
Bloomington, Ill.  
Moweaqua Seed Co. Hatchery  
Moweaqua, Ill.  
McFeeter's Hatchery  
Defiance, Ohio  
Ridgway Duck Hatchery, The  
(Also Ducklings, Goslings and  
Poults)  
La Rue, Ohio  
Russell Hatchery  
Corvallis, Ore.  
Sunshine Hatcheries  
Coydon, Ind.

Wayne Duck Farm  
Wayne, Ohio

**CHRISTMAS GREENS**

Chesmore Seed Co.  
St. Joseph, Mo.  
Conwell, Inc., H. Ernest  
Milton, Del.  
Holmes Seed Co.  
Canton, Ohio  
Jones, The Holly Wreath Man  
Milton, Del.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Michael-Leonard Co.  
Sioux City, Iowa  
Neilson, Knud  
Evergreen, Ala.  
Platten's Christmas Trees, Inc.  
Green Bay, Wis.  
Quality Seed & Grain Co. (Mistletoe)  
Chickasha, Okla.  
Schell, Inc., Walter S.  
Harrisburg, Pa.  
South West Desert Nurseries  
(Mistletoe)  
Las Cruces, N. Mex.  
Vaughan's Seed Store  
Chicago, Ill.

**CHRISTMAS TREES**

Hamilton Seed & Coal Co.  
Cedar Rapids, Iowa  
Holmes Seed Co., The  
Canton, Ohio  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Michael-Leonard Co.  
Sioux City, Iowa  
Schell, Inc., Walter S.  
Harrisburg, Pa.

**COD LIVER OIL**

Appel Commission Co., C. H.  
St. Louis, Mo.  
Atkins & Durbrow, Inc.  
New York, N. Y.  
Perfection Foods Co.  
Battle Creek, Mich.  
Premier Peat Moss Corp.  
New York, N. Y.  
Squibb & Sons, E. R.  
New York, N. Y.  
Wood & Sons, T. W.  
Richmond, Va.

**COLCHICINE ALKALOID**

Mallinckrodt Chemical Works  
St. Louis, Mo.  
Merck & Co., Inc.  
Rahway, N. J.  
Vitamin Institute of Calif.  
Hollywood, Calif.

**COPPER OXIDE—RED**

American Florist Supply Co.  
Chicago, Ill.  
Ansbacher-Siegle Corp.  
Brooklyn, N. Y.  
Holmes Seed Co.  
Canton, Ohio  
Mallinckrodt Chemical Works  
St. Louis, Mo.  
Merck & Co., Inc.  
Rahway, N. J.  
Protex Industries, Inc.  
New York, N. Y.  
Rohm & Haas Co.  
Philadelphia, Pa.  
Shur-Gro. Co.  
Pittsburgh, Pa.  
Vaughan's Seed Store  
Chicago, Ill.  
Woodruff & Sons, Inc., F. H.  
Milford, Conn.

**COUPLING—HOSE**

American Florist Supply Co.  
Chicago, Ill.



Leonard & Son, A. M.  
Piqua, Ohio  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio

#### CRAB GRASS KILLER

Garden Products Co.  
St. Louis, Mo.  
American Liquid Fertilizer Co.  
Marietta, Ohio

#### CREOSOTE OIL

C-A Wood Preserver Co.  
St. Louis, Mo.  
Merck & Co., Inc.  
Rahway, N. J.

#### CULTIVATORS—GARDEN

Allen & Co., Inc., S. L.  
Philadelphia, Pa.  
American Florist Supply Co.  
Chicago, Ill.  
American Fork & Hoe Co.  
Cleveland, Ohio  
Case Co., J. I.  
Racine, Wis.  
Gardex, Inc.  
Michigan City, Ind.  
Geyer Mfg. Co.  
Rock Falls, Ill.  
Gilson Co., J. E.  
Port Washington, Wis.  
Gravely Motor Plow & Cultivator Co.  
Dunbar, W. Va.  
Hamilton Seed & Coal Co.  
Cedar Rapids, Iowa  
Hudson Mfg. Co., H. D.  
Chicago, Ill.  
Leonard & Son, A. M.  
Piqua, Ohio  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Norcross & Sons, C. S.  
Bushnell, Ill.  
Pioneer Mfg. Co.  
West Allis, Milwaukee, Wis.  
Schell, Inc., Walter S.  
Harrisburg, Pa.  
Union Fork & Hoe Co., The  
Columbus, Ohio  
Utilitor Co., The  
Miamisburg, Ohio  
Vaughan's Seed Store  
Chicago, Ill.

#### CUTTERS—SOD

Lane & Son, M. R.  
Ardmore, Pa.  
Leonard & Son, A. M.  
Piqua, Ohio  
Union Fork & Hoe Co., The  
Columbus, Ohio

#### CUTTLE BONE

Burnett's, Inc.  
Newark, N. J.  
Albert Dickinson Seed Co., The  
Chicago, Ill.  
Hinton & Co.  
New York, N. Y.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Petpak Products Co.  
Milwaukee, Wis.  
Scarlett & Co., Wm. G.  
Baltimore, Md.  
Schell, Inc., Walter S.  
Harrisburg, Pa.  
Schoemann & Mayer, Inc.  
New York, N. Y.  
Spratt's Patent, Ltd.  
Newark, N. J.

#### CYLINDERS

Myers & Bro. Co., The F. E.  
Ashland, Ohio

#### DAIRY SUPPLIES

Anker-Holth Mfg. Co.  
Port Huron, Mich.  
Cherry-Burrell Corp.  
New York, N. Y.  
Creamery Package Mfg. Co.  
New York, N. Y.  
Duggar Mfg. Co., L. G.  
Hope Hull, Ala.  
Hammond Paint & Chemical Co.  
Beacon, N. Y.  
Mechling Bros. Chemicals  
Philadelphia, Pa.  
Pilling & Son Co., G. P.  
Philadelphia, Pa.

#### DIBBLES

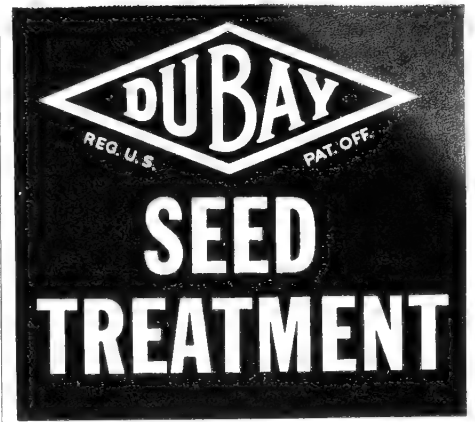
Gardex, Inc.  
Michigan City, Ind.  
Johnson, Inc., Wm.  
Newark, N. J.  
Leonard & Son, A. M.  
Piqua, Ohio  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Schell, Inc., Walter S.  
Harrisburg, Pa.  
Union Fork & Hoe Co.  
Columbus, Ohio  
Vaughan's Seed Store  
Chicago, Ill.

#### DIGGERS—DANDELION

Hamilton Seed & Coal Co.  
Cedar Rapids, Iowa  
Meilink & Co.  
Detroit, Mich.  
Union Fork & Hoe Co.  
Columbus, Ohio

#### DISINFECTANTS—ANIMAL

Aeroil Burner Co. (Torches)  
West New York, N. J.  
American Florist Supply Co.  
Chicago, Ill.  
Bonide Chem. Co., Inc.  
Utica, N. Y.  
Boyle Co., The A. S.  
Jersey City, N. J.  
Brower Mfg. Co.  
Quincy, Ill.  
Carbola Chemical Co.  
Natural Bridge, N. Y.  
Carus Chemical Co.  
La Salle, Ill.  
C-A Wood Preserver Co.  
St. Louis, Mo.  
Chic-Tone Co.  
Bath, Pa.  
Clifton Chem. Co., Inc.  
New York, N. Y.  
Conkey Co., G. E.  
Cleveland, Ohio  
Dow Chemical Co.  
Midland, Mich.  
Lee Co., Geo. H.  
Omaha, Nebr.  
LeGear Medicine Co., Dr. L. D.  
St. Louis, Mo.  
Mallinckrodt Chemical Works  
St. Louis, Mo.  
Mechling Bros. Chemicals  
Philadelphia, Pa.  
Merck & Co., Inc.  
Rahway, N. J.  
Nicotine Mfg. Co.  
St. Louis, Mo.  
Pratt Food Co.  
Philadelphia, Pa.  
Rohm & Haas Co.  
Philadelphia, Pa.  
Russell Co., I. D.  
Kansas City, Mo.  
Salsbury's Laboratories, Dr.  
Charles City, Iowa  
Schell, Inc., Walter S.  
Harrisburg, Pa.



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planting plans!

NOT many farmers now will risk high-priced seed and hard-to-get labor by planting without Du Bay Seed Treatment! That's why, in the months ahead, you can look for more sales of *New Improved CERESAN*, SEMESAN JR., SEMESAN BEL, 2% CERESAN and SEMESAN—why you should prepare by ordering needed stock now. If you are not a Du Bay Dealer, write for further information on this fast-selling line.

**BAYER - SEMESAN COMPANY**  
INCORPORATED  
NEMOURS BLDG., WILMINGTON, DEL.



PROFIT by selling PURE  
**CARBOLINEUM**

—like that referred to in U. S. Farm Bulletins, to kill chicken mites. Should last

**1 to 3 YEARS**

Can be diluted with kerosene.

Write for delivered prices and sample, or get it through your jobber.

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Schoemann & Mayer, Inc.  
New York, N. Y.  
Tobacco By-Products & Chemical Corp.  
Louisville, Ky.  
Vaughan's Seed Store  
Chicago, Ill.

#### DISINFECTANTS—SEED

American Cyanamid & Chem. Corp.  
New York, N. Y.  
Ansbacher-Siegle Corp.  
Brooklyn, N. Y.  
Bayer-Semesan Co., Inc.  
Wilmington, Del.  
California Spray Chemical Co.  
Elizabeth, N. J.  
Carus Chemical Co.  
La Salle, Ill.  
Dickinson Seed Co., The Albert  
Chicago, Ill.  
Douglas Chemical & Supply Co.  
Kansas City, Mo.  
Dow Chemical Co.  
Midland, Mich.  
Garden Products Co.  
St. Louis, Mo.  
Goulard & Olena, Inc.  
New York, N. Y.  
Hamilton Seed & Coal Co.  
Cedar Rapids, Iowa  
Hammond Paint & Chem. Co.  
Beacon, N. Y.  
Innis, Speiden & Co.  
New York, N. Y.  
McCormick Sales Co., The  
Baltimore, Md.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio.  
Mallinckrodt Chemical Works  
St. Louis, Mo.  
Mechling Bros. Chemicals  
Philadelphia, Pa.  
Merck & Co., Inc.  
Rahway, N. J.  
Rohm & Haas Co.  
Philadelphia, Pa.  
Scarlett & Co., Wm. G.  
Baltimore, Md.  
Schell, Inc., Walter S.  
Harrisburg, Pa.  
Seaboard Seed Co.  
Philadelphia, Pa.  
United States Rubber Co.  
Naugatuck Chemical Div.  
New York, N. Y.  
Vaughan's Seed Store  
Chicago, Ill.  
Vitamin Institute of Calif.  
Hollywood, Calif.  
Wood Ridge Mfg. Co.  
Wood Ridge, N. J.

#### DISTRIBUTOR—FERTILIZER

American Agricultural Chemical Co., The  
New York, N. Y.  
American Florist Supply Co.  
Chicago, Ill.  
Dickinson Seed Co., The Albert  
Chicago, Ill.  
Hydroponic Chemical Co., Inc.  
New York, N. Y.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Masters Planter Co.  
Benton Harbor, Mich.  
Mechling Bros. Chemicals  
Philadelphia, Pa.  
Rorer, Inc., William H.  
Philadelphia, Pa.  
Schell, Inc., Walter S.  
Harrisburg, Pa.  
Smith Agricultural Chemical Co., The  
Columbus, Ohio

Swift & Co.  
Chicago, Ill.  
Thompson & Sons, O. E.  
Ypsilanti, Mich.  
Vaughan's Seed Store  
Chicago, Ill.

#### DOG FOOD

Arcady Farms Milling Co.  
Chicago, Ill.  
Balorations, Inc. (Div. Tioga Mills, Inc.)  
Waverly, N. Y.  
Battle Creek Dog Food Co.  
Battle Creek, Mich.  
Dickinson Co., The Albert  
Chicago, Ill.  
Glover Co., Inc., H. Clay  
New York, N. Y.  
Goulard & Olena, Inc.  
New York, N. Y.  
Holmes Seed Co.  
Canton, Ohio  
Ken-L-Products Division  
The Quaker Oats Company  
Rockford, Ill.  
Justrite Co.  
Milwaukee, Wis.  
Lilly Co., The Chas. H.  
Seattle, Wash.  
McCormick Sales Co., The  
Baltimore, Md.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Meat Products Co.  
Cleveland, Ohio  
Old Trusty Dog Food Co.  
Needham Heights, Mass.  
Perfection Foods Co.  
Battle Creek, Mich.  
Philadelphia Seed Co.  
Philadelphia, Pa.  
Schell, Inc., Walter S.  
Harrisburg, Pa.  
Spratt's Patent, Ltd.  
Newark, N. J.

#### DOG SUPPLIES

Battle Creek Dog Food Co.  
Battle Creek, Mich.  
Grand River Pet Supply Co.  
Detroit, Mich.  
Ken-L-Products Division  
The Quaker Oats Company  
Rockford, Ill.  
McCarty Mfg. Co.  
Park Ridge, Ill.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
National Pet Shops  
St. Louis, Mo.  
National Sawdust Co.  
Brooklyn, N. Y.  
One-Spot Co.  
Elkridge, Md.  
Progressive Accessories  
New York, N. Y.  
Schell, Inc., Walter S.  
Harrisburg, Pa.  
Schoemann & Mayer, Inc. (Complete  
line of dog furnishings)  
New York, N. Y.  
Standard Screen Co.  
Chicago, Ill.  
Spratt's Patent, Ltd.  
Newark, N. J.  
Sudbury Soil Testing Laboratory  
Sudbury, Mass.

#### DRILLS—SEED

Allen & Co., Inc., S. L.  
Philadelphia, Pa.  
Field Force Mfg. Co.  
Pottstown, Pa.

American Fork & Hoe Co.  
Cleveland, Ohio  
Case Co., J. I.  
Racine, Wis.  
Geyer Mfg. Co.  
Rock Falls, Ill.  
Hudson Mfg. Co., H. D.  
Chicago, Ill.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio

#### DUSTS

Bayer-Semesan Co., Inc.  
Wilmington, Del.  
California Spray Chemical Co.  
Elizabeth, N. J.  
Dow Chemical Co.  
Midland, Mich.  
Hammond Paint & Chemical Co.  
Beacon, N. Y.  
McCormick Sales Co., The  
Baltimore, Md.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Mechling Bros. Chemicals  
Philadelphia, Pa.  
Rose Mfg. Co.  
Beacon, N. Y.  
Scarlett & Co., William G.  
Baltimore, Md.  
Tennessee Corp.  
New York, N. Y.  
Tobacco By-Products & Chem. Corp., Inc.  
Louisville, Ky.  
Vaughan's Seed Store  
Chicago, Ill.

#### DUSTERS

Acmeline Mfg. Co.  
Traverse City, Mich.  
Allen & Co., Inc., S. L.  
Philadelphia, Pa.  
American Cyanamid & Chem. Corp.  
New York, N. Y.  
American Florist Supply Co.  
Chicago, Ill.  
Bean Mfg. Co., John  
Lansing, Mich.  
Brown Co., E. C.  
Rochester, N. Y.  
California Spray Chemical Corp.  
Elizabeth, N. J.  
Dobbins Mfg. Co.  
Elkhart, Ind.  
Feeny Manufacturing Co.  
Muncie, Ind.  
"Friend" Mfg. Co.  
Gasport, N. Y.  
Hudson Mfg. Co., H. D.  
Chicago, Ill.  
Leonard & Son, A. M.  
Piqua, Ohio  
Los Angeles Chemical Co.  
Los Angeles, Calif.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Messinger Mfg. Co.  
Tatamy, Pa.  
One-Spot Co.  
Elkridge, Md.  
Root Mfg. Co.  
Cleveland, Ohio  
Scarlett & Co., William G.  
Baltimore, Md.  
Shunk Mfg. Co.  
Bucyrus, Ohio  
Smith & Co., D. B.  
Utica, N. Y.  
Tennessee Corp.  
New York, N. Y.  
Vaughan's Seed Store  
Chicago, Ill.

#### EGG PRESERVATIVES

Dow Chemical Co.  
Midland, Mich.  
Mechling Bros. Chemicals  
Philadelphia, Pa.

Schell, Inc., Walter S.  
Harrisburg, Pa.

**ELECTRIC HEDGE TRIMMERS**

American Florist Supply Co.  
Chicago, Ill.  
Bartlett Mfg. Co.  
Detroit, Mich.  
Leonard & Son, A. M.  
Piqua, Ohio  
Detco Mfg. Co.  
Oaks, Montgomery Co., Pa.  
Schell, Inc., Walter S.  
Harrisburg, Pa.  
Vaughan's Seed Store  
Chicago, Ill.

**ERADICATORS—WORM**

Dow Chemical Co.  
Midland, Mich.  
Hammond Paint & Chemical Co.  
Beacon, N. Y.  
Merck & Co., Inc.  
Rahway, N. J.  
Reade Mfg. Co.  
Jersey City, N. J.

**ERADICATORS—POTATOE VINE  
& WEED**

Goulard & Olena, Inc.  
New York, N. Y.

**EROSION CONTROL**

Bemis Bro. Bag Co.  
St. Louis, Mo.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio

**EXTERMINATORS—ANT**

Acme White Lead & Color Works  
Detroit, Mich.  
Agricultural Laboratories, Inc.  
Columbus, Ohio

American Cyanamid & Chemical Corp.  
New York, N. Y.

Bonide Chem. Co., Inc.  
Utica, N. Y.  
Boyle Co., The A. S.  
Jersey City, N. J.  
Buckeye Chemical & Specialty Co.  
New York, N. Y.  
Goulard & Olena, Inc. (traps)  
New York, N. Y.  
Hammond Paint & Chem. Co.  
Beacon, N. Y.  
Killant Chem. Co.  
Fort Worth, Texas  
Lethelin Products Co., Inc.  
Wood Ridge, N. J.  
Rotenone Products Co. (Traps)  
East Orange, N. J.  
Senoret Chemical Co.  
St. Louis, Mo.  
Soilicide Laboratories  
Upper Montclair, N. J.  
Tobacco By-Products & Chem. Corp.  
Louisville, Ky.

**EXTERMINATORS—FLY**

Goulard & Olena, Inc.  
New York, N. Y.  
Hammond Paint & Chem. Co.  
Beacon, N. Y.  
Lyon Rural Electric Co.  
San Diego, Calif.  
Warner Electric Co.  
Chicago, Ill.

**EXTERMINATORS—MOLE AND  
GOPHER**

American Cyanamid & Chem. Corp.  
New York, N. Y.  
Atkins & Durbrow, Inc.  
New York, N. Y.  
Bohlender Plant Chemicals, Inc.  
Tipp City, Ohio

California Spray Chem. Corp.  
Elizabeth, N. J.

Fort Dodge Chemical Co.  
Fort Dodge, Iowa  
Goulard & Olena, Inc.  
New York, N. Y.  
Hammond Paint & Chem. Co.  
Beacon, N. Y.  
Mallinckrodt Chemical Works  
St. Louis, Mo.  
Rat Lunches Co.  
Carroll, Iowa  
Rose Mfg. Co.  
Beacon, N. Y.  
Smith Chemical Co.  
Ames, Iowa  
Soilicide Laboratories  
Upper Montclair, N. J.

**EXTERMINATORS—PEST**

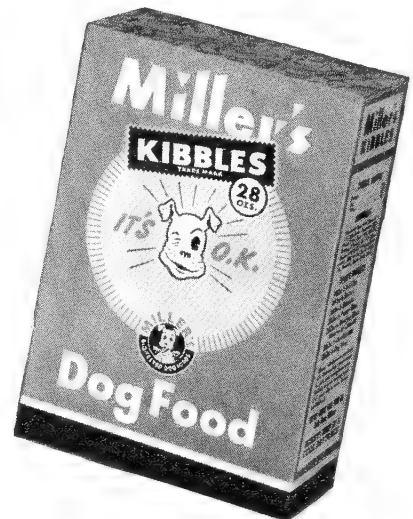
Aeroil Burner Co., Inc.  
West New York, N. J.  
Agricultural Laboratories, Inc.  
Columbus, Ohio  
American Cyanamid & Chem. Corp.  
New York, N. Y.  
American Florist Supply Co.  
Chicago, Ill.  
Bonide Chem. Co., Inc.  
Utica, N. Y.  
Boyle Co., The A. S.  
Jersey City, N. J.  
California Spray Chemical Corp.  
Elizabeth, N. J.  
C-A Wood Preserver Co.  
St. Louis, Mo.  
Douglas Chemical & Supply Co.  
Kansas City, Mo.  
Dow Chemical Co.  
Midland, Mich.  
Du Pont de Nemours & Co., Inc., E. I.  
Grasselli Chemicals Dept.  
Wilmington, Del.

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Hammond Paint & Chem. Co.  
Beacon, N. Y.  
LeGear Medicine Co., Dr. L. D.  
St. Louis, Mo.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Mechling Bros. Chemicals  
Philadelphia, Pa.  
Merck & Co., Inc.  
Rahway, N. J.  
Nott Mfg. Co.  
New York, N. Y.  
Rat Lunches Co.  
Carroll, Iowa  
Scarlett & Co., William G.  
Baltimore, Md.  
Shunk Mfg. Co. (Grasshopper)  
Bucyrus, Ohio  
Soilicide Laboratories  
Upper Montclair, N. J.  
Tanglefoot Co., The  
Grand Rapids, Mich.  
Tobacco By-Products & Chem. Corp., Inc.  
Louisville, Ky.  
V & M Products  
Galesburg Mich.

### EXTERMINATORS—RAT

American Cyanamid & Chem. Corp.  
New York, N. Y.  
Atkins & Durbrow, Inc.  
New York, N. Y.  
Bohlender Plant Chemicals, Inc.  
Tipp City, Ohio  
Bonide Chem. Co., Inc.  
Utica, N. Y.  
California Spray-Chem. Corp.  
Elizabeth, N. J.  
Douglas Chem. & Supply Co.  
Kansas City, Mo.  
Fort Dodge Chem. Co.  
Fort Dodge, Iowa  
Goulard & Olena, Inc.  
New York, N. Y.  
Innis, Speiden & Co.  
New York, N. Y.  
Killant Chem. Co.  
Ft. Worth, Texas  
K-R-O Company  
Springfield, Ohio  
Rat Lunches Co.  
Carroll, Iowa  
Smith Chemical Co.  
Ames, Iowa  
Soilicide Laboratories  
Upper Montclair, N. J.  
V & M Products  
Galesburg, Mich.  
Woods Chem. Co., Inc., C. G.  
Glendale, Calif.

### FEEDERS—BIRD

Audubon Workshop  
Glencoe, Ill.  
Bishop, Welles L.  
Meriden, Conn.  
Breck's  
Boston, Mass.  
Garden Products Co.  
St. Louis, Mo.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Schell, Inc., Walter S.  
Harrisburg, Pa.  
Schoemann & Mayer, Inc.  
New York, N. Y.  
Vaughan's Seed Store  
Chicago, Ill.  
Woodworking Specialty Co.  
Crystal Lake, Ill.

### FEED HOPPERS

Brower Mfg. Co.  
Quincy, Ill.  
Cyclone Mfg. Co., The  
Urbana, Ind.  
Hoeft & Co., Inc.  
North Chicago, Ill.  
Hudson Mfg. Co., H. D.  
Chicago, Ill.  
Makomb Steel Products Co.  
Macomb, Ill.  
National Ideal Co.  
Toledo, Ohio  
Oakes Mfg. Co.  
Tipton, Ind.  
Simplex Brooder Stove Co.  
Grand Rapids, Mich.  
Thompson & Sons, O. E.  
Ypsilanti, Mich.  
Western Stoneware Co.  
Monmouth, Ill.

### FEED—POULTRY

Arcady Farms Milling Co.  
Chicago, Ill.  
Cargill, Inc.  
Minneapolis, Minn.  
Conkey Co., G. E.  
Cleveland, Ohio  
Dickinson Seed Co., The Albert  
Chicago, Ill.  
Goldberg Seed & Feed Co.  
Fargo, N. D.  
Kasco Mills, Inc.  
Toledo, Ohio  
Northrup, King & Co.  
Minneapolis, Minn.  
Ouren Seed Co.  
Council Bluffs, Iowa  
Philadelphia Seed Co.  
Philadelphia, Pa.  
Pratt Food Co.  
Philadelphia, Pa.  
Purcell Seed Co.  
Evansville, Ind.  
Quaker Oats Co.  
Chicago, Ill.  
Ralston Purina Co.  
St. Louis, Mo.  
Scarlett & Co., Wm. G.  
Baltimore, Md.  
Sexauer & Son, Geo. P.  
Brookings, S. D., and Des Moines, Ia.  
Tioga Mills  
Waverly, N. Y.

### FEED—STOCK

Chambers Seed Co., Inc.  
Louisville, Ky.  
Dairy Association Co., Inc.  
Lyndonville, Vt.  
Farley-Clark, Inc.  
Bellingham, Wash.  
Funk Bros. Seed Co.  
Bloomington, Ill.  
Kasco Mills, Inc.  
Toledo, Ohio  
Lilly Co., The Chas. H.  
Seattle, Wash.  
Magic Stock Remedy Co., Inc.  
Chattanooga, Tenn.  
Newday Seeds, Inc.  
Fargo, N. D.  
Ouren Seed Co.  
Council Bluffs, Iowa  
Purcell Seed Co.  
Evansville, Ind.  
Tioga Mills  
Waverly, N. Y.  
Wilson & Co.  
Chicago, Ill.  
Wood & Sons, T. W.  
Richmond, Va.

## FENCING

Badger Electric Fence Co.  
Appleton, Wis.  
Continental Steel Corp.  
Kokomo, Ind.  
Lansing Specialties Mfg. Co.  
Lansing, Mich.  
Michigan Wire Goods Co.  
Niles, Mich.  
Plymouth Stamped Metal Co.  
Galion, Ohio

## FERTILIZERS AND PLANT FOODS

Agricultural Laboratories, Inc.  
Columbus, Ohio  
American Agricultural Chem. Co., The  
New York, N. Y.  
American Florist Supply Co.  
Chicago, Ill.  
American Liquid Fertilizer Co. (Liquid)  
Marietta, Ohio  
Atkins & Durbrow, Inc.  
New York, N. Y.  
California Spray Chemical Corp.  
Elizabeth, N. J.  
Dickinson Seed Co., The Albert  
Chicago, Ill.  
Du Pont de Nemours & Co., Inc., E. I.  
Wilmington, Del.  
Ellis Associates, Inc.  
Montclair, N. J.  
Garden Products Co.  
St. Louis, Mo.  
Lilly Co., The Chas. H.  
Seattle, Wash.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Mechling Bros., Chemicals  
Philadelphia, Pa.  
Plantabbs Co.  
Baltimore, Md.  
Premier Peat Moss Corp.  
New York, N. Y.  
Pulverized Manure Co., The  
Chicago, Ill.  
Rorer, Inc., Wm. H.  
Philadelphia, Pa.  
Rose Mfg. Co.  
Beacon, N. Y.  
Scarlett & Co., William G.  
Baltimore, Md.  
Sewerage Commission  
Milwaukee, Wis.  
Shur-Gro Co.  
Pittsburgh, Pa.  
Smith Agricultural Chemical Co., The  
Columbus, Ohio  
Summers Fertilizer Co., The  
Baltimore, Md.  
Swift & Co. (Vigoro)  
Chicago, Ill.  
Tennessee Corp. (Loma)  
New York, N. Y.  
Vaughan's Seed Store  
Chicago, Ill.  
Von Damm, F. H.  
Brooklyn, N. Y.  
Wilson & Co.  
Chicago, Ill.

## FISH FOODS

American Bird Products Co.  
Chicago, Ill.  
Battle Creek Dog Food Co.  
Battle Creek, Mich.  
Burnett's, Inc.  
Newark, N. J.  
Grassymfork Fisheries, Inc.  
Martinsville, Ind.  
Hinton & Co.  
New York, N. Y.  
Justrite Co.  
Milwaukee, Wis.  
Lakeview Ponds  
Mt. Airy, Cincinnati, Ohio

McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
National Pet Shops  
St. Louis, Mo.  
Ozark Fisheries, Inc.  
Stoutland, Mo.  
Petpak Products Co.  
Milwaukee, Wis.  
Philadelphia Bird Food Co.  
Philadelphia, Pa.  
Scarlett & Co., Wm. G.  
Baltimore, Md.  
Schoemann & Mayer, Inc.  
New York, N. Y.  
Spratt's Patent, Ltd.  
Newark, N. J.

## FLATS—SEED

American Florist Supply Co.  
Chicago, Ill.  
Ball-Biddle Co.  
Riverton, N. J.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Norman Sheet Metal Mfg. Co., W. F.  
Nevada, Mo.  
Perma Tag Co. (Plant)  
Grand Rapids, Mich.  
Yoho & Hooker (Cypress)  
Youngstown, Ohio

## FLORISTS' SUPPLIES

American Chemical Paint Co.  
Ambler, Pa.  
American Cyanamid & Chemical Corp.  
New York, N. Y.  
American Florist Supply Co.  
Chicago, Ill.  
Bird & Son, Inc.  
East Walpole, Mass.  
Created Ideas, Inc.  
Cincinnati, Ohio  
Dickinson Co., The Albert  
Chicago, Ill.  
Garden Products Co.  
St. Louis, Mo.  
Hammond Paint & Chemical Co.  
Beacon, N. Y.  
Hampden Mfg. Co. (Flower Holder)  
New York, N. Y.  
Holmes Seed Co., The  
Canton, Ohio  
Hydroponic Chemical Co., Inc.  
New York, N. Y.  
Leonard & Son, A. M. (Flower Holder)  
Piqua, Ohio  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Mechling Bros. Chemicals  
Philadelphia, Pa.  
M & K, Ltd. (Flower Holder)  
Portland, Ore.  
Plantabbs Co.  
Baltimore, Md.  
Protex Industries, Inc.  
New York, N. Y.  
Rorer, Inc., William H.  
Philadelphia, Pa.  
Rotenone Products Co. (Tindust)  
East Orange, N. J.  
Seaboard Seed Co.  
Philadelphia, Pa.  
Thompson Co., Wm. T.  
Los Angeles, Calif.  
Vaughan's Seed Store  
Chicago, Ill.

## FLOWERS—ARTIFICIAL

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American Florist Supply Co.  
Chicago, Ill.  
Cal. Artificial Flower Co.  
Providence, R. I.  
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Geyer Mfg. Co.  
Rock Falls, Ill.  
Leonard & Son., A. M.  
Piqua, Ohio  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Union Fork & Hoe Co., The  
Columbus, Ohio  
Vaughan's Seed Store  
Chicago, Ill.

**FORMALDEHYDE DUST**

Du Pont de Nemours & Co., Inc., E. I.  
Grasselli Chemicals Dept.  
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Hammond Paint & Chem. Co.  
Beacon, N. Y.  
Merck & Co., Inc.  
Rahway, N. J.  
Rohm & Haas Co.  
Philadelphia, Pa.

**FOUNTAINS—DRINKING**

Brower Mfg. Co.  
Quincy, Ill.  
Cyclone Mfg. Co., The  
Urbana, Ind.  
Hoeft & Co., Inc.  
North Chicago, Ill.  
Hudson Mfg. Co., H. D.  
Chicago, Ill.  
Makomb Steel Products Co.  
Macomb, Ill.  
National Ideal Co.  
Toledo, Ohio  
Oakes Mfg. Co.  
Tipton, Ind.  
Simplex Brooder Stove Co.  
Grand Rapids, Mich.  
Thompson & Sons, O. E.  
Ypsilanti, Mich.

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Ambler, Pa.  
Dickinson Co., The Albert  
Chicago, Ill.  
Dow Chemical Co.  
Midland, Mich.  
Merck & Co., Inc.  
Rahway, N. J.

**FUMIGANTS**

Agricultural Laboratories, Inc.  
Columbus, Ohio  
American Cyanamid & Chem. Co.  
New York, N.Y.  
American Florist Supply Co.  
Chicago, Ill.  
California Spray-Chem. Corp.  
Elizabeth, N. J.  
Douglas Chemical & Supply Co.  
Kansas City, Mo.  
Dow Chemical Co.  
Midland, Mich.  
Du Pont de Nemours & Co., Inc., E. I.  
Wilmington, Del.  
Goulard & Olena, Inc.  
New York, N. Y.  
Hammond Paint & Chem. Co.  
Beacon, N. Y.  
Innis, Speiden & Co.  
New York, N. Y.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Mallinckrodt Chemical Works  
St. Louis, Mo.

Mechling Bros. Chemical Co.  
Philadelphia, Pa.

Merck & Co., Inc.  
Rahway, N. J.  
Nicotine Mfg. Co.  
St. Louis, Mo.  
Rose Mfg. Co.  
Beacon, N. Y.  
Scarlett & Co., Wm. G.  
Baltimore, Md.  
Tobacco By-Products & Chemical Corp  
Louisville, Ky.  
Vaughan's Seed Store  
Chicago, Ill.

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Innis, Speiden & Co.  
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Merck & Co., Inc.  
Rahway, N. J.  
Vaughan's Seed Store  
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Bayer-Semesan Co., Inc.  
Wilmington, Del.  
Bonide Chem. Co., Inc.  
Utica, N. Y.  
California Spray Chem. Corp.  
Elizabeth, N. J.  
Carus Chemical Co.  
La Salle, Ill.  
Chipman Chemical Co., Inc.  
Bound Brook, N. J.  
Curex, Inc.  
Wood Ridge, N. J.  
Dickinson Seed Co., The Albert  
Chicago, Ill.  
Dow Chemical Co.  
Midland, Mich.  
Du Pont de Nemours & Co., Inc., E. I.  
Wilmington, Del.  
Garden Products Co.  
St. Louis, Mo.  
Goulard & Olena, Inc.  
New York, N. Y.  
Hammond Paint & Chemical Co.  
Beacon, N. Y.  
Los Angeles Chemical Co.  
Los Angeles, Calif.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Mallinckrodt Chemical Works  
St. Louis, Mo.  
Mechling Bros. Chemicals  
Philadelphia, Pa.  
Merck & Co., Inc.  
Rahway, N. J.  
National Sulphur Co.  
New York, N. Y.  
Nott Mfg. Co.  
New York, N. Y.  
Pratt Co., B. G.  
New York, N. Y.  
Protex Industries, Inc.  
New York, N. Y.  
Rohm & Haas Co., Inc.  
Philadelphia, Pa.  
Rose Mfg. Co.  
Beacon, N. Y.  
Seaboard Seed Co.  
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Stauffer Chemical Co.  
New York, N. Y.  
Tennessee Corp.  
New York, N. Y.

U. S. Rubber Co., Naugatuck Chemical  
Div.

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Springfield, N. J.  
Wood Ridge Mfg. Co.  
Wood Ridge, N. J.

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Lannon Quarries Corp.  
Beaver Dam, Wis.  
Unadilla Silo Co., Inc.  
Unadilla, N. Y.  
Universal Wire & Iron Co.  
(Wire Garden Arches)  
Milwaukee, Wis.  
Western Stoneware Co.  
Monmouth, Ill.  
Woodcraft Co.  
Dalton, N. Y.  
Woodworking Specialty Co.  
Crystal Lake, Ill.

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Pottstown, Pa.  
Ariens Company  
Brillion, Wis.  
Gilson-Bolens Mfg. Co.  
Port Washington, Wis.  
Gravelly Motor Plow & Cultivator Co.  
Dunbar, W. Va.  
Leroy Plow Co.  
Leroy, N. Y.  
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Sol-O-Lite Mfg. Co.  
Chicago, Ill.  
Warp Bros.  
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Crystal Lake, Ill.

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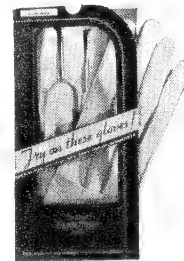
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Seamlex Co.  
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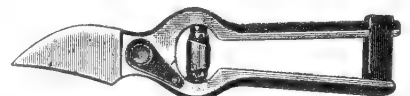
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Schell, Inc., Walter S.  
Harrisburg, Pa.  
Union Fork & Hoe Co., The  
Columbus, Ohio

**LAWN FERTILIZERS**  
American Agricultural Chemical Co., The  
New York, N. Y.  
Atkins & Durbrow, Inc.  
New York, N. Y.  
Albert Dickinson Co., The  
Chicago, Ill.  
Hydroponic Chemical Co., Inc.  
New York, N. Y.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Mechling Bros. Chemicals  
Philadelphia, Pa.  
Nott Mfg. Co.  
New York, N. Y.  
Pulverized Manure Co., The  
Chicago, Ill.  
Rorer, Inc., William H.  
Philadelphia, Pa.  
Scarlett & Co., William G.  
Baltimore, Md.  
Smith Agricultural Chemical Co.  
Columbus, Ohio  
Swift & Co.  
Chicago, Ill.  
Tennessee Corp., Loma Div.  
New York, N. Y.  
Vaughan's Seed Store  
Chicago, Ill.  
Woodruff & Sons, Inc., F. H.  
Milford, Conn.

**LEGUME INOCULANTS**  
Agricultural Laboratories, Inc.  
Columbus, Ohio  
Craver-Dickinson Seed Co.  
Buffalo, N. Y.  
Albert Dickinson Co., The  
Chicago, Ill.  
Earp, Thomas, Laboratories, Inc.  
Bloomfield, N. J.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Nitragin Co., Inc., The  
Milwaukee, Wis.  
Nott Mfg. Co.  
New York, N. Y.  
Scarlett & Co., William G.  
Baltimore, Md.  
Schell, Inc., Walter S.  
Harrisburg, Pa.  
Urbana Laboratories, The  
Urbana, Ill.  
Vaughan's Seed Store  
Chicago, Ill.

**LIME**  
American Florist Supply Co.  
Chicago, Ill.  
International Agricultural Corp.  
New York, N. Y.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Marble Cliff Quarries Co.  
Columbus, Ohio  
Mechling Bros. Chemicals  
Philadelphia, Pa.  
Vaughan's Seed Store  
Chicago, Ill.

**LIQUID PLANT FOOD**  
American Florist Supply Co.  
Chicago, Ill.  
American Liquid Fertilizer Co.  
Marietta, Ohio  
Garden Products Co.  
St. Louis, Mo.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Nott Mfg. Co.  
New York, N. Y.  
Rorer, Inc., William H.  
Philadelphia, Pa.  
Thompson Co., William T.  
Los Angeles, Calif.  
Vaughan's Seed Store  
Chicago, Ill.

**LITTER—POULTRY**  
American Florist Supply Co.  
Chicago, Ill.  
Atkins & Durbrow, Inc.  
New York, N. Y.  
Dickinson Co., The Albert  
Chicago, Ill.  
Goulard & Olena, Inc.  
New York, N. Y.  
Land O'Lakes Creameries, Inc.  
Minneapolis, Minn.  
National Ideal Co.  
Toledo, Ohio  
New Amsterdam Import & Supply Co.,  
Inc.  
New York, N. Y.  
Julius Loewith, Inc.  
New York, N. Y.  
Premier Peat Moss Corp.  
New York, N. Y.  
Scarlett & Co., Wm. G.  
Baltimore, Md.

**MANURE—COW**  
American Florist Supply Co.  
Chicago, Ill.  
Atkins & Durbrow, Inc.  
New York, N. Y.  
Goulard & Olena, Inc.  
New York, N. Y.  
Pulverized Manure Co., The  
Chicago, Ill.  
Scarlett & Co., Wm. G.  
Baltimore, Md.

# GARDEN SEED

◆  
*Growers of*

CABBAGE

BEETS

SPINACH

TURNIPS

RUTABAGA

MANGELS

KALE

RADISH

BRUSSEL SPROUTS

MUSTARD

SWISS CHARD

◆  
*Special Plantings  
of*

WITLOOF CHICORY

KOHLRABI

CORN SALAD

◆  
**J. A. BOYCE CO.**

MOUNT VERNON

WASH.

## Here's the GOOD NEWS

for 1943 on



As you know, our Government has placed drastic wartime restrictions on the use of pyrethrum and rotenone—the major insect-killing ingredients in the peacetime formula for regular Red Arrow Garden Spray. But—you can continue to push Red Arrow as in the past. Here's why:



### FOR HOME GARDENERS

We have developed a new "wartime" Red Arrow Garden Spray which contains no war-restricted materials. With this new contact insecticide, one ounce makes two gallons of effective spray. Kills Mealy Bugs, Aphis, Leaf Hoppers, Thrips, Lace Bugs, Orthezia, Red Spider, White Fly and Chrysanthemum Midge. Safe to humans, birds and pets when sprayed. Packed in 1-ounce, 4-ounce and 1-pint sizes. And sells at peacetime prices for regular Red Arrow Garden Spray.

### FOR COMMERCIAL GROWERS

You can offer "Special" Red Arrow Garden Spray, which we introduced two years ago, and which proved tremendously popular with the nursery and greenhouse trade. This extra-high-powered Pyrethrum spray is especially effective against Japanese Beetles, Leaf Tyers, Leaf Rollers, and many other sucking and chewing insects, both under glass and outdoors. Packed in quart, gallon and 5-gallon sizes—and prices also are the same as for 1942.



◆ ◆ ◆  
As in the past, Red Arrow will be nationally advertised, and spray charts and other sales helps will be supplied free. For price lists and full information, ask your jobber, or write today to:

**THE McCORMICK SALES CO.**

McCORMICK BLDG., BALTIMORE, MD.

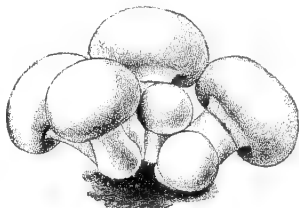
# WIZARD BRAND SHEEP & COW MANURES

Wizard Manures are highest quality, dehydrated pure manures, direct heat sterilized to kill all weed seeds. Attractively packed and consistently advertised for more than 35 years. A free sales building service makes Wizard the quickest selling and most profitable brand to handle.



Attractively  
Packed in  
All Sizes  
for Retail—  
2, 5, 10, 25, 50  
and 100 lb.  
Bags.

The Pulverized Manure Co.  
395 Union Stock Yards, Chicago



## TOBACCO STEM PROCESS U. S. Patent No. 1,939,600 MUSHROOM SPAWN

Now Available  
to Seed House Trade

Used widely by the commercial mushroom grower.

Spawn is produced by most modern scientific pure culture methods.

Vigorous, quick starting, certain. Great improvement over old type brick and manure spawn.

Most ideal spawn for Seed House Trade and especially profitable for listing in catalog. Comes dried and crumbled. Fine keeping qualities. Supplied in bulk to be sold by the ounce, same as other seeds, or supplied in one-half pound cans complete with instructions.

Write for complete information. Samples and Manual of Mushroom Culture supplied to established Seed Houses.

CHESTER COUNTY  
MUSHROOM LABORATORIES  
WEST CHESTER, PENNA.

Schell, Inc., Walter S.  
Harrisburg, Pa.  
Swift & Co.  
Chicago, Ill.  
Vaughan's Seed Store  
Chicago, Ill.

### MANURE—SHEEP

American Florist Supply Co.  
Chicago, Ill.  
Brent Seed Co., C. S.  
Lexington, Ky.  
Goulard & Olena, Inc.  
New York, N. Y.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Philadelphia Seed Co., Inc.  
Philadelphia, Pa.  
Pulverized Manure Co., The  
Chicago, Ill.  
Scarlett & Co., Wm. G.  
Baltimore, Md.  
Schell, Inc., Walter S.  
Harrisburg, Pa.  
Shur-Gro Company  
Pittsburgh, Pa.  
Stockdale Fertilizer Co.  
Morris, Ill.  
Swift & Co.  
Chicago, Ill.  
Vaughan's Seed Store  
Chicago, Ill.

### MARKERS—PLANT

American Florist Supply Co.  
Chicago, Ill.  
Bartlett Mfg. Co.  
Detroit, Mich.  
Lansing Specialties Mfg. Co.  
Lansing, Mich.  
Leonard & Son, A. M.  
Piqua, Ohio  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Midwest Metal Specialties Co.  
Aurora, Ill.  
Norman Sheet Metal Mfg. Co., W. F.  
Nevada, Mo.  
Plantabbs Corp.  
Baltimore, Md.  
Smith Industries (Metal)  
Xenia, Ohio  
Wilton Garden Label Co.  
Wilton, Conn.  
Yoho & Hooker  
Youngstown, Ohio  
Vaughan's Seed Store  
Chicago, Ill.

### MIXERS—SEED OR FEED

Brower Mfg. Co.  
Quincy, Ill.

Ferrell & Co., A. T.  
Saginaw, Mich.  
Hart-Carter Co.  
Minneapolis, Minn.  
Howes Co., Inc., S.  
Silver Creek, N. Y.  
Majestic Huller & Mfg. Co.  
Minneapolis, Minn.  
Prater Pulverizer Co.  
Cicero, Ill.  
Sedberry, Inc., J. B.  
Franklin, Tenn.  
Sprout, Waldron & Co.  
Muncy, Pa.

### MOSS—PEAT

American Bulb Co.  
Chicago, Ill.  
American Florist Supply Co.  
Chicago, Ill.  
American Soil Sponge Selling Corp.  
New York, N. Y.  
Atkins & Durbrow, Inc. (Horticultural)  
New York, N. Y.  
Dickinson Co., The Albert  
Chicago, Ill.  
Hamilton Seed & Coal Co.  
Cedar Rapids, Iowa  
Holmes Seed Co., The  
Canton, Ohio  
Loewith, Inc., Julius  
New York, N. Y.  
Maine Peat Moss Co., Inc.  
Jonesport, Maine  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
McHutchison & Co.  
New York, N. Y.  
Michigan Peat Co.  
Buchanan, Mich.  
New Amsterdam Import & Supply Co.,  
Inc.  
New York, N. Y.  
Ouren Seed Co.  
Council Bluffs, Iowa  
Philadelphia Seed Co., Inc.  
Philadelphia, Pa.  
Premier Peat Moss Corp.  
New York, N. Y.  
Scarlett & Co., Wm. G.  
Baltimore, Md.  
Schell, Inc., Walter S.  
Harrisburg, Pa.  
Snelson Co.  
Savannah, Ga.  
Vaughan's Seed Store  
Chicago, Ill.

### MOSS—SPHAGNUM

American Bulb Co.  
Chicago, Ill.  
American Florist Supply Co.  
Chicago, Ill.

*New Packages - Better Sales*

# PREMIER Quality

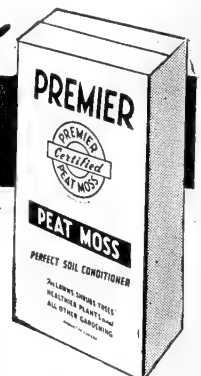
Solid, substantial fibre-board  
bales. Easy to store and handle.  
Two sizes — Large and Utility (half size)

## PEAT MOSS

PREMIER means first in Quality, Absorbency,  
Economy and Repeat Business.

PREMIER PEAT MOSS CORP.

535 Fifth Ave., New York City



American Soil Sponge Selling Corp.  
New York, N. Y.  
Atkins & Durbrow, Inc.  
New York, N. Y.  
Holmes Seed Co., The  
Canton, Ohio  
Loewith, Inc., Julius  
New York, N. Y.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
McHutchison & Co.  
New York, N. Y.  
Premier Peat Moss Corp.  
New York, N. Y.  
Snelson Co.  
Savannah, Ga.  
Vaughan's Seed Store  
Chicago, Ill.

#### MOTH KILLERS

Agricultural Laboratories, Inc.  
Columbus, Ohio  
American Cyanamid & Chem. Corp.  
New York, N. Y.  
California Spray Chemical Corp.  
Elizabeth, N. J.  
Douglas Chemical & Supply Co.  
Kansas City, Mo.  
Dow Chemical Co.  
Midland, Mich.  
Goulard & Olena, Inc.  
New York, N. Y.  
Hammond Paint & Chemical Co.  
Beacon, N. Y.  
Innis, Speiden & Co.  
New York, N. Y.  
Killant Chem. Co.  
Ft. Worth, Texas  
Mallinckrodt Chem. Works  
St. Louis, Mo.  
Mechling Bros. Chemicals  
Philadelphia, Pa.  
Merck & Co., Inc.  
Rahway, N. J.  
Soilicide Laboratories  
Upper Montclair, N. J.

#### MOWERS—LAWN

Allen & Co., Inc., S. L.  
Philadelphia, Pa.  
Clemson Bros., Inc.  
Middletown, N. Y.  
Coldwell Lawn Mower Co.  
Newburgh, N. Y.  
Cooper Mfg. Co. (Power)  
Marshalltown, Iowa  
Eclipse Lawn Mower Co.  
Prophetstown, Ill.  
Gilson-Bolens Mfg. Co. (Power)  
Port Washington, Wis.  
Jacobsen Mfg. Co.  
Racine, Wis.  
Leonard & Son, A. M.  
Piqua, Ohio  
Moto-Mower Co. (Power)  
Detroit, Mich.

Robertson Mfg. Co.  
Michigan City, Ind.  
Shaw Mfg. Co. (Power)  
Galesburg, Kans.  
Yardman, Inc.  
Jackson, Mich.

#### MULCH

American Florist Supply Co.  
Chicago, Ill.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Vaughan's Seed Store  
Chicago, Ill.

#### MUSHROOM SPAWN

Chester County Mushroom Laboratories  
West Chester, Pa.  
Lambert's Mushroom Laboratories  
Coatesville, Pa.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Vaughan's Seed Store  
Chicago, Ill.

#### NESTS—POULTRY

Brower Mfg. Co.  
Quincy, Ill.  
Cyclone Mfg. Co.  
Urbana, Ind.  
Hoeft & Co.  
North Chicago, Ill.  
Hudson Mfg. Co., H. D.  
Chicago, Ill.

#### NOVELTIES

Aerolux Light Corp.  
New York, N. Y.  
Carter Products Co.  
Cleveland, Ohio  
Created Ideas, Inc.  
Cincinnati, Ohio  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Shure Co., N.  
Chicago, Ill.  
Vaughan Seed Store  
Chicago, Ill.

Worcester Wire Novelty Co., Inc.  
Baltimore, Md.

#### NOZZLES—HOSE

American Florist Supply Co.  
Chicago, Ill.  
Carter Products Corp.  
Cleveland, Ohio  
Leonard & Son, A. M.  
Piqua, Ohio  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Perfection Sprinkler Co.  
Plymouth, Mich.  
Smith & Co., D. B.  
Utica, N. Y.  
Vaughan's Seed Store  
Chicago, Ill.

**NUTRIENT SOLUTION TESTING**  
Urbana Laboratories, The  
Urbana, Ill.

#### OYSTER SHELLS

Land O'Lakes Creameries, Inc.  
Minneapolis, Minn.  
Oyster Shell Prod. Corp.  
New Rochelle, N. Y.  
Scarlett & Co., Wm. G.  
Baltimore, Md.  
Shell Builder, Inc.  
Houston, Texas  
Universal Crushed Shell Co.  
Muscatine, Iowa  
Wood & Sons, T. W.  
Richmond, Va.

#### PAINTS—GREENHOUSE

Goulard & Olena, Inc.  
New York, N. Y.  
Hammond Paint & Chem. Co.  
Beacon, N. Y.

#### PEAT MOSS

(See Moss-Peat)

#### PENCILS—WATERPROOF LABEL

American Bulb Co.  
Chicago, Ill.  
American Florist Supply Co.  
Chicago, Ill.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio

#### PETS

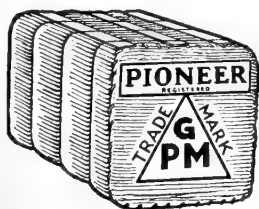
Deedie's Pet Shop  
Newark, N. J.  
National Pet Shops  
St. Louis, Mo.  
So. Calif. Bird & Pet Exchange  
Bell, Calif.  
Zenith Novelty Co.  
New York, N. Y.

#### PET SUPPLIES

Battle Creek Dog Food Co.  
Battle Creek, Mich.  
Dickinson Co., The Albert  
Chicago, Ill.  
Holmes Seed Co., The  
Canton, Ohio  
Ken-L-Products Division  
The Quaker Oats Company  
Rockford, Ill.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Mechling Bros. Chemicals  
Philadelphia, Pa.  
National Pet Shops  
St. Louis, Mo.  
Schoemann & Mayer, Inc.  
New York, N. Y.  
Spratt's Patent, Ltd.  
Newark, N. J.

## PEAT MOSS

PIONEER GPM brand—finest grade, 100% pure sphagnum moss peat for horticultural use. Large pressure packed bales.



#### HEADQUARTERS FOR

For more than 60 years, Atkins & Durbrow has been headquarters for top quality peat moss products.

Today we are ready to supply you with prompt shipments of a fine quality, pure sphagnum peat moss that is ideal for horticultural use. Write today for free literature and quantity prices.

### ATKINS & DURBROW, Inc.

165 John Street, New York, N. Y.

CHICAGO

DETROIT

BOSTON

## DRICONURE

An all organic fertilizer combining cow manure and poultry manure with peat moss. Free from weed seeds. Safe, clean, easy to use.



# OREGON BULB FARMS, Inc.

Address all Mail to Sandy, Oregon.  
Telegrams to Portland, Oregon.  
Farms are 22 miles East of Portland, Oregon,  
near Dodge Park.

**Growers of New and Internationally  
famous varieties of**

**Daffodils**

**Miniature Daffodils**

**Dutch Iris**

**English Iris**

**Spanish Iris**

**Montbretia**

EARLHAM HYBRIDS

**Lilies**

# BUY

**More**

# War Bonds

**and**

# Stamps

Vaughan Seed Store  
Chicago, Ill.

## PLANT COVERS

Germain Seed & Plant Co.  
Los Angeles, Calif.  
Oldmill Paper Products Corp.  
Long Island City, N. Y.  
Paxton Products Co.  
Riverside, Calif.  
Vaughan Seed Store  
Chicago, Ill.

## PLANTERS

Acemline Mfg. Co.  
Traverse City, Mich.  
Allen & Co., Inc., S. L.  
Philadelphia, Pa.  
Case Co., J. I.  
Racine, Wis.  
Coleman Bros. Mfg. Co.  
New Albany, Ind.  
Dobbins Mfg. Co.  
Elkhart, Ind.  
Farquhar Co., Ltd., A. B.  
York, Pa.  
Field Force Mfg. Co.  
Pottstown, Pa.  
Gardex, Inc.  
Michigan City, Ind.  
G-L Products Co. (Bulb)  
Toledo, Ohio  
Holland Celery Planter Co.  
Holland, Mich.  
Magee Co., Thos. J.  
Germantown, Philadelphia, Pa.  
Masters Planter Co.  
Benton Harbor, Mich.  
S. & H. Set Onion Planter Co.  
Pleasant Valley, Iowa  
Vaughan Seed Store  
Chicago, Ill.

## CUT FLOWER PLANT FOOD

American Chemical Paint Co.  
Ambler, Pa.  
American Florist Supply Co.  
Chicago, Ill.  
Dickinson Co., The Albert  
Chicago, Ill.  
Floralife  
Chicago, Ill.  
Flower Foods, Inc.  
Maywood, Ill.  
Garden Products Co.  
St. Louis, Mo.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Thompson Co., William T.  
Los Angeles, Calif.  
Vaughan Seed Store  
Chicago, Ill.

## PLANT FOODS

(See also Fertilizers)

Agricultural Laboratories, Inc.  
Columbus, Ohio  
American Agricultural Chemical Co., The  
New York, N. Y.  
Atkins & Durbrow, Inc.  
New York, N. Y.  
Garden Products Co.  
St. Louis, Mo.  
Goulard & Olena, Inc.  
New York, N. Y.  
Holmes Seed Co., The  
Canton, Ohio  
Hydroponic Chemical Co., Inc.  
New York, N. Y.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Mechling Bros. Chemicals  
Philadelphia, Pa.  
Nott Mfg. Co.  
New York, N. Y.  
Plantabbs Co.  
Baltimore, Md.  
Pulverized Manure Co., The  
Chicago, Ill.

Rorer, Inc., William H.  
Philadelphia, Pa.  
Schell, Inc., Walter S.  
Harrisburg, Pa.  
Smith Agricultural Chem. Co., The  
Columbus, Ohio  
Swift & Co.  
Chicago, Ill.  
Tennessee Corp.  
New York, N. Y.  
Thompson Co., William T.  
Los Angeles, Calif.  
Twin City Seed Co.  
Minneapolis, Minn.  
Vaughan Seed Store  
Chicago, Ill.

## PLANT STIMULANTS

Agricultural Laboratories, Inc.  
Columbus, Ohio  
American Chemical Paint Co.  
Ambler, Pa.  
Dickinson Co., The Albert  
Chicago, Ill.  
Dow Chemical Co.  
Midland, Mich.  
Goulard & Olena, Inc.  
New York, N. Y.  
Garden Products Co.  
St. Louis, Mo.  
Hydroponic Chemical Co., Inc.  
New York, N. Y.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Merck & Co., Inc.  
Rahway, N. J.  
Nott Mfg. Co.  
New York, N. Y.  
Plantabbs Co.  
Baltimore, Md.  
Pulverized Manure Co., The  
Chicago, Ill.  
Rorer, Inc., William H.  
Philadelphia, Pa.  
Swift & Co.  
Chicago, Ill.  
Thompson Co., William T.  
Los Angeles, Calif.  
Twin City Seed Co.  
Minneapolis, Minn.  
Vaughan Seed Store  
Chicago, Ill.

## PLANT VITAMINS

Agricultural Laboratories, Inc.  
Columbus, Ohio  
American Chemical Paint Co.  
Ambler, Pa.  
American Florist Supply Co.  
Chicago, Ill.  
Burgess Seed & Plant Co.  
Galesburg, Mich.  
Dickinson Co., The Albert  
Chicago, Ill.  
Garden Products Co.  
St. Louis, Mo.  
Goulard & Olena, Inc.  
New York, N. Y.  
Hydroponic Chemical Co., Inc.  
New York, N. Y.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Merck & Co., Inc.  
Rahway, N. J.  
Nott Mfg. Co.  
New York, N. Y.  
Plantabbs Co.  
Baltimore, Md.  
Rorer, Inc., William H.  
Philadelphia, Pa.  
Schell, Inc., Walter S.  
Harrisburg, Pa.  
Thompson Co., William T.  
Los Angeles, Calif.  
Vaughan Seed Store  
Chicago, Ill.  
PLOWES  
Allen & Co., Inc., S. L.  
Philadelphia, Pa.

Gardex, Inc.  
Michigan City, Ind.

**POLE PRUNERS**  
Bartlett Mfg. Co.  
Detroit, Mich.  
Leonard & Son, A. M.  
Piqua, Ohio

**POT COVERS—FLOWER**  
American Bulb Co.  
Chicago, Ill.  
American Florist Supply Co.  
Chicago, Ill.  
Bird & Son, Inc.  
East Walpole, Mass.  
Oldmill Paper Products Corp.  
Long Island City, N. Y.  
Vaughan Seed Store  
Chicago, Ill.

**POT SAUCERS**  
American Florist Supply Co.  
Chicago, Ill.  
Bird & Son, Inc.  
East Walpole, Mass.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Vaughan's Seed Store  
Chicago, Ill.  
Zane Pottery Co.  
Zanesville, Ohio

**POTS—FLOWER**  
American Bulb Co.  
Chicago, Ill.  
American Florist Supply Co.  
Chicago, Ill.  
Ball-Biddle Co. (Fibre)  
Riverton, N. J.  
Bird & Son, Inc. (Paper)  
East Walpole, Mass.  
Fertile Products, Inc.  
Bridgeport, Conn.  
Haeger Potteries  
Dundee, Ill.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Schell, Inc., Walter S.  
Harrisburg, Pa.  
Vaughan's Seed Store  
Chicago, Ill.  
Western Stoneware Co.  
Monmouth, Ill.

**POTS—TRANSPLANTING**  
Ball-Biddle Co. (Fiber)  
Riverton, N. J.  
Bird & Son, Inc. (Paper)  
East Walpole, Mass.  
Fertile Products, Inc.  
Bridgeport, Conn.  
Goulard & Olena, Inc.  
New York, N. Y.  
Iris Paper Flower Pot Co.  
Philadelphia, Pa.  
Kervan Co.  
New York, N. Y.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Paxton Products Co.  
Riverside, Calif.  
Vaughan Seed Store  
Chicago, Ill.

**POSTERS**  
Burpee Co., W. Atlee  
Philadelphia, Pa.  
Central Tag Co.  
Chicago, Ill.  
McFarland Publicity Service  
Harrisburg, Pa.  
Morse Co., A. B.  
St. Joseph, Mich.  
Schmidt Litho. Co.  
San Francisco, Calif.  
Stecher-Traung Litho. Corp.  
Rochester, N. Y.

**POWER LAWN MOWERS**  
Allen & Co., Inc., S. L.  
Silver Creek, N. Y.

American Florist Supply Co.  
Chicago, Ill.  
Eclipse Lawn Mower Co.  
Prophetstown, Ill.  
Schell, Inc., Walter S.  
Harrisburg, Pa.  
Vaughan Seed Store  
Chicago, Ill.

**POWER SPRAYERS**  
Aeroil Burner Co.  
West New York, N. J.  
Bartlett Mfg. Co.  
Detroit, Mich.  
Dobbins Mfg. Co.  
Elkhart, Ind.  
Hudson Mfg. Co., H. D.  
Chicago, Ill.  
Myers & Bro. Co., The F. E.  
Ashland, Ohio

**PROTECTORS—LAWN**  
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Lansing Specialties Mfg. Co.  
Lansing, Mich.  
Merck & Co., Inc.  
Rahway, N. J.  
Michigan Wire Goods  
Niles, Mich.

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Riverton, N. J.  
California Fruit Wrapping Mills, Inc.  
Pomona, Calif.  
Germain's Hotkaps Mfg. Div.  
Los Angeles, Calif.  
Harris Mfg. Co., A. W.  
Sleepy Eye, Minn.  
Oldmill Paper Products Corp.  
Long Island City, N. Y.  
Paxton Products Co.  
Riverside, Cal.  
Schell, Inc., Walter S.  
Harrisburg, Pa.  
Vaughan Seed Store  
Chicago, Ill.  
Woodruff & Sons, Inc., F. H.  
Milford, Conn.

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Chicago, Ill.  
Atkins & Co., E. C.  
Indianapolis, Ind.  
Bartlett Mfg. Co.  
Detroit, Mich.  
Clark & Son, Walter E.  
Milford, Conn.  
Disston & Sons, Inc., Henry  
Philadelphia, Pa.  
Graham & Co., Inc., John H.  
New York, N. Y.  
Johnson, Inc., Wm.  
Newark, N. J.  
Leonard & Sons, A. M.  
Piqua, Ohio  
Nagley Transplanter Co.  
Memphis, N. Y.  
Peck, Stow & Wilcox Co.  
Southington, Conn.  
Smith & Son, Inc., Seymour  
Oakville, Conn.  
Tiffany, Carroll R.  
Conklin, N. Y.  
Vaughan Seed Store  
Chicago, Ill.


**POTTERY**  
(See Bowls—Bulb)

**PUMPS—HAND & POWER**  
Myers & Bro. Co., The F. E.  
Ashland, Ohio

**PUMP JACKS**  
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Hammond Paint & Chem. Co.

Beacon, N. Y.

McCormick Sales Co., The

Baltimore, Md.

McLaughlin Gormley King Co.

Minneapolis, Minn.

Mechling Bros. Chemicals

Philadelphia, Pa.

Protex Industries, Inc.

New York, N. Y.

Vaughan Seed Store

Chicago, Ill.

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American Reedcraft Corp.

New York, N. Y.

Buist Co., Robert

Philadelphia, Pa.

Goulard & Olena, Inc.

New York, N. Y.

Holmes Seed Co., The

Canton, Ohio

Leonard & Son, A. M.

Piqua, Ohio

Loewith, Inc., Julius

New York, N. Y.

McCullough Seed Co., The J. Chas.

Cincinnati, Ohio

McHutchison & Co.

New York, N. Y.

Meehan Co., Thomas B.

Dresher, Pa.

Schell, Inc., Walter S.

Harrisburg, Pa.

Vaughan Seed Store

Chicago, Ill.

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Chicago, Ill.

Bartlett Mfg. Co.

Detroit, Mich.

Gardex, Inc.

Michigan City, Ind.

Hamlin Metal Products Co.

Akron, Ohio

Kautenberg Co., W. E.

Freeport, Ill.

Leonard & Son, A. M.

Piqua, Ohio

McCullough Seed Co., The J. Chas.

Cincinnati, Ohio

Union Fork & Hoe Co., The

Columbus, Ohio

Vaughan Seed Store

Chicago, Ill.

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McHutchison & Co.

New York, N. Y.

Vaughan's Seed Store

Chicago, Ill.

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Newark, N. J.

Leonard & Son, A. M.

Piqua, Ohio

### REELS—HOSE

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Anker-Holth Mfg. Co.

Port Huron, Mich.

Leonard & Son, A. M.

Piqua, Ohio

McCullough Seed Co., The J. Chas.

Cincinnati, Ohio

Schell, Inc., Walter S.

Harrisburg, Pa.

Specialty Mfg. Co.

St. Paul, Minn.

Vaughan Seed Store

Chicago, Ill.

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Boyle Co., A. S.

Jersey City, N. J.

Hammond Paint & Chem. Co.

Beacon, N. Y.

Justrite Co.

Milwaukee, Wis.

Le Gear Medicine Co., Dr. L. D.

St. Louis, Mo.

McCullough Seed Co., The J. Chas.

Cincinnati, Ohio

Mechling Bros. Chemicals

Philadelphia, Pa.

One-Spot Co.

Elkridge, Md.

Polk-Miller Products Corp.

Richmond, Va.

Q-W Laboratories, Inc.

Bound Brook, N. J.

Schoemann & Mayer, Inc.

New York, N. Y.

Spratt's Patent, Ltd.

Newark, N. J.

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Chic-Tone Co., Inc.

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Conkey Co., G. E.

Cleveland, Ohio

Land O'Lakes Creameries, Inc.

Minneapolis, Minn.

Lee Co., Geo. H.

Omaha, Nebr.

LeGear Medicine Co., Dr. L. D.

St. Louis, Mo.

Mechling Bros. Chemicals

Philadelphia, Pa.

Merck & Co., Inc.

Rahway, N. J.

One-Spot Co.

Elkridge, Md.

Parke, Davis & Co.

Detroit, Mich.

Pratt Food Co.

Philadelphia, Pa.

Russell Co., I. D.

Kansas City, Mo.

Salsbury's Laboratories, Dr.

Charles City, Iowa

Standard Chem. Mfg. Co.

Omaha, Nebr.

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Chattanooga, Tenn.

Dairy Association Co.

Lyndonville, Vt.

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Omaha, Nebr.

LeGear Medicine Co., Dr. L. D.

St. Louis, Mo.

Lilly Co., The Chas. H.

Seattle, Wash.

McCullough Seed Co., The J. Chas.

Cincinnati, Ohio

Mechling Bros. Chemicals

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Pratt Food Co.

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Hammond Paint & Chem. Co.  
Beacon, N. Y.

Holmes Seed Co.  
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McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio

Scarlett & Co., Wm. G.  
Baltimore, Md.

Schell, Inc., Walter S.  
Harrisburg, Pa.

Vaughan Seed Store  
Chicago, Ill.

Woodruff & Sons, Inc., F. H.  
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California Spray Chemical Corp.  
Elizabeth, N. J.

Goulard & Olena, Inc.  
New York, N. Y.

Hammond Paint & Chem. Co.  
Beacon, N. Y.

Holmes Seed Co.  
Canton, Ohio

McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio

Mechling Bros. Chemicals  
Philadelphia, Pa.

Nott Mfg. Co.  
New York, N. Y.

Protex Industries, Inc.  
New York, N. Y.

Sudbury Laboratory  
South Sudbury, Mass.

Tobacco By-Products & Chem. Corp.  
Louisville, Ky.

Vaughan Seed Store  
Chicago, Ill.

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Bohlender Plant Chemicals, Inc.  
Tipp City, Ohio

California Spray Chemical Corp.  
Elizabeth, N. J.

Goulard & Olena, Inc.  
New York, N. Y.

Hammond Paint & Chem. Co.  
Beacon, N. Y.

LeGear Medicine Co., Dr. L. D.  
St. Louis, Mo.

Mechling Bros. Chemicals  
Philadelphia, Pa.

National Carbon Co., Inc.  
New York, N. Y.

Tanglefoot Co., The  
Grand Rapids, Mich.

Tobacco By-Products & Chemical Corp.,  
Inc.  
Louisville, Ky.

Vaughan Seed Store  
Chicago, Ill.

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Columbus, Ohio

American Florist Supply Co.  
Chicago, Ill.

Atkins & Durbrow, Inc.  
New York, N. Y.

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Elizabeth, N. J.

Douglas Chemical & Supply Co.  
Kansas City, Mo.

Hammond Paint & Chem. Co.  
Beacon, N. Y.

Rat Lunches Co.  
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V & M Products  
Galesburg, Mich.

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Chicago, Ill.

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McCullough Seed Co., The J. Chas.  
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Summers Fertilizer Co., The  
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Caledonia, N. Y.

Gardex, Inc.  
Michigan City, Ind.

Graham & Co., John H.  
New York, N. Y.

Holmes Seed Co., The  
Canton, Ohio

Jackson Mfg. Co.  
Harrisburg, Pa.

Leonard & Son, A. M.  
Piqua, Ohio

McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio

Schell, Inc., Walter S.  
Harrisburg, Pa.

Vaughan's Seed Store  
Chicago, Ill.

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Chicago, Ill.

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McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio

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Nott Mfg. Co.  
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Rorer, Inc., William H.  
Philadelphia, Pa.

Scarlett & Co., Wm. G.  
Baltimore, Md.

Seaboard Seed Co.  
Philadelphia, Pa.

Thompson Co., Wm. T.  
Los Angeles, Calif.

Vaughan Seed Store  
Chicago, Ill.

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Chicago, Ill.

Goulard & Olena, Inc.  
New York, N. Y.

Hammond Paint & Chem. Co.  
Beacon, N. Y.

McCormick Sales Co., The  
Baltimore, Md.

McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio

Mechling Bros. Chemicals  
Philadelphia, Pa.

Protex Industries, Inc.  
New York, N. Y.

Schell, Inc., Walter S.  
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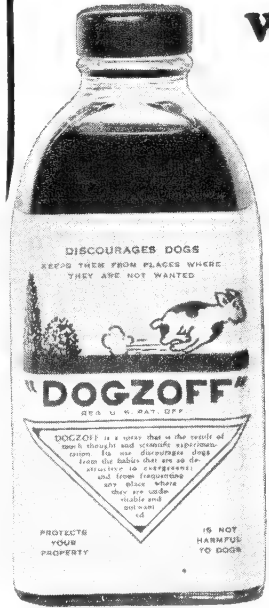
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 Dow Chemical Co.  
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 Garden Products Co.  
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 Cincinnati, Ohio  
 Merck & Co., Inc.  
 Rahway, N. J.  
 Rorer, Inc., William H.  
 Philadelphia, Pa.  
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 Vaughan Seed Store  
 Chicago, Ill.

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 American Florist Supply Co.  
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 Cyclone Seeder Co.  
 Urbana, Ind.  
 Germain Seed & Plant Co.  
 Los Angeles, Calif.  
 Leonard & Son, A. M.  
 Piqua, Ohio  
 McCullough Seed Co., The J. Chas.  
 Cincinnati, Ohio  
 Masters Planter Co.  
 Benton Harbor, Mich.  
 Schell, Inc., Walter S.  
 Harrisburg, Pa.  
 Scarlett & Co., Wm. G.  
 Baltimore, Md.  
 Smith Agri. Chem. Co.  
 Columbus, Ohio

### Swift & Co.

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 Douglas-Guardian Warehouse Corp.  
 Chicago, Ill.  
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 Minneapolis, Minn.  
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 Cleveland, Ohio  
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 Chicago, Ill.  
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 Seattle, Wash.  
 Nolin, W. T.  
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 Dobbins Mfg. Co.  
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 Hamilton, Mich.  
 Masters Planter Co.  
 Benton Harbor, Mich.  
 Nagley Transplanter Co.  
 Memphis, N. Y.  
 Oldmill Paper Products Corp.  
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 Piqua, Ohio  
 McCullough Seed Co., The J. Chas.  
 Cincinnati, Ohio  
 North Wayne Tool Co.  
 Oakland, Me.  
 Peck, Stow & Wilcox Co.  
 Southington, Conn.  
 Smith & Son, Inc., Seymour  
 Oakville, Conn.  
 Tiffany, Carroll R.  
 Conklin, N. Y.  
 Vaughan Seed Store  
 Chicago, Ill.

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 Hamlin Metal Products Co.  
 Akron, Ohio  
 Leonard & Son, A. M.  
 Piqua, Ohio

McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Union Fork & Hoe Co., The  
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Vaughan's Seed Store  
Chicago, Ill.

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Kemp Mfg. Co. (Power)  
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McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
North Wayne Tool Co.  
Oakland, Me.  
Vaughan's Seed Store  
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Jersey City, N. J.  
California Spray Chemical Co.  
Elizabeth, N. J.  
Goulard & Olena, Inc.  
New York, N. Y.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Vaughan Seed Store  
Chicago, Ill.

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Earp-Thomas Lab. Inc.,  
Bloomfield, N. J.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
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Urbana Laboratories, The  
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Sudbury Soil Testing Labs.  
South Sudbury, Mass.

Urbana Laboratories, The  
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Vaughan's Seed Store  
Chicago, Ill.

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Bartlett Mfg. Co.  
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Leonard & Son, A. M.  
Piqua, Ohio  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Union Fork & Hoe Co., The  
Columbus, Ohio  
Vaughan's Seed Store  
Chicago, Ill.

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Leonard & Son, A. M. (Sod)  
Piqua, Ohio  
Stoner-Maurer Co.  
Monroe, Mich.

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Dobbins Mfg. Co.  
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McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Myers & Bro. Co., The F. E.  
Ashland, Ohio  
Vaughan Seed Store  
Chicago, Ill.

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Aeroil Burner Co.  
West New York, N. J.  
American Florist Supply Co.  
Chicago, Ill.

Bartlett Mfg. Co.  
Detroit, Mich.  
Bean Mfg. Co., John  
Lansing, Mich.  
Boyle Co., The A. S.  
Jersey City, N. J.  
Brown Co., E. C.  
Rochester, N. Y.  
Budwig Mfg. Co.  
Burbank, Calif.  
Campbell-Hausfeld Co., The  
Harrison, Ohio  
Champion Sprayer Co.  
Detroit, Mich.

Cyclone Mfg. Co.  
Urbana, Ind.  
Dobbins Mfg. Co.  
Elkhart, Ind.  
Feeny Mfg. Co.  
Muncie, Ind.  
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Gasport, N. Y.

Germain Seed & Plant Co.  
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New York, N. Y.  
Hudson Mfg. Co., H. D.  
Chicago, Ill.

Leonard & Son, A. M.  
Piqua, Ohio  
Lowell Sprayer Co.  
Lowell, Mich.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Myers & Bro. Co., The F. E.  
Ashland, Ohio  
Parco Products Co.  
Allentown, Pa.  
Protex Industries, Inc.  
New York, N. Y.  
Smith & Co., Inc., D. B.  
Utica, N. Y.  
Thompson Co., William T.  
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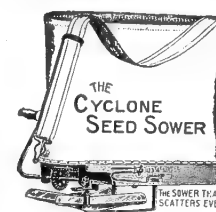
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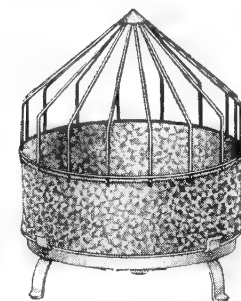
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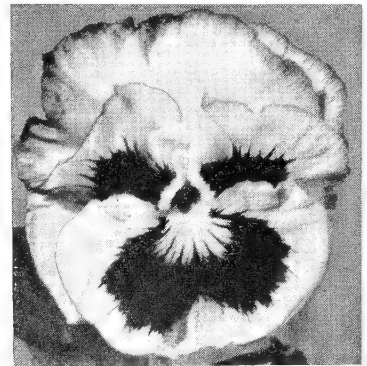
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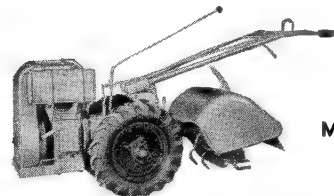


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Grown.

Hybrid Sweet Corn, Idaho grown.  
Onion Southport Yellow Globe,  
Brigham and Golden Globe, all  
Idaho grown.

Ask for our Green List, pricing every-  
thing the seed dealer needs.

### VAUGHAN'S SEED STORE

47 Barclay St.  
New York City

601 W. Jackson Blvd.  
Chicago, Ill.



**Send for CUTS and COPY now!**

**PYROTE.** Rotenone-Pyrethrum concentrated liquid spray.

**SPOR-GO.** Copper Mildew Spray, powder.

**FILMFAST.** Spreads, sticks, stays.

**VEGET-AID.** Complete Plant Food—with granular tobacco stem base.

**ANT POWDER.** Harmless to pets—Rotenone base, kills household and garden ants.

**FLEA POWDER.** Rotenone base—harmless to pets, kills fleas on fur-bearing animals. Quick relief for dogs and cats!

**JAPANESE BEETLE CONTROL PRODUCTS**

*These are just a few of the products forming the complete Mechling line*

Nationally Distributed  Nationally Advertised

**MECHLING BROS. CHEMICALS**  
 Division of General Chemical Company  
 TWELVE SOUTH TWELFTH STREET  
 PHILADELPHIA, PENNA.  
 Sales Offices in Principal Cities

# PETER SLUIS

**Wholesale Vegetable Seeds**

**Mount Vernon, Wash.**

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Spinach

Chinese Cabbage

Beet

Turnip

Rutabaga

and

Cabbage

of high-bred quality for your critical trade.

MT. VERNON

WASH.

**WATERER AND FERTILIZER—ROOT**

- American Florist Supply Co. Chicago, Ill.
- Bartlett Mfg. Co. Detroit, Mich.
- Leonard & Son, A. M. Piqua, Ohio
- McCullough Seed Co., The J. Chas. Cincinnati, Ohio
- Shur-Gro Company Pittsburgh, Pa.
- Scofield Mfg. Co. Cleveland, Ohio
- Sub-Ter-Rain Tool Co. San Francisco, Calif.
- Water Lance Mfg. Co. St. Louis, Mo.

**WATER SYSTEMS**

- Myers & Bro. Co., The F. E. Ashland, Ohio

**WAX—GRAFTING**

- American Florist Supply Co. Chicago, Ill.
- Bartlett Mfg. Co. Detroit, Mich.
- Clark & Son, Walter E. Milford, Conn.
- Leonard & Son, A. M. Piqua, Ohio
- McCullough Seed Co., The J. Chas. Cincinnati, Ohio
- Pubsley & Morrison Yuba City, Calif.
- Schell, Inc., Walter S. Harrisburg, Pa.
- Vaughan Seed Store Chicago, Ill.
- Woodruff & Sons, Inc., F. H. Milford, Conn.

**WEED CUTTERS**

- American Florist Supply Co. Chicago, Ill.
- Gardex, Inc. Michigan City, Ind.
- McCullough Seed Co., The J. Chas. Cincinnati, Ohio
- Union Fork & Hoe Co., The Columbus, Ohio
- Vaughan's Seed Store Chicago, Ill.

**WEED DESTROYERS**

- Aeroil Burner Co., Inc. (Torches) West New York, N. J.
- American Florist Supply Co. Chicago, Ill.
- American Liquid Fertilizer Co., Inc. Marietta, Ohio
- Ansbacher-Siegle Corp. Brooklyn, N. Y.
- Cal. Spray-Chem. Corp. Elizabeth, N. J.
- Chipman Chem. Co., Inc. Bound Brook, N. J.
- Dobbins Mfg. Co. Elkhart, Ind.
- Dow Chemical Co. Midland, Mich.
- Du Pont de Nemours & Co., Inc., E. I. Wilmington, Del.
- Garden Products Co., St. Louis, Mo.
- Goulard & Olena, Inc. New York, N. Y.
- Hammond Paint & Chemical Co. Beacon, N. Y.
- Innis, Speiden & Co. New York, N. Y.
- McCullough Seed Co., The J. Chas. Cincinnati, Ohio
- Mallinckrodt Chem. Works St. Louis, Mo.
- Mechling Bros. Chemicals Philadelphia, Pa.

- Merck & Co., Inc. Rahway, N. J.
- Parco Products Co. Allentown, Pa.
- Reade Mfg. Co. Jersey City, N. J.
- Reade, Inc., Morris B. Belleville, N. J.
- Scarlett & Co., William G. Baltimore, Md.
- Smith Agricultural Chemical Co., The Columbus, Ohio
- Vaughan Seed Store Chicago, Ill.
- Weed-Knell Aurora, Ill.

**WEEDERS**

- Aeroil Burner Co. (Burners) West New York, N. J.
- Allen & Co., Inc., S. L. Philadelphia, Pa.
- American Florist Supply Co. Chicago, Ill.
- Animal Trap Co. of America Lititz, Pa.
- Bartlett Mfg. Co. Detroit, Mich.
- Carter Products Co. Cleveland, Ohio
- Farquhar Co., Ltd., A. B. York, Pa.
- Gardener's Friend Co. Orange, Mass.
- Gardex, Inc. Michigan City, Ind.
- Gilson Co., J. E. Port Washington, Wis.
- Gogel Co., Walter A. Toledo, Ohio
- Hudson Mfg. Co., H. D. Chicago, Ill.
- Imperial Bit & Snap Co. Racine, Wis.
- Johnson, Inc., Wm. Newark, N. J.
- Leonard & Son, A. M. Piqua, Ohio
- McCullough Seed Co., The J. Chas. Cincinnati, Ohio
- Michigan Wire Goods Co. Niles, Mich.
- Norcross & Sons, C. S. Bushnell, Ill.
- North Wayne Tool Co. Oakland, Me.
- Union Fork & Hoe Co., The Columbus, Ohio
- Vaughan Seed Store Chicago, Ill.
- Weed-Knell Aurora, Ill.

**WHEELBARROWS**

- American Florist Supply Co. Chicago, Ill.
- American Steel Scraper Co. Sidney, Ohio
- Fairbanks Co. New York, N. Y.
- Gardener's Friend Co. Orange, Mass.
- Jackson Mfg. Co. Harrisburg, Pa.
- Leonard & Son, A. M. Piqua, Ohio
- McCullough Seed Co., The J. Chas. Cincinnati, Ohio
- Thompson & Sons, O. E. Ypsilanti, Mich.
- Vaughan Seed Store Chicago, Ill.

**YARD FIGURES**

- Lannon Quarries Corp. (Metal) Beaver Dam, Wis.
- Western Stoneware Co. Monmouth, Ill.



# Equipment and Supplies

## ADV. FOR SEEDSMEN

Benton Review Shop  
Fowler, Ind.  
Bodger Seeds, Ltd.  
El Monte, Calif. (Electros, Kodachromes, Nickeltypes, Photographs, Transparencies)  
DeLaMare Co., Inc., A. T.  
New York, N. Y.  
Dubois Press, The  
Rochester, N. Y.  
Hall Printing Co., W. F.  
Chicago, Ill.  
McFarland Publicity Service, The  
Harrisburg, Pa.  
Morse Co., A. B.  
St. Joseph, Mich.  
Schmidt Litho. Co.  
San Francisco, Calif.  
Stecher-Traung Litho. Corp.  
Rochester, N. Y.  
Sweeney, Straub & Dimm,  
Spokane, Wash.  
Wallace-Homestead Co.  
Des Moines, Iowa

## ALFALFA GRINDERS

Hart-Carter Co.  
Minneapolis, Minn.  
Howes Co., Inc., S.  
Silver Creek, N. Y.  
Sedberry, Inc., J. B.  
Franklin, Tenn.

## ASPIRATORS—SEED CORN

Howes Co., Inc., S.  
Silver Creek, N. Y.  
Oliver Mfg. Co.  
St. Louis, Mo.  
Superior Separator Co.  
Minneapolis, Minn.

## BAG CLEANERS

Howes Co., Inc., S.  
Silver Creek, N. Y.  
Oliver Mfg. Co.  
St. Louis, Mo.

## BAG CLOSING MACHINES

Bates Valve Bag Corp. (Wire Tie)  
New York, N. Y.  
Brown Bag Filling Machine Co.  
Fitchburg, Mass.  
Savage Co., W. J.  
Knoxville, Tenn.

## BAG FILLING MACHINES

Brown Bag Filling Machine Co.  
Fitchburg, Mass.  
Frazier & Son  
Belleville, N. J.  
Howes Co., Inc., S.  
Silver Creek, N. Y.  
Richardson Scale Co.  
Clifton, N. J.  
Sidney Grain Machinery Co.  
Sidney, Ohio  
Stokes & Smith Co., The  
Philadelphia, Pa.

## BAG HOLDERS

Bemis Bro. Bag Co.  
St. Louis, Mo.  
Hance Mfg. Co., J. W.  
Westerville, Ohio  
Howes Co., Inc., S.  
Silver Creek, N. Y.  
Richardson Scale Co.  
Clifton, N. J.  
Seedbuero Equipment Co.  
Chicago, Ill.

Sprout, Waldron & Co.  
Muncy, Pa.

## BAG PILERS—CONVEYORS

Farquhar, A. B., Co.  
York, Pa.  
Revolverator Co.  
North Bergen, N. J.

## BAGS—CELLULOSE

Cupples-Hesse Envelope Co.  
St. Louis, Mo.  
Disbrow Mfg. Co.  
Newark, N. J.  
Dow Chemical Co.  
Midland, Mich.

## BAGS—COTTON OR BURLAP

Ames Bag Co.  
Cleveland, Ohio  
Bemis Bro. Bag Co.  
St. Louis, Mo.  
Chase Bag Co.  
Chicago, Ill.  
Cincinnati Bag Co.  
(The J. Chas. McCullough Seed Co.)  
Cincinnati, Ohio  
Dickinson Co., The Albert  
Chicago, Ill.  
Fulton Bag & Cotton Mills  
Atlanta, Ga.  
Hamilton Seed & Coal Co.  
Cedar Rapids, Iowa  
Neahr & Co., M. J.  
Chicago, Ill.  
Progressive Bag Co.  
New Haven, Conn.  
Royal River Mills, Inc.  
Baltimore, Md.

## BAG SEALS

Brooks, Co., E. J.  
Newark, N. J.  
Seedbuero Equipment Co.  
Chicago, Ill.  
Stoffel Seals Co.  
Chicago, Ill.

## BAGS—FRUIT PICKER

Cyclone Seeder Co., Inc., The  
Urbana, Ind.

## BAGS—PAPER

Bates Valve Bag Corp.  
New York, N. Y.  
Bemis Bro. Bag Co.  
St. Louis, Mo.  
Brown Bag Filling Machine Co.  
Fitchburg, Mass.  
Chase Bag Co.  
Chicago, Ill.  
Disbrow Mfg. Co. (Satchel Bottom  
Bags and Packets)  
Newark, N. J.  
Fulton Bag & Cotton Mills  
Atlanta, Ga.  
Miller, Tompkins & Co.  
East Rutherford, N. J.  
Neahr & Co., M. J.  
Chicago, Ill.  
Page Seed Co., The  
Greene, N. Y.  
Wolf Brothers  
Philadelphia, Pa.

## BAGS—SEAMLESS "A"

Bemis Bro. Bag Co.  
St. Louis, Mo.  
Chase Bag Co.  
Chicago, Ill.  
Dickinson Co., The Albert  
Chicago, Ill.



## COTTON BAGS

### That Help You SELL SEED!

The right fabric for the purpose . . . the right design printed on the bags . . . the right price—you get these when you buy AMES sacks.

Leading bag users have been coming to us for cotton bags for 31 years.

Let us figure with you.

*Write for Prices and Samples*

**AMES BAG CO.**  
1991 E. 66th St., Cleveland, O.



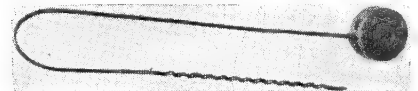
Grip-Lock Seals are now the standard for Seedsmen's use.

These Seals are the best protection against substitution and adulteration. Once locked this seal destroys itself on attempted re-locking.

No Sealing Tool is necessary, Grip-Lock Seals are self-locking.

We also manufacture all sizes of lead and wire seals for attaching tags to bags of seeds.

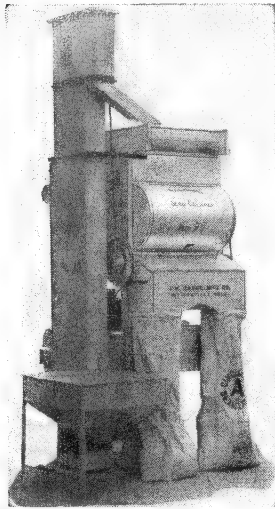
—SAMPLES ON REQUEST—



**E. J. BROOKS COMPANY**  
184 North 13th St., NEWARK, N. J.

# SEED CLEANERS

*The Vac-A-Way*



## CUSTOM SIZE

Available with optional equipment including elevator and hopper.

## FARM SIZE

Easily changed from hand power to electric drive or gasoline or motor.

## SCREENS

Perforated plates and woven wire screens in stock for special seed cleaning requirements.

*Write for Information and Prices!*

**J. W. HANCE MFG. CO.**  
WESTERVILLE OHIO

**FOR SOLVING YOUR  
SEPARATION  
PROBLEMS  
THE SS&S**

**Specific  
Gravity  
Separator**

**SUTTON, STEELE, & STEELE**

**Incorporated**

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London, W. C. 2, England

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Atlanta, Ga.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
Royal River Mills  
Baltimore, Md.

## BAGS—WATERPROOF

Bemis Bro. Bag Co.  
St. Louis, Mo.  
Chase Bag Co.  
Chicago, Ill.  
Fulton Bag & Cotton Mills  
Atlanta, Ga.  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio

## BAG STITCHING MACHINES

Howes Co., Inc., S.  
Silver Creek, N. Y.  
Savage Co., W. J.  
Knoxville, Tenn.  
Union Special Machine Co.  
Chicago, Ill.

## BELTING

Goodrich Rubber Co., B. F.  
Diamond Mechanical Goods Div.  
Akron, Ohio

## BURLAP—NURSERY

Bemis Bro. Bag Co.  
St. Louis, Mo.  
Fulton Bag & Cotton Mills  
Atlanta, Ga.

## CANS—FIBRE AND TIN

American Can Co.  
Chicago, New York & San Francisco  
Hamilton Seed & Coal Co.  
Cedar Rapids, Iowa  
Seedburo Equipment Co.  
Chicago, Ill.  
Sefton Nat'l Fibre Can Co.  
Chicago, Ill.

## CANVAS COVERS

Bemis Bro. Bag Co.  
St. Louis, Mo.  
Chase Bag Co.  
Chicago, Ill.  
Fulton Bag & Cotton Mills  
Atlanta, Ga.

## CARTONS—LITHOGRAPHED

Schmidt Litho. Co.  
San Francisco, Calif.  
Stecher-Traung Lithograph Corp.  
Rochester, N. Y.

## CARTONS—PAPER

Bird & Son  
East Walpole, Mass.  
Container Corp. of America  
Chicago, Ill.  
Disbrow Mfg. Co. (Corrugated)  
Newark, N. J.  
Du Bois Press  
Rochester, N. Y.  
Schmidt Lithograph Co.  
San Francisco, Calif.  
Weaver Mailing Env. & Box Co.  
Philadelphia, Pa.

## CARTONS—PRINTED

Disbrow Mfg. Co.  
Newark, N. J.  
Genesee Valley Lithograph Co.  
Rochester, N. Y.  
Schmidt Lithograph Co.  
San Francisco, Calif.  
Stecher-Traung Lithograph Corp.  
Rochester, N. Y.

## CATALOG COLORED COVERS

Benton Review Shop  
Fowler, Ind.  
DuBois Press, The  
Rochester, N. Y.

Genesee Valley Lithograph Co.  
Rochester, N. Y.  
Hall Printing Co., W. F.  
Chicago, Ill.  
Hart Publications, Inc.  
Minneapolis, Minn.  
McFarland Co., J. Horace  
Harrisburg, Pa.  
Morse Co., A. B.

St. Joseph, Mich.  
Schmidt Lithograph Co.  
San Francisco, Calif.  
Stecher-Traung Lithograph Corp.  
Rochester, N. Y.  
Sweeney, Straub & Dimm,  
Spokane, Wash.  
Wallace-Homestead Co.  
Des Moines, Iowa

## CATALOG ENVELOPES

American Paper Goods Co., The  
Chicago, Ill.  
Brown Bag Filling Machine Co.  
Fitchburg, Mass.  
Cupples-Hesse Corp.  
St. Louis, Mo.  
Disbrow Mfg. Co.  
Newark, N. J.  
Heco Envelope Co.  
Chicago, Ill.  
Outlook Envelope Co.  
Chicago, Ill.

## CATALOG ILLUSTRATIONS

DuBois Press  
Rochester, N. Y.  
Hall Printing Co., W. F.  
Chicago, Ill.  
McFarland Co., J. Horace  
Harrisburg, Pa.  
Morse Co., A. B.  
St. Joseph, Mich.  
Rochester Horticultural Studios  
Rochester, N. Y.  
Schmidt Lithograph Co.  
San Francisco, Calif.  
Sweeney, Straub & Dimm  
Spokane, Wash.

## CATALOG PRINTERS

Benton Review Shop  
(Stock Seed Catalogs)  
Fowler, Ind.  
Byrd Press, Inc., The Wm.  
Richmond, Va.  
DeLaMare Co., Inc., A. T.  
New York, N. Y.  
DuBois Press, The  
Rochester, N. Y.  
Hall Printing Co., W. F.  
Chicago, Ill.  
Hart Publications, Inc.  
Minneapolis, Minn.  
McFarland Co., J. Horace  
Harrisburg, Pa.  
Morse Co., A. B.  
St. Joseph, Mich.  
Schmidt Lithograph Co.  
San Francisco, Calif.  
Sweeney, Straub & Dimm (Stock Seed  
Catalog)  
Portland, Ore.  
Wallace-Homestead Co.  
Des Moines, Iowa

## CEMENT—CANVAS

Albrecht & Co.  
Rowayton, Conn.  
Bemis Bro. Bag Co.  
St. Louis, Mo.  
Donley & Bro., J. L.  
Ashland, Ohio  
Fulton Bag & Cotton Mills  
Atlanta, Ga.  
Val-A Company  
Chicago, Ill.

## CLEANERS—GRAIN AND SEED

American Grain Separator Co.  
Minneapolis, Minn.  
Cleland Mfg. Co.  
Minneapolis, Minn.  
Crippen Mfg. Co.  
Alma, Mich.  
Ferrell & Co., A. T.  
Saginaw, Mich.  
Hance Mfg. Co., J. W.  
Westerville, Ohio  
Howes Co., Inc., S.  
Silver Creek, N. Y.  
Hart-Carter Company  
Minneapolis, Minn.  
Huntley Mfg. Co.  
Brocton, N. Y.  
Majestic Huller & Mfg. Co.  
Minneapolis, Minn.  
Oliver Mfg. Co.  
St. Louis, Mo.  
Rice Seed Co., W. A.  
Jerseyville, Ill.  
Sidney Grain Machinery Co.  
Sidney, Ohio  
Sprout Waldron & Co.  
Muncy, Pa.  
Superior Separator Co.  
Minneapolis, Minn.  
Sutton Steele & Steele, Inc.  
Dallas, Texas

## CLEANERS AND GRADERS— CRACKED CORN

Cleland Mfg. Co.  
Minneapolis, Minn.  
Ferrell & Co., A. T.  
Saginaw, Mich.  
Hance Mfg. Co., J. W.  
Westerville, Ohio  
Howes Co., Inc., S.  
Silver Creek, N. Y.  
Majestic Huller & Mfg. Co.  
Minneapolis, Minn.  
Oliver Mfg. Co.  
St. Louis, Mo.  
Superior Separator Co.  
Minneapolis, Minn.

## COLOR REPRODUCTIONS

Du Bois Press, The  
Rochester, N. Y.  
Genesee Valley Litho. Co.  
Rochester, N. Y.  
McFarland Co., J. Horace  
Harrisburg, Pa.  
Morse Co., A. B.  
St. Joseph, Mich.  
Schmidt Litho. Co.  
San Francisco, Calif.  
Stecher-Traung Litho. Corp.  
Rochester, N. Y.  
Sweeney, Straub & Dimm  
Portland, Ore.

## COMPOST MAKERS

American Florists Supply Co.  
Chicago, Ill.  
Salem Tool Co.  
W-W Grinder Corp.  
Wichita, Kans.

## CORN CRACKERS

Howes Co., Inc., S.  
Silver Creek, N. Y.  
Sedberry, Inc., J. B.  
Franklin, Tenn.

## COUNTERS—STORE

Heller & Co.  
Montpelier, Ohio

## CRUSHERS

Sedberry, Inc., J. B. (Oat)  
Franklin, Tenn.  
Straub Co.  
Philadelphia, Pa.

## DISPLAY RACKS—SEED PACKET

Davis Metal Fixture Co.  
Lansing, Mich.  
Hamilton Mfg. Co.  
Two Rivers, Wis.

## Heller & Co.

Montpelier, Ohio  
Narragansett Machine Co.  
Pawtucket, R. I.  
Union Steel Products Co.  
Albion, Mich.  
Walkerbilt  
Penn Yan, N. Y.  
Worcester Wire Novelty Co., Inc.  
Baltimore, Md.

## DISPLAYS—ILLUMINATED

Bodger Seeds, Ltd.  
El Monte, Calif.  
Rochester Horticultural Studios  
Rochester, N. Y.

## DOCKAGE TESTERS

Hart-Carter Co.  
Minneapolis, Minn.  
Seedburo Equipment Co.  
Chicago, Ill.

## DRIERS—SEED

Howes Co., Inc., S.  
Silver Creek, N. Y.  
Randolph Co., O. W.  
Toledo, Ohio

## DUST COLLECTORS

Howes Co., Inc., S.  
Silver Creek, N. Y.  
Huntley Mfg. Co.  
Brocton, N. Y.  
Ideal Commutator Dresser Co.  
Sycamore, Ill.

## DUST PROTECTORS

Garnett, Herbert (Respirators)  
Maumee, Ohio  
Seedburo Equipment Co.  
Chicago, Ill.

## ELECTROTYPES OF FLOWERS

Bodger Seeds, Ltd.  
El Monte, Calif.  
Morse Co., A. B.  
St. Joseph, Mich.

## ELEVATORS—AIR-LIFT

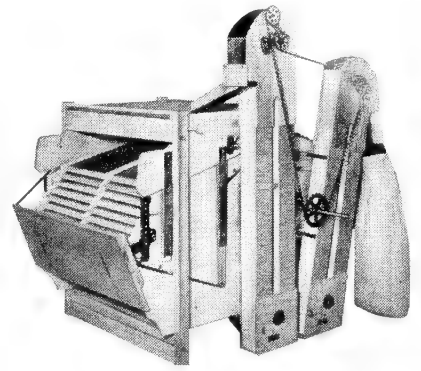
Oliver Mfg. Co.  
St. Louis, Mo.  
ELEVATOR—ELECTRIC  
Davis & Newcomer Electric Elev. Co.  
Fostoria, Ohio  
Farquhar Co., A. B.  
Troy, Pa.

## ENVELOPES

American Paper Goods Co.  
Chicago, Ill.  
Berkowitz Envelope Co.  
Kansas City, Mo.  
Brown Bag Filling Machine Co., The  
Fitchburg, Mass.  
Cupples-Hesse Corp.  
St. Louis, Mo.  
Salem, Ohio  
Disbrow Mfg. Co.  
Newark, N. J.  
Heco Envelope Co.  
Chicago, Ill.  
Heinrich Envelope Co.  
Minneapolis, Minn.  
Miller, Tompkins & Co.  
East Rutherford, N. J.  
Outlook Envelope Co.  
Chicago, Ill.  
Tension Envelope Co.  
Brooklyn, N. Y.  
Weaver Mailing Envelope & Box Co.  
Philadelphia, Pa.  
Wolf Brothers  
Philadelphia, Pa.

## ENVELOPE SEALERS

Arnold, Schuyler  
Coldwater, N. Y.  
Brown Bag Filling Machine Co.  
Fitchburg, Mass.  
Ferguson Co., J. L. (Carton)  
Joliet, Ill.  
Stokes & Smith Co., The  
Philadelphia, Pa.  
Wright-Dalton Machine Co.  
Durham, N. C.



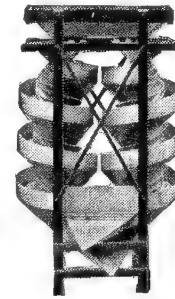
## The Warehouse Seed Cleaner

Designed for general seed cleaning or seed receiving separator. Accurate weight grading. Efficient screening. Large capacity. Very light running. Low priced.

## Expert Rehuller and Scarifier

Rehulls and scarifies any kind of seed with maximum capacity and efficiency.

## The Krussow Double Spiral



For separating round seeds from flat or irregular seeds. Largest capacity—highest efficiency.  
• Also mfg. corn graders and grain cleaners.

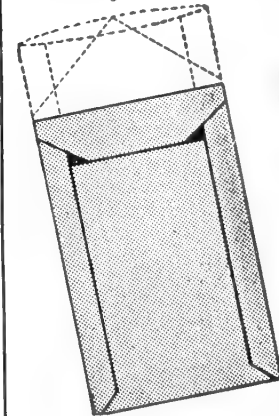
**CLELAND**  
MANUFACTURING CO.  
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## FOR ECONOMY AND SAFETY

mail your seed samples

IN

## SPEAR ENVELOPES



They are strong, secure, non-sifting. Can be had plain or printed.

Sizes from 3 x 4½ to 7 x 11½.

These envelopes must be seen to appreciate their outstanding features.

Send for free samples. We also manufacture catalog and commercial envelopes and letterheads.

**HEINRICH ENVELOPE CO.**  
Manufacturer

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## Your **BUSINESS**

The production of your catalog isn't "just another printing job" to us. Why? . . . simply because **our** business is only as good as **your** business . . . so it's up to us to get **results** for you. To do this, we carefully plan every job on **sound selling ideas**.

This conscientious service has a record of **proven** results.

**The Du Bois Press**  
Rochester, N. Y.  
HORTICULTURAL PRINTERS

## for the Seed Trade



✓ ENVELOPES  
✓ TAGS  
✓ SEED BAGS

WRITE FOR SAMPLES  
AND PRICES . . .

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SAINT LOUIS, MO.



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Saginaw, Mich.  
Hance Mfg. Co., J. W.  
Westerville, Ohio  
Howes Co., Inc., S.  
Silver Creek, N. Y.  
Lewis Seed Co.  
Louisville, Ky.  
Rice Seed Co., W. A.  
Jerseyville, Ill.  
Sidney Grain Machinery Co.  
Sidney, Ohio

**FARM IMPLEMENTS**  
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American Grain Separator Co.  
Minneapolis, Minn.  
Ariens Co.  
Brillion, Wis.  
Case Co., J. I.  
Racine, Wis.  
Hance Mfg. Co., J. W.  
Westerville, Ohio

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Douglas-Guardian Warehouse Corp.  
Chicago, Ill.

**FINANCING**  
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Chicago, Ill.  
Douglas-Guardian Warehouse Corp.  
Chicago, Ill.

**FUMIGATION**  
(See Fumigants Under Resale  
Merchandise)

**GERMINATORS**  
Bridges Mfg. Co.  
Bedford, Iowa  
Herbst Bros.  
New York, N. Y.  
Seedbuero Equipment Co.  
Chicago, Ill.  
Specialty Mfg. Co.  
St. Paul, Minn.  
Standard Scientific Supply Corp.  
New York, N. Y.

**GRADERS—BEAN**  
Ferrell & Co., A. T.  
Saginaw, W. S., Mich.  
Hance Mfg. Co., J. W.  
Westerville, Ohio  
Hart-Carter Co.  
Minneapolis, Minn.  
Howes Co., Inc., S.  
Silver Creek, N. Y.  
Oliver Mfg. Co.  
St. Louis, Mo.  
Sutton Steele & Steele, Inc.  
Dallas, Texas

**GRADERS—CORN**  
Auto Compressor Co.  
Wilmington, Ohio  
Cleland Mfg. Co.  
Minneapolis, Minn.  
Ferrell & Co., A. T.  
Saginaw, W. S., Mich.  
Hamilton Seed & Coal Co.  
Cedar Rapids, Iowa  
Hance Mfg. Co., J. W.  
Westerville, Ohio  
Hart-Carter Co.  
Minneapolis, Minn.  
Hogmoe Mfg. Co.  
Minneapolis, Minn.  
Howes Co., Inc., S.  
Silver Creek, N. Y.

Majestic Huller & Mfg. Co.  
Minneapolis, Minn.  
Oliver Mfg. Co.  
St. Louis, Mo.  
Superior Separator Co.  
Minneapolis, Minn.  
Sutton Steele & Steele, Inc.  
Dallas, Texas

**GRAIN MILLS**  
Ferrell & Co., A. T.  
Saginaw, Mich.  
Hart-Carter Co.  
Minneapolis, Minn.  
Howes Co., Inc., S.  
Silver Creek, N. Y.  
Oliver Mfg. Co.  
St. Louis, Mo.  
Superior Separator Co.  
Minneapolis, Minn.

**GRAIN AND SEED TREATING  
EQUIPMENT**  
Bayer-Semesan Co., Inc.  
Wilmington, Del.  
Hance Mfg. Co., J. W.  
Westerville, Ohio  
Howes Co., Inc., S.  
Silver Creek, N. Y.  
Oliver Mfg. Co.  
St. Louis, Mo.  
Seedbuero Equipment Co.  
Chicago, Ill.

**GREENHOUSES**  
American-Moninger Greenhouse Mfg.  
Co.  
Brooklyn, N. Y.  
Foley Greenhouse Mfg. Co.  
Forest Park, Ill.  
Lord & Burnham Co.  
Irvington, N. Y.  
Metropolitan Greenhouse Mfg. Corp.  
Brooklyn, N. Y.  
Yoho & Hooker  
Youngstown, Ohio

**GRINDERS—FEED**  
Anglo-American Mill Co.  
Owensboro, Ky.  
Case Co., J. I.  
Racine, Wis.  
Fairbanks, Morse & Co.  
Chicago, Ill.  
Hogmoe Mfg. Co.  
Minneapolis, Minn.  
Patch, Inc., A. H.  
Clarksville, Tenn.  
Sedberry, Inc., J. B.  
Franklin, Tenn.

**GRADERS—BEAN**  
Straub Co.  
Philadelphia, Pa.  
W-W Grinder Corp.  
Wichita, Kans.

**HAMMER MILLS**  
Case Co., J. I.  
Racine, Wis.  
Sedberry, Inc., J. B.  
Franklin, Tenn.

**HORTICULTURAL ADVERTISING**  
Hall Printing Co., W. F.  
Chicago, Ill.  
McFarland Publicity Service  
Harrisburg, Pa.  
Morse Co., A. B.  
St. Joseph, Mich.

**HORTICULTURAL COLOUR  
CHART**  
Bodger Seeds, Ltd.  
El Monte, Calif.

**HORTICULTURAL PRINTING**  
Du Bois Press, The  
Rochester, N. Y.  
Hall Printing Co., W. F.  
Chicago, Ill.  
Hart Publications, Inc.  
Minneapolis, Minn.

McFarland Organizations  
Harrisburg, Pa.  
Morse Co., A. B.  
St. Joseph, Mich.  
Schmidt Lithograph Co.  
San Francisco, Calif.  
Sweeney, Straub & Dimm  
Portland, Ore.

**HULLERS**

American Grain Separator Co.  
Minneapolis, Minn.  
Cleland Mfg. Co.  
Minneapolis, Minn.  
Ferrell & Co., A. T.  
Saginaw, Mich.  
Hart-Carter Company  
Minneapolis, Minn.  
Howes Co., Inc., S.  
Silver Creek, N. Y.  
Majestic Huller & Mfg. Co.  
Minneapolis, Minn.  
Superior Separator Co.  
Minneapolis, Minn.

**INVENTORY WAREHOUSING**

Banks, Warehouses Inc., Wm. H.  
Chicago, Ill.  
Douglas-Guardian Warehouse Corp.  
Chicago, Ill.

**KODACHROMES**

Bodger Seeds, Ltd.  
El Monte, Calif.

**LABELS**

Du Bois Press, The  
Rochester, N. Y.  
Morse Co., A. B.  
St. Joseph, Mich.  
Schmidt Lithograph Co.  
San Francisco, Calif.  
Stecher-Traung Litho. Corp.  
Rochester, N. Y.

**LABELS—CAN**

Morse Co., A. B.  
St. Joseph, Mich.  
Schmidt Lithograph Co.  
San Francisco, Calif.  
Stecher-Traung Litho. Corp.  
Rochester, N. Y.

**LABELS AND HANGERS—BOX**

Genesee Valley Lithograph Co.  
Rochester, N. Y.  
Morse Co., A. B.  
St. Joseph, Mich.  
Schmidt Litho. Co.  
San Francisco, Calif.  
Stecher-Traung Litho. Corp.  
Rochester, N. Y.

**LABORATORY EQUIPMENT**

Heller & Co.  
Montpelier, Ohio  
Howes Co., Inc., S.  
Silver Creek, N. Y.  
Seedburo Equipment Co.  
Chicago, Ill.  
Specialty Mfg. Co.  
St. Paul, Minn.  
Standard Scientific Supply Co.  
New York, N. Y.  
Straub Co.  
Philadelphia, Pa.  
Torsion Balance Co.  
New York, N. Y.  
Troemner, Henry  
Philadelphia, Pa.

**MAILING ENVELOPES**

American Paper Goods Co., The  
Chicago, Ill.  
Bemis Bro. Bag Co.  
St. Louis, Mo.  
Brown Bag Filling Machine Co.  
Fitchburg, Mass.  
Disbrow Mfg. Co.  
Newark, N. J.  
Outlook Envelope Co.  
Chicago, Ill.

**MICE—PROOF SEED CASES**

Heller & Co.  
Montpelier, Ohio

**MIXERS—MOLASSES**

Sedberry, Inc., J. B.  
Franklin, Tenn.

**MOISTURE TESTERS**

Seedburo Equipment Co.  
Chicago, Ill.

**NICKELTYPES**

Bodger Seeds, Ltd.  
El Monte, Calif.  
Morse Co., A. B.  
St. Joseph, Mich.

**NOVELTY MAILING ENVELOPES**

American Paper Goods Co.  
Chicago, Ill.  
Brown Bag Filling Machine Co.  
Fitchburg, Mass.  
Disbrow Mfg. Co.  
Newark, N. J.

**OAT CRUSHERS**

Howes Co., Inc., S.  
Silver Creek, N. Y.  
Sedberry, Inc., J. B.  
Franklin, Tenn.

**PACKAGING MACHINERY—FEED**

Frazier & Son  
Belleville, N. J.  
Howes Co., Inc., S.  
Silver Creek, N. Y.  
Huntley Mfg. Co.  
Brocton, N. Y.  
Richardson Scale Co.  
Clifton, N. J.

**PACKAGING SCALES**

Detecto Scales, Inc.  
Brooklyn, N. Y.  
Seedburo Equipment Co.  
Chicago, Ill.  
Troemner, Henry  
Philadelphia, Pa.

**PACKET FILLING**

Brown Bag Filling Machine Co., The  
Fitchburg, Mass.  
Ferguson Co., J. L.  
Joliet, Ill.  
Frazier & Son  
Belleville, N. J.  
Wright-Dalton Machine Co.  
Durham, N. C.

**SAMPLE BAGS**

Bemis Bro. Bag Co.  
St. Louis, Mo.  
Disbrow Mfg. Co.  
Newark, N. J.  
Fulton Bag & Cotton Mills  
Atlanta, Ga.

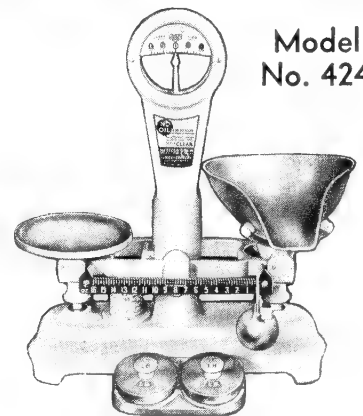
**SAMPLE CASES**

Hamilton Mfg. Co.  
Two Rivers, Wis.  
Heller & Co.  
Montpelier, Ohio  
Knickerbocker Case Co.  
Chicago, Ill.  
Seedburo Equipment Co.  
Chicago, Ill.

**SAMPLE ENVELOPES—SEED**

American Paper Goods Co.  
Chicago, Ill.  
Bemis Bro. Bag Co.  
St. Louis, Mo.  
Berkowitz Envelope Co.  
Kansas City, Mo.  
Brown Bag Filling Machine Co.  
Fitchburg, Mass.  
Cupples-Hesse Corp.  
St. Louis, Mo.  
Disbrow Mfg. Co., Inc.  
Newark, N. J.

**DETECTO-GRAM  
Seed Scale  
Stops Losses  
Speeds Packaging**

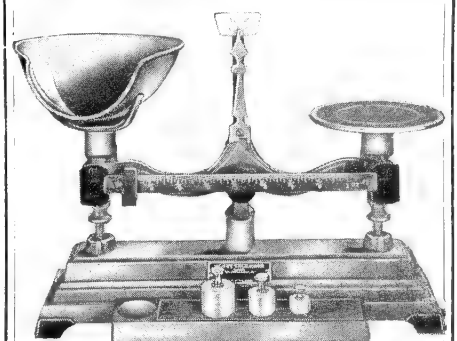


Model No. 424

Shows slightest overweight. Wide travel indicator shows fraction of an ounce clearly. Save time and money with one of many Detecto-Gram scales. Write now for complete information.

**DETECTO-GRAM SCALES**

div. of Detecto Scales, Inc.  
Scale Makers Since 1900  
Representatives in all principal cities  
**3 MAIN ST., BROOKLYN, N. Y.**



No. 7857 SCALE

**Henry Troemner**

Manufacturer

Fine Balances, Scales,  
Weights for Testing  
and Grading of Seed,  
Grain, etc.

Sensitive to 1/128 ounce

Many Types for Many Uses

EST. 1840

CIRCULAR "S"

911 ARCH ST. PHILA., PA.

Heco Envelope Co.  
Chicago, Ill.  
Heinrich Envelope Co.  
Minneapolis, Minn.  
Miller, Tompkins & Co.  
East Rutherford, N. J.  
Stecher-Traung Lithograph Corp.  
Rochester, N. Y.  
Weaver Mailing Envelope & Box Co.  
Philadelphia, Pa.

**SAMPLE PANS**  
Seedbuero Equipment Co.  
Chicago, Ill.

**SCALE COVERS—CANVAS**  
Bemis Bro. Bag Co.  
St. Louis, Mo.

**SCALES—AUTOMATIC**  
Detecto Scales, Inc.  
Brooklyn, N. Y.  
Exact Weight Scale Co., The  
Columbus, Ohio  
Fairbanks, Morse & Co.  
Chicago, Ill.  
Howes Co., Inc., S.  
Silver Creek, N. Y.  
Richardson Scale Co.  
Clifton, N. J.  
Toledo Scale Co.  
Toledo, Ohio  
Torsion Balance Co.  
New York, N. Y.  
Troemner, Henry  
Philadelphia, Pa.

**SCALES—COUNTER OR PLAT-  
FORM**  
Detecto Scales, Inc.  
Brooklyn, N. Y.  
Exact Weight Scale Co., The  
Columbus, Ohio  
Howes Co., Inc., S.  
Silver Creek, N. Y.

Ralston Scale Co.  
Columbus, Ohio  
Seedbuero Equipment Co.  
Chicago, Ill.  
Toledo Scale Co.  
Toledo, Ohio  
Torsion Balance Co.  
New York, N. Y.  
Triner Sales Co.  
Chicago, Ill.  
Troemner, Henry  
Philadelphia, Pa.

**SCALES—LABORATORY**  
Detecto Scales, Inc.  
Brooklyn, N. Y.  
Exact Weight Scale Co., The  
Columbus, Ohio  
Seedbuero Equipment Co.  
Chicago, Ill.  
Standard Scientific Supply Corp.  
New York, N. Y.  
Torsion Balance Co.  
New York, N. Y.  
Troemner, Henry  
Philadelphia, Pa.

**SCARIFIERS**  
Allis-Chalmers Mfg. Co.  
Milwaukee, Wis.  
American Grain Separator Co.  
Minneapolis, Minn.  
Cleland Mfg. Co.  
Minneapolis, Minn.  
Ferrell & Co., A. T.  
Saginaw, Mich.  
Howes Co., Inc., S.  
Silver Creek, N. Y.  
Majestic Huller & Mfg. Co.  
Minneapolis, Minn.  
Savage Co., W. J.  
Knoxville, Tenn.  
Superior Separator Co.  
Minneapolis, Minn.

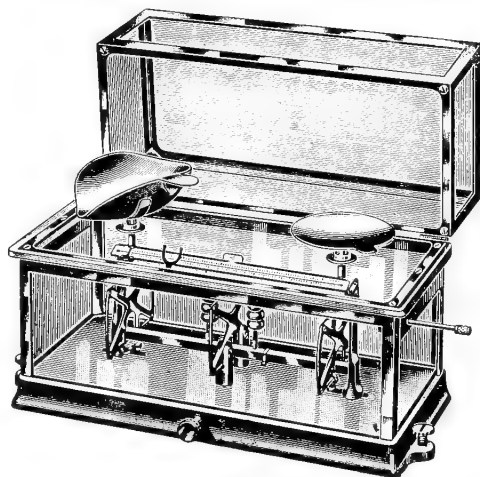
**SCOOPS**  
Detecto Scales, Inc.  
Brooklyn, N. Y.  
Michigan Wire Goods Co. (Wire)  
(Potato, Corn, Apple)  
Niles, Mich.  
Seedbuero Equipment Co.  
Chicago, Ill.  
Troemner, Henry  
Philadelphia, Pa.  
Union Fork & Hoe Co., The  
Columbus, Ohio

**SCREENS**  
Cleland Mfg. Co.  
Minneapolis, Minn.  
Ferrell & Co., A. T.  
Saginaw, Mich.  
Hance Mfg. Co., J. W.  
Westerville, Ohio  
Howes Co., Inc., S.  
Silver Creek, N. Y.  
Huntley Mfg. Co.  
Brocton, N. Y.  
Oliver Mfg. Co. (Anti-Gravity)  
St. Louis, Mo.  
Seedbuero Equipment Co.  
Chicago, Ill.  
Sutton, Steele & Steele, Inc.  
Dallas, Texas

**SEALS**  
American Casting & Mfg. Corp.  
Brooklyn, N. Y.  
Bates Valve Bag Corp. (Wire Tie)  
New York, N. Y.  
Brooks Co., E. J.  
Newark, N. J.  
Porter Safety Seal Co.  
Chicago, Ill.  
Protecto-Seal Co.  
Orchard Park, N. Y.  
Stoffel Seals Co.  
Chicago, Ill.

## TORSION BALANCES

For Grain, Seed Testing, Laboratory  
Work, etc.

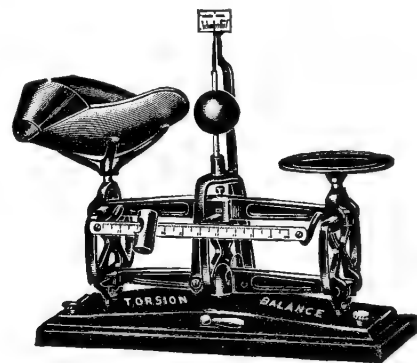


No. 5055

For determination of percentage of damaged kernels; foreign material other than dockage; wheat of other classes; acidity test of corn, etc. Extensively used by U. S. Dept. of Agriculture, Grain and Seed Industry, Etc.

**Capacity** ..... 120 grams  
**Sensitiveness** ..... 2 mg.  
**Scoop** ..... 4 x 3 1/8 x 1 3/8 inches deep  
**Graduated Beam** ..... 0 to 1 gram by 1/100th gram graduations, or if specified, 0 to 500 mg. by 5 mg. graduations.

No Small Weights Required



Nos. 4000, 4005

Designed according to suggestions of the U. S. Department of Agriculture expressly for the determination of moisture in grain.

**Capacity** ..... 1 kg. (2 lb.)  
**Graduated Beam** ..... 0 to 10 grams by 1/10th gram graduations.  
**Brass Scoop** ..... 10 1/2 x 5 1/2 x 2 1/2 inches deep

Send for bulletin No. 575

**THE TORSION BALANCE CO.**

### SALES OFFICES

92 Reade Street, New York City  
228 N. La Salle Street, Chicago  
1400—16th Street, San Francisco

Factory: 147-153 Eighth St., Jersey City, N. J.

### SEED BINS

Heller & Co.  
Montpelier, Ohio

### SEED CASES

Davis Metal Fixture Co.  
Lansing, Mich.

Heller & Co.  
Montpelier, Ohio

### SEED CORN GRADERS (ROTARY)

Hance Mfg. Co., J. W.  
Westerville, Ohio

### SEED EXTRACTORS—SPIRAL

Cleland Mfg. Co.  
Minneapolis, Minn.

Hance Mfg. Co., J. W.  
Westerville, Ohio

Howes Co., Inc., S.  
Silver Creek, N. Y.

### SEED MEASURING CUPS

Condon Bros. Seedsmen  
Rockford, Ill.

Seedburo Equipment Co.  
Chicago, Ill.

### SEED PACKETS—KRAFT

American Paper Goods Co., The  
Chicago, Ill.

Brown Bag Filling Machine Co., The  
Fitchburg, Mass.

Cupples Hesse Corp.  
St. Louis, Mo.

Disbrow Mfg. Co.  
Newark, N. J.

### SEED SEPARATORS

Ferrell & Co., A. T.  
Saginaw, Mich.

Hance Mfg. Co., J. W.  
Westerville, Ohio

Hart-Carter Co.  
Minneapolis, Minn.

Howes Co., Inc., S.  
Silver Creek, N. Y.

Oliver Mfg. Co.  
St. Louis, Mo.

Rice Seed Co., W. A.  
Jerseyville, Ill.

Sidney Grain & Machinery Co.  
Sidney, Ohio

Superior Separator Co.  
Minneapolis, Minn.

Sutton, Steele & Steele, Inc.  
Dallas, Texas

### SEED SIEVES

Ferrell & Co., A. T.  
Saginaw, Mich.

Hance Mfg. Co., J. W.  
Westerville, Ohio

Howes Co., Inc., S.  
Silver Creek, N. Y.

Seedburo Equipment Co.  
Chicago, Ill.

### SEED TESTING—COMMERCIAL

Commercial Seed Laboratory  
Washington, D. C., and Toledo, Ohio

International Seed, Inc.  
New York, N. Y.

Standard Reference Laboratory  
Ames, Iowa

Montgomery Seed Laboratory  
Montgomery, Ala.

National Seed Laboratory  
Toledo, Ohio

Ransom Seed Laboratory  
Los Angeles, Calif.

### SEED TESTING EQUIPMENT

Hance Mfg. Co., J. W.  
Westerville, Ohio

Howes Co., Inc., S.  
Silver Creek, N. Y.

Seedburo Equipment Co.  
Chicago, Ill.

### SEED TREATER

American Grain Separator Co.  
Minneapolis, Minn.

Ben Gustafson Seed Grain Machinery  
Co.

Fargo, N. Dak.

Hance Mfg. Co., J. W.  
Westerville, Ohio

Oliver Mfg. Co.  
St. Louis, Mo.

Seedburo Equipment Co.  
Chicago, Ill.

### SEED TREATING EQUIPMENT

Bayer-Semesan Co., Inc.  
Wilmington, Dela.

Hance Mfg. Co., J. W.  
Westerville, Ohio

Oliver Mfg. Co.  
St. Louis, Mo.

Seedburo Equipment Co.  
Chicago, Ill.

### SEED TRIERS

Seedburo Equipment Co.  
Chicago, Ill.

### SEPARATORS—GRAVITY

Oliver Mfg. Co.  
St. Louis, Mo.

Sutton, Steele & Steele, Inc.  
Dallas, Texas

### SEWING MACHINES—BAG

Union Special Machine Co.  
Chicago, Ill.

### SHAKING SHOES

Oliver Mfg. Co.  
St. Louis, Mo.

### SHEETING AND BURLAP FOR SHADE

Bemis Bro. Bag Co.  
St. Louis, Mo.

# Exact Weight Scales

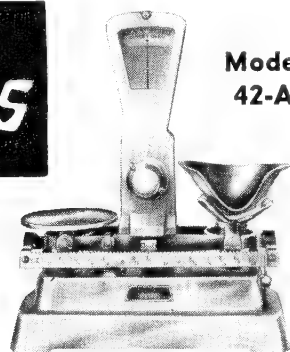
*Helping the SEEDMEN  
do their War Job . . .*

Victory gardens and fields are no longer talk . . . they are actual facts and necessities. Food wins wars!

Your war job is selling the seed for this big effort. When you weigh your seed use EXACT WEIGHT Scales for speed and accuracy. They get your orders out fast and at a profit. These scales are the same reliable units they have always been.

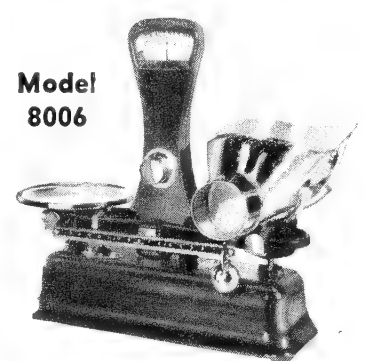
Remember this when you buy a scale. It takes a real scale to sell seed over the counter from bulk and do it at a profit.

*Write for our complete 1943  
illustrated seed scale catalog  
—do it before the busy season  
opens.*



Model  
42-A

EXACT WEIGHT Scale Model 42-A. Recommended for over-the-counter sales of expensive and costly flower seed, or packaging flower seeds. Equipped with open scoop. Accurate to 1/100 oz. Capacity to 1 lb.

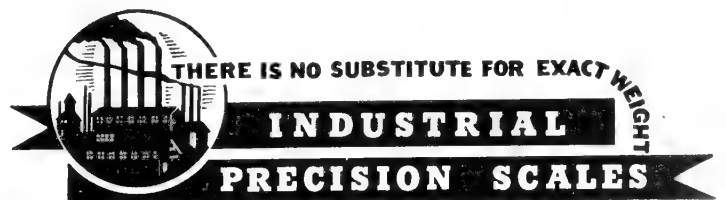


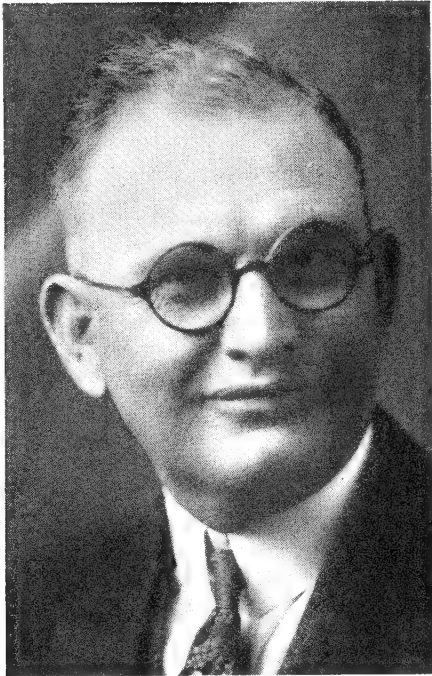
Model  
8006

EXACT WEIGHT Scale Model 8006. Recommended for packaging garden seeds or large orders of flower seeds. Nile blue or white as preferred. Equipped with funnel scoop. Accurate to 1/8 oz. Capacity to 12 lbs.

## The Exact Weight Scale Company

18 W. Fifth Ave., Columbus, Ohio





D. H. GILBERT

Founder in 1899 of the Reliable  
**D. H. GILBERT SEED CO.**

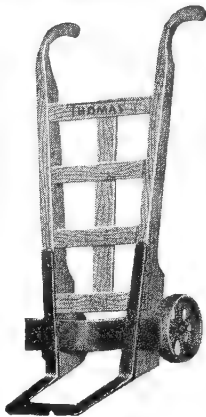
**GROWERS of  
WATERMELONS**

Expressly for Seed Purposes—Inbred True  
to Type Stock

**MONTICELLO, FLORIDA**  
Home of the WATERMELON

## BAG TRUCKS

A very popular bag truck, probably more widely used for all kinds of bag handling than any other. Has a one-piece cast steel nose with ample wheel guards, smooth and strong. Model 25A pictured. Several others.



## PLATFORM TRUCKS

Heavy, rigid; a size to meet every requirement. Strong angle steel frame welded into a one-piece unit with running gear supports. Smooth hardwood boards laid flush inside angle frame. Built to give long service.



No. 360-S Series

# THOMAS

**TRUCK & CASTER CO.**

4301 Mississippi River Keokuk, Iowa

**Fulton Bag & Cotton Mills**  
Atlanta, Ga.

### SHELLERS—CORN

Hamilton Seed & Coal Co.  
Cedar Rapids, Iowa  
Hart-Carter Co.  
Minneapolis, Minn.  
Howes Co., Inc., S.  
Silver Creek, N. Y.  
Messinger Mfg. Co.  
Tatamy, Pa.

### SIEVE DRIVES

Howes Co., Inc., S.  
Silver Creek, N. Y.

### SORTERS—BEET SEED

Ferrell & Co., A. T.  
Saginaw, Mich.

### SORTERS—CORN

Howes Co., Inc., S.  
Silver Creek, N. Y.  
Universal Hoist & Mfg. Co.  
Cedar Falls, Iowa

### STORE FIXTURES

Davis Metal Fixtures Co.  
Lansing, Mich.  
Heller & Co.  
Montpelier, Ohio  
Narragansett Machine Co.  
Pawtucket, R. I.  
National Cash Register Co.  
Dayton, Ohio  
Stackbin Corp.  
Providence, R. I.  
Walkerbilt  
Penn Yan, N. Y.

### TABLES—BEAN HAND PICKING

Crippen Mfg. Co.  
Alma, Mich.  
Ferrell & Co., A. T. (Hand and Power)  
Saginaw, Mich.

### TAGS—SHIPPING

American Florists Supply Co.  
Chicago, Ill.  
Benton Review Shop  
Fowler, Ind.  
Campbell Box & Tag Co.  
South Bend, Ind.  
Central Tag Co.  
Chicago, Ill.  
Cupples-Hesse Corp.  
St. Louis, Mo.  
Dennison Mfg. Co.  
Framingham, Mass.  
Disbrow Mfg. Co.  
Newark, N. J.  
Morse Co., A. B.  
St. Joseph, Mich.  
Perma Tag Co.  
Grand Rapids, Mich.

### TARPAULINS

Bemis Bro. Bag Co.  
St. Louis, Mo.

**Fulton Bag & Cotton Mills**  
Atlanta, Ga.

### TESTERS—SEED CORN

Howes Co., Inc., S.  
Silver Creek, N. Y.  
Seedbuero Equipment Co.  
Chicago, Ill.  
Specialty Mfg. Co.  
St. Paul, Minn.

### THERMOSTATS AND WAFERS

Brower Mfg. Co.  
Quincy, Ill.  
Cyclone Mfg. Co.  
Urbana, Ind.  
Hudson Mfg. Co., H. D.  
Chicago, Ill.  
Lyon Electric Co.  
San Diego, Calif.  
National Ideal Co.  
Toledo, Ohio

### THRESHERS—SEED

Allis-Chalmers Mfg. Co.  
Milwaukee, Wis.  
American Grain Separator Co.  
Minneapolis, Minn.  
Caledonia Bean Harvester Works  
Caledonia, N. Y.  
Case Co., J. I.  
Racine, Wis.  
Howes Co., Inc., S.  
Silver Creek, N. Y.  
International Harvester Co.  
Chicago, Ill.  
Messinger Mfg. Co.  
Tatamy, Pa.  
Koger Pea & Bean Thresher Co.  
Morristown, Tenn.  
Pioneer Thresher Co.  
Shortsville, N. Y.

### TILLERS

Ariens Co.  
Brillion, Wis.

### TRIERS—BAG OR CAR

Seedbuero Equipment Co.  
Chicago, Ill.

### TRUCKS—WAREHOUSE

American Florists Supply Co.  
Chicago, Ill.  
Fairbanks Company  
New York, N. Y.  
Nutting Truck Co.  
Faribault, Minn.  
Revolvator Co.  
North Bergen, N. J.  
Seedbuero Equipment Co.  
Chicago, Ill.  
Steubing Truck Co.  
Cincinnati, Ohio

**FOR A BETTER  
STORE LAYOUT  
IT'S  
HELLER  
MODERN STORE  
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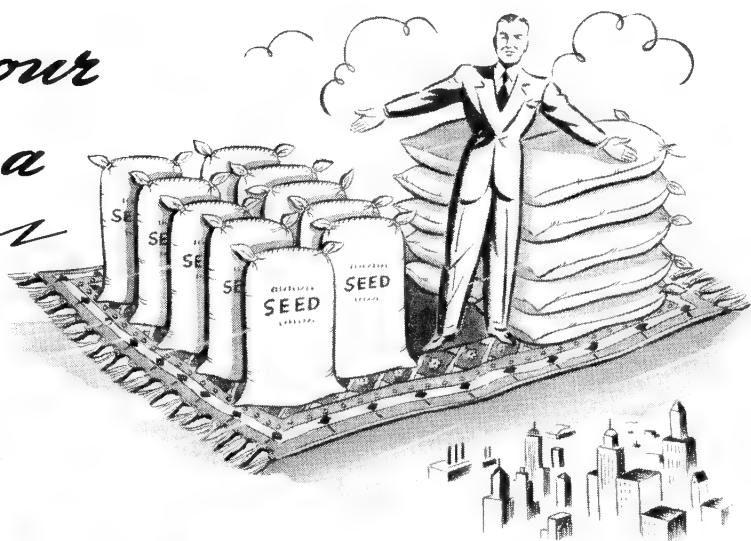
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# TOLERANCE TABLES TO BE USED IN CONNECTION WITH THE ENFORCEMENT OF THE FEDERAL SEED ACT

(Seedsmen should remember that the tolerances are not for the purpose of permitting labeling to show higher quality than is actually found by test. The tolerances are provided to take care of the unavoidable variation in the results of tests and difficulty in bringing seed to uniform quality. It would be the part of wisdom to label the seed as indicated by test and certainly not to show higher quality than is indicated by test. There are numerous indications that seedsmen are applying the tolerance to the results of tests when labeling seed for shipment in interstate commerce. This is certain to lead to difficulty. The seedsman will need the protection of the tolerance if he labels the seed on the basis of the results of a test. If the tolerance is applied prior to labeling the seed, the seedsman in effect deprives himself of the protection of the tolerance.)

**TABLE OF TOLERANCE FOR PURE SEED VARIATIONS FOR OTHER THAN CERTAIN CHAFFY GRASSES**

Value %	.00	.10	.20	.30	.40	.50	.60	.70	.80	.90	Value %
100	.60										100
99	.79	.77	.75	.73	.71	.69	.67	.65	.63	.61	99
98	.99	.97	.95	.93	.91	.89	.87	.85	.83	.81	98
97	1.18	1.16	1.14	1.12	1.10	1.08	1.06	1.05	1.04	1.01	97
96	1.36	1.34	1.33	1.31	1.29	1.27	1.25	1.23	1.21	1.20	96
95	1.55	1.52	1.50	1.48	1.46	1.45	1.44	1.42	1.40	1.38	95
94	1.72	1.71	1.69	1.67	1.65	1.63	1.62	1.60	1.58	1.56	94
93	1.90	1.88	1.86	1.85	1.83	1.81	1.79	1.78	1.76	1.74	93
92	2.07	2.05	2.03	2.02	2.00	1.98	1.96	1.95	1.93	1.91	92
91	2.23	2.22	2.20	2.18	2.17	2.15	2.13	2.12	2.10	2.08	91
90	2.40	2.38	2.36	2.35	2.33	2.31	2.30	2.28	2.27	2.25	90
89	2.55	2.54	2.52	2.51	2.49	2.47	2.46	2.44	2.43	2.41	89
88	2.71	2.67	2.68	2.66	2.65	2.63	2.62	2.60	2.58	2.57	88
87	2.86	2.84	2.83	2.81	2.80	2.78	2.77	2.75	2.74	2.72	87
86	3.00	2.99	2.97	2.96	2.95	2.92	2.92	2.90	2.89	2.87	86
85	3.15	3.13	3.12	3.10	3.09	3.07	3.06	3.05	3.03	3.02	85
84	3.28	3.27	3.26	3.24	3.23	3.21	3.20	3.19	3.17	3.16	84
83	3.42	3.40	3.39	3.38	3.36	3.35	3.34	3.32	3.31	3.30	83
82	3.55	3.53	3.52	3.51	3.50	3.48	3.47	3.46	3.44	3.43	82
81	3.67	3.66	3.65	3.64	3.62	3.61	3.60	3.59	3.57	3.56	81
80	3.80	3.78	3.77	3.76	3.75	3.73	3.72	3.71	3.70	3.68	80
79	3.91	3.90	3.89	3.88	3.87	3.85	3.84	3.83	3.82	3.81	79
78	4.03	4.02	4.00	3.99	3.98	3.97	3.96	3.95	3.94	3.92	78
77	4.14	4.13	4.12	4.10	4.09	4.08	4.07	4.06	4.05	4.04	77
76	4.24	4.23	4.22	4.21	4.20	4.19	4.18	4.17	4.16	4.15	76
75	4.35	4.33	4.32	4.31	4.30	4.29	4.28	4.27	4.26	4.25	75
74	4.44	4.43	4.42	4.41	4.40	4.39	4.38	4.37	4.36	4.35	74
73	4.54	4.53	4.52	4.51	4.50	4.49	4.48	4.47	4.46	4.45	73
72	4.63	4.62	4.61	4.60	4.59	4.58	4.57	4.56	4.55	4.55	72
71	4.71	4.70	4.70	4.69	4.68	4.67	4.66	4.65	4.64	4.64	71
70	4.80	4.79	4.78	4.77	4.76	4.75	4.75	4.74	4.73	4.72	70
69	4.87	4.87	4.86	4.85	4.84	4.83	4.83	4.82	4.81	4.80	69
68	4.95	4.94	4.93	4.93	4.92	4.91	4.90	4.90	4.89	4.88	68
67	5.02	5.01	5.00	5.00	4.99	4.98	4.98	4.97	4.96	4.95	67
66	5.08	5.08	5.07	5.06	5.06	5.05	5.04	5.04	5.03	5.02	66
65	5.15	5.14	5.13	5.13	5.12	5.11	5.11	5.10	5.10	5.09	65
64	5.20	5.20	5.19	5.19	5.18	5.17	5.17	5.16	5.16	5.15	64
63	5.26	5.25	5.25	5.24	5.24	5.23	5.23	5.22	5.21	5.21	63
62	5.31	5.30	5.30	5.29	5.29	5.28	5.28	5.27	5.27	5.26	62
61	5.35	5.35	5.34	5.34	5.34	5.33	5.33	5.32	5.32	5.31	61
60	5.40	5.39	5.39	5.38	5.38	5.37	5.37	5.37	5.36	5.36	60
59	5.43	5.43	5.43	5.42	5.42	5.41	5.41	5.41	5.40	5.40	59
58	5.47	5.46	5.46	5.46	5.45	5.45	5.45	5.44	5.44	5.44	58
57	5.50	5.49	5.49	5.49	5.49	5.48	5.48	5.48	5.47	5.47	57
56	5.52	5.52	5.52	5.52	5.51	5.51	5.51	5.51	5.50	5.50	56
55	5.55	5.54	5.54	5.54	5.54	5.53	5.53	5.53	5.53	5.53	55
54	5.56	5.56	5.56	5.56	5.56	5.55	5.55	5.55	5.55	5.55	54
53	5.58	5.58	5.57	5.57	5.57	5.57	5.57	5.57	5.57	5.56	53
52	5.59	5.59	5.59	5.58	5.58	5.58	5.58	5.58	5.58	5.58	52
51	5.59	5.59	5.59	5.59	5.59	5.59	5.59	5.59	5.59	5.59	51
50	5.60	5.59	5.59	5.59	5.59	5.59	5.59	5.59	5.59	5.59	50

The tolerance for pure seed on purity less than 50% is the same as the tolerance for the larger part of the difference between the purity and 100%.

Example: If the purity test is 96.40% use the table in this manner: Find 96 in the "Value" column, then the .40 at top of table. These two intersect at 1.29. Therefore the tolerance allowed would be 1.29%.

**TABLE OF TOLERANCE FOR WEED SEEDS, OTHER CROP SEED, AND INERT MATTER FOR OTHER THAN CERTAIN CHAFFY GRASSES**

Value %	.00	.10	.20	.30	.40	.50	.60	.70	.80	.90	Value %
0	.20	.21	.23	.25	.27	.29	.31	.33	.35	.37	0
1	.39	.41	.43	.45	.47	.49	.51	.53	.55	.57	1
2	.59	.61	.63	.65	.66	.68	.70	.72	.74	.76	2
3	.78	.80	.81	.83	.85	.87	.89	.91	.93	.94	3
4	.96	.98	1.00	1.02	1.04	1.05	1.06	1.08	1.10	1.12	4
5	1.15	1.16	1.18	1.20	1.22	1.23	1.25	1.27	1.29	1.31	5
6	1.32	1.34	1.36	1.38	1.39	1.41	1.43	1.45	1.46	1.48	6
7	1.50	1.51	1.53	1.55	1.56	1.58	1.60	1.62	1.63	1.65	7
8	1.67	1.68	1.70	1.72	1.73	1.75	1.77	1.78	1.80	1.82	8
9	1.83	1.85	1.87	1.88	1.90	1.91	1.93	1.95	1.96	1.98	9
10	2.00	2.01	2.03	2.04	2.06	2.07	2.09	2.11	2.12	2.14	10
11	2.15	2.17	2.18	2.20	2.22	2.23	2.25	2.26	2.28	2.29	11
12	2.31	2.32	2.34	2.35	2.37	2.38	2.40	2.41	2.43	2.44	12
13	2.46	2.47	2.49	2.50	2.52	2.53	2.55	2.56	2.57	2.59	13
14	2.60	2.62	2.63	2.65	2.66	2.67	2.69	2.70	2.72	2.73	14
15	2.75	2.76	2.77	2.79	2.80	2.81	2.83	2.84	2.86	2.87	15
16	2.88	2.90	2.91	2.92	2.94	2.95	2.96	2.98	2.89	3.00	16
17	3.02	3.03	3.04	3.06	3.07	3.08	3.10	3.11	3.12	3.13	17
18	3.15	3.16	3.17	3.19	3.20	3.21	3.22	3.24	3.25	3.26	18
19	3.27	3.28	3.30	3.31	3.32	3.33	3.35	3.36	3.37	3.38	19
20	3.40	3.41	3.42	3.43	3.44	3.45	3.47	3.48	3.49	3.50	20
21	3.51	3.52	3.54	3.55	3.56	3.57	3.58	3.59	3.60	3.62	21
22	3.63	3.64	3.65	3.66	3.67	3.68	3.69	3.70	3.72	3.73	22
23	3.74	3.75	3.76	3.77	3.78	3.79	3.80	3.81	3.82	3.83	23
24	3.84	3.85	3.86	3.87	3.88	3.89	3.90	3.91	3.92	3.93	24
25	3.95	3.95	3.96	3.97	3.98	3.99	4.00	4.01	4.02	4.03	25
26	4.04	4.05	4.06	4.07	4.08	4.09	4.10	4.11	4.12	4.13	26
27	4.14	4.15	4.16	4.16	4.17	4.18	4.19	4.20	4.21	4.22	27
28	4.23	4.24	4.24	4.25	4.26	4.27	4.28	4.29	4.30	4.30	28
29	4.31	4.32	4.33	4.34	4.35	4.35	4.36	4.37	4.38	4.39	29
30	4.40	4.40	4.41	4.42	4.43	4.43	4.44	4.45	4.46	4.47	30
31	4.47	4.48	4.49	4.50	4.50	4.51	4.52	4.53	4.53	4.54	31
32	4.55	4.55	4.56	4.57	4.58	4.58	4.59	4.60	4.60	4.61	32
33	4.62	4.62	4.63	4.64	4.64	4.65	4.66	4.66	4.67	4.68	33
34	4.68	4.69	4.70	4.70	4.71	4.71	4.72	4.73	4.73	4.74	34
35	4.75	4.75	4.76	4.76	4.77	4.77	4.78	4.79	4.79	4.80	35
36	4.80	4.81	4.81	4.82	4.83	4.83	4.84	4.84	4.85	4.85	36
37	4.86	4.86	4.87	4.87	4.88	4.88	4.89	4.89	4.90	4.90	37
38	4.91	4.91	4.92	4.92	4.93	4.93	4.94	4.94	4.94	4.95	38
39	4.95	4.96	4.96	4.97	4.97	4.97	4.98	4.98	4.99	4.99	39
40	5.00	5.00	5.00	5.00	5.01	5.01	5.02	5.02	5.03	5.03	40

Example—If the sample tested shows 4.40% of weed seeds, other crop seeds and inert matter, the tolerance is computed as follows: Find 4 in the "value" column, then .40 at top of table. These two intersect at 1.04; hence the tolerance is 1.04%.

**Table of Tolerance for Inert Matter, Weed Seed, and Crop Seed for the following: Poa spp., Argostis spp. Festuca spp., bromegrass, crested wheatgrass, orchard grass, velvet grass, tall oatgrass, meadow foxtail, sweet vernalgrass, Rhodes grass, Dallis grass, carpet grass and Bermuda grass, and mixtures containing these seeds singly or combined in excess of 50%**

Value %	.00	.10	.20	.30	.40	.50	.60	.70	.80	.90	Value %
0	.20	.21	.23	.25	.27	.29	.31	.33	.35	.37	0
1	.39	.41	.43	.45	.47	.49	.51	.53	.55	.58	1
2	.60	.62	.64	.66	.67	.69	.71	.73	.76	.78	2
3	.80	.82	.83	.85	.87	.90	.92	.94	.96	.97	3
4	.99	1.02	1.04	1.06	1.08	1.09	1.10	1.13	1.15	1.17	4
5	1.20	1.21	1.24	1.26	1.28	1.29	1.31	1.33	1.35	1.37	5
6	1.39	1.42	1.44	1.46	1.47	1.50	1.52	1.54	1.55	1.58	6
7	1.60	1.61	1.64	1.66	1.67	1.69	1.72	1.74	1.75	1.78	7
8	1.80	1.81	1.83	1.86	1.87	1.89	1.92	1.93	1.95	1.98	8
9	1.99	2.01	2.04	2.06	2.07	2.09	2.11	2.13	2.15	2.17	9
10	2.20	2.21	2.23	2.25	2.27	2.28	2.31	2.33	2.34	2.37	10
11	2.38	2.41	2.42	2.44	2.47	2.48	2.51	2.52	2.54	2.56	11
12	2.58	2.60	2.62	2.63	2.66	2.67	2.70	2.71	2.74	2.75	12
13	2.77	2.79	2.81	2.83	2.85	2.87	2.89	2.91	2.92	2.95	13
14	2.96	2.98	3.00	3.03	3.04	3.05	3.07	3.09	3.12	3.13	14
15	3.16	3.17	3.19	3.21	3.23	3.24	3.26	3.28	3.29	3.32	15

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Value %	.00	.10	.20	.30	.40	.50	.60	.70	.80	.90	Value %
16	3.34	3.36	3.38	3.39	3.42	3.43	3.45	3.47	3.49	3.50	16
17	3.53	3.54	3.56	3.58	3.60	3.61	3.64	3.66	3.67	3.69	17
18	3.71	3.73	3.74	3.77	3.78	3.80	3.81	3.84	3.86	3.87	18
19	3.89	3.90	3.93	3.94	3.96	3.97	4.00	4.02	4.03	4.05	19
20	4.08	4.09	4.11	4.12	4.14	4.15	4.18	4.20	4.21	4.23	20
21	4.24	4.26	4.29	4.30	4.32	4.33	4.35	4.36	4.38	4.41	21
22	4.42	4.44	4.46	4.47	4.49	4.50	4.52	4.53	4.56	4.58	22
23	4.60	4.61	4.63	4.64	4.66	4.68	4.69	4.71	4.72	4.74	23
24	4.76	4.77	4.79	4.81	4.82	4.84	4.85	4.87	4.89	4.90	24
25	4.93	4.94	4.95	4.97	4.99	5.00	5.02	5.04	5.05	5.07	25
26	5.09	5.10	5.12	5.14	5.15	5.17	5.19	5.20	5.22	5.24	26
27	5.25	5.27	5.29	5.29	5.31	5.32	5.34	5.36	5.38	5.39	27
28	5.41	5.43	5.43	5.45	5.46	5.48	5.50	5.53	5.53	5.54	28
29	5.55	5.57	5.59	5.61	5.62	5.63	5.65	5.66	5.68	5.70	29
30	5.72	5.72	5.74	5.75	5.77	5.78	5.79	5.81	5.83	5.85	30
31	5.85	5.87	5.89	5.90	5.91	5.93	5.94	5.96	5.97	5.98	31
32	6.00	6.01	6.02	6.04	6.06	6.06	6.08	6.10	6.10	6.12	32
33	6.14	6.14	6.16	6.18	6.18	6.20	6.22	6.23	6.24	6.26	33
34	6.27	6.28	6.30	6.31	6.33	6.33	6.35	6.37	6.37	6.39	34
35	6.41	6.41	6.43	6.44	6.45	6.46	6.48	6.50	6.50	6.52	35
36	6.52	6.54	6.55	6.56	6.58	6.59	6.61	6.61	6.63	6.63	36
37	6.65	6.66	6.68	6.68	6.70	6.71	6.72	6.73	6.75	6.75	37
38	6.77	6.78	6.79	6.80	6.82	6.82	6.84	6.85	6.85	6.87	38
39	6.88	6.89	6.90	6.92	6.92	6.93	6.95	6.95	6.97	6.98	39
40	7.00	7.00	7.01	7.01	7.03	7.03	7.05	7.06	7.08	7.08	40

Example—If the sample tested shows 3.30% of weed seeds, other crop seeds and inert matter, the tolerance is computed as follows: Find 3 in the "value" column, then .30 at top of table. These two intersect at .85; hence the tolerance is .85%.

**Table of Tolerance for Pure Seed Variations for the following: Poa spp., Agrostis spp., Festuca spp., bromegrass, crested wheatgrass, orchard grass, velvet grass, tall oatgrass, meadow foxtail, sweet vernalgrass, Rhodes grass, Dallis grass, carpet grass, and Bermuda grass, and mixtures containing these seeds singly or combined in excess of 50%**

Value %	.00	.10	.20	.30	.40	.50	.60	.70	.80	.90	Value %
100	.60										100
99	.79	.77	.75	.73	.71	.69	.67	.65	.63	.61	99
98	1.00	.98	.96	.94	.92	.90	.88	.86	.83	.81	98
97	1.21	1.19	1.17	1.15	1.12	1.10	1.08	1.07	1.06	1.03	97
96	1.41	1.39	1.38	1.35	1.33	1.31	1.29	1.27	1.24	1.23	96
95	1.62	1.59	1.57	1.54	1.52	1.51	1.50	1.48	1.45	1.43	95
94	1.82	1.81	1.78	1.76	1.74	1.71	1.70	1.68	1.66	1.63	94
93	2.03	2.00	1.98	1.97	1.95	1.92	1.90	1.87	1.86	1.84	93
92	2.23	2.21	2.18	2.17	2.15	2.12	2.10	2.09	2.06	2.04	92
91	2.43	2.41	2.39	2.36	2.35	2.33	2.30	2.28	2.27	2.24	91
90	2.64	2.61	2.59	2.57	2.55	2.52	2.51	2.49	2.47	2.45	90
89	2.83	2.81	2.79	2.77	2.75	2.72	2.71	2.69	2.67	2.65	89
88	3.03	3.01	2.99	2.97	2.95	2.93	2.91	2.89	2.86	2.85	88
87	3.23	3.20	3.19	3.16	3.15	3.12	3.11	3.08	3.07	3.04	87
86	3.42	3.40	3.37	3.36	3.35	3.32	3.31	3.28	3.27	3.24	86
85	3.62	3.59	3.58	3.55	3.54	3.51	3.50	3.48	3.46	3.44	85
84	3.80	3.78	3.77	3.74	3.73	3.70	3.69	3.67	3.65	3.63	84
83	4.00	3.97	3.95	3.94	3.91	3.90	3.88	3.86	3.84	3.83	83
82	4.18	4.16	4.14	4.13	4.11	4.08	4.07	4.05	4.03	4.01	82
81	4.36	4.35	4.33	4.32	4.29	4.27	4.26	4.24	4.21	4.20	81
80	4.56	4.53	4.51	4.49	4.48	4.46	4.44	4.42	4.41	4.38	80
79	4.73	4.71	4.69	4.68	4.66	4.63	4.62	4.60	4.59	4.57	79
78	4.92	4.90	4.87	4.85	4.83	4.82	4.80	4.79	4.77	4.74	78
77	5.09	5.07	5.05	5.03	5.01	4.99	4.98	4.96	4.94	4.93	77
76	5.25	5.24	5.22	5.20	5.19	5.17	5.15	5.14	5.12	5.10	76
75	5.43	5.40	5.39	5.37	5.35	5.34	5.32	5.30	5.29	5.27	75
74	5.59	5.57	5.56	5.54	5.52	5.50	5.49	5.47	5.45	5.44	74
73	5.76	5.84	5.73	5.71	5.69	5.67	5.66	5.64	5.63	5.61	73
72	5.92	5.90	5.89	5.87	5.85	5.83	5.82	5.80	5.80	5.78	72
71	6.07	6.05	6.05	6.03	6.01	6.00	5.98	5.96	5.94	5.94	71
70	6.24	6.22	6.20	6.18	6.16	6.15	6.14	6.12	6.11	6.09	70
69	6.37	6.37	6.35	6.33	6.32	6.30	6.29	6.28	6.26	6.24	69
68	6.53	6.51	6.49	6.49	6.47	6.45	6.43	6.43	6.41	6.39	68
67	6.67	6.65	6.64	6.63	6.61	6.59	6.59	6.57	6.55	6.53	67
66	6.80	6.80	6.78	6.76	6.76	6.74	6.72	6.71	6.71	6.68	66
65	6.95	6.93	6.91	6.91	6.89	6.87	6.86	6.84	6.84	6.82	65

Value %	.00	.10	.20	.30	.40	.50	.60	.70	.80	.90	Value %
64	7.07	7.06	7.04	7.04	7.02	7.00	7.00	6.98	6.97	6.95	64
63	7.20	7.18	7.18	7.16	7.15	7.13	7.13	7.11	7.09	7.09	63
62	7.32	7.30	7.30	7.28	7.27	7.26	7.25	7.23	7.23	7.21	62
61	7.43	7.43	7.41	7.40	7.40	7.38	7.36	7.35	7.35	7.33	61
60	7.56	7.54	7.53	7.51	7.51	7.49	7.48	7.48	7.46	7.45	60
59	7.65	7.65	7.64	7.62	7.62	7.60	7.59	7.59	7.57	7.56	59
58	7.76	7.74	7.74	7.73	7.71	7.71	7.70	7.68	7.68	7.67	58
57	7.86	7.84	7.83	7.83	7.82	7.80	7.80	7.79	7.77	7.77	57
56	7.94	7.94	7.93	7.93	7.91	7.90	7.90	7.89	7.87	7.87	56
55	8.04	8.02	8.02	8.01	8.01	7.99	7.98	7.97	7.97	7.96	55
54	8.11	8.11	8.10	8.10	8.09	8.07	8.06	8.06	8.05	8.05	54
53	8.20	8.19	8.17	8.17	8.16	8.16	8.15	8.14	8.14	8.12	53
52	8.27	8.26	8.26	8.24	8.23	8.23	8.23	8.21	8.21	8.20	52
51	8.32	8.32	8.31	8.31	8.30	8.30	8.29	8.28	8.28	8.27	51
50	8.40	8.37	8.37	8.36	8.36	8.35	8.35	8.34	8.34	8.33	50

Example. If the purity test is 91.40%, use the table in this manner: Find 91 in the "value" column, then the .40 at top of table. These two intersect at 2.35. Therefore the tolerance allowed would be 2.35%.

### EXTENDED TOLERANCE TABLE FOR OCCURRENCE OF NOXIOUS WEED SEEDS

Number Found by Analysis	The Following Are Within the Tolerance	Number Found by Analysis	The Following Are Within the Tolerance	Number Found by Analysis	The Following Are Within the Tolerance	Number Found by Analysis	The Following Are Within the Tolerance	Number Found by Analysis	The Following Are Within the Tolerance	Number Found by Analysis	The Following Are Within the Tolerance
2	0	66	51	122	101	176	151	230	201	283	251
4	1	67	52	123	102	177	152	231	202	284	252
6	2	68	53	124	103	178	153	232	203	285	253
8	3	69	54	125	104	179	154	233	204	286	254
9	4	71	55	126	105	180	155	234	205	287	255
11	5	72	56	127	106	181	156	235	206	288	256
12	6	73	57	128	107	183	157	236	207	289	257
13	7	74	58	129	108	184	158	237	208	290	258
14	8	75	59	130	109	185	159	238	209	292	259
16	9	76	60	132	110	186	160	239	210	293	260
17	10	77	61	133	111	187	161	240	211	294	261
18	11	78	62	134	112	188	162	242	212	295	262
20	12	80	63	135	113	189	163	243	213	296	263
21	13	81	64	136	114	190	164	244	214	297	264
22	14	82	65	137	115	191	165	245	215	298	265
23	15	83	66	138	116	192	166	246	216	299	266
24	16	84	67	139	117	193	167	247	217	300	267
25	17	85	68	140	118	194	168	248	218	301	268
27	18	86	69	141	119	195	169	249	219	302	269
28	19	87	70	142	120	197	170	250	220	303	270
29	20	89	71	144	121	198	171	251	221	304	271
30	21	90	72	145	122	199	172	252	222	305	272
32	22	91	73	146	123	200	173	253	223	306	273
33	23	92	74	147	124	201	174	254	224	307	274
34	24	93	75	148	125	202	175	255	225	309	275
35	25	94	76	149	126	203	176	256	226	310	276
37	26	95	77	150	127	204	177	258	227	311	277
38	27	96	78	151	128	205	178	259	228	312	278
39	28	97	79	152	129	206	179	260	229	313	279
41	29	99	80	153	130	207	180	261	230	314	280
42	30	100	81	154	131	208	181	262	231	315	281
43	31	101	82	156	132	209	182	263	232	316	282
44	32	102	83	157	133	211	183	264	233	317	283
45	33	103	84	158	134	212	184	265	234	318	284
46	34	104	85	159	135	213	185	266	235	319	285
48	35	105	86	160	136	214	186	267	236	320	286
49	36	106	87	161	137	215	187	268	237	321	287
50	37	107	88	162	138	216	188	269	238	322	288
51	38	108	89	163	139	217	189	270	239	323	289
52	39	110	90	164	140	218	190	271	240	324	290
53	40	111	91	165	141	219	191	272	241	325	291
55	41	112	92	166	142	220	192	273	242	326	292
56	42	113	93	167	143	221	193	275	243	328	293
57	43	114	94	169	144	222	194	276	244	329	294
58	44	115	95	170	145	223	195	277	245	330	295
59	45	116	96	171	146	224	196	278	246	331	296
60	46	117	97	172	147	226	197	279	247	332	297
61	47	118	98	173	148	227	198	280	248	333	298
63	48	120	99	174	149	228	199	281	249	334	299
64	49	121	100	175	150	229	200	282	250	335	300
65	50										

Example—If the sample contains 50 noxious weed seeds the tolerance allowance is 37.

# Classified List of Seeds

Classifications Showing Specialties of Advertisers in Seed Trade Buyers Guide

Addresses Are Shown on Pages 228-230

## Flower

### ANNUALS

American Bulb Co.  
Bodger Seeds, Ltd.  
C. S. Brent Seed Co.  
(Nasturtiums)  
Buckman Denholm & Holden Seed Co.  
Robert Buist Company  
W. Atlee Burpee Co.  
Burrell Seeds, Inc.  
Comstock Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Co.  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Herbst Brothers  
Holmes Seed Co.  
Kelly Seed Co.  
D. Landreth Seed Co.  
The Wm. Macdonald Seed Co.  
J. Chas. McCullough Seed Co.  
Charles R. Moore  
John Mosbell Co.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
The Page Seed Co.  
Rex D. Pearce  
I. L. Radwaner Seed Co., Inc.  
Walter S. Schell, Inc.  
Stollers Seed House  
U. S. Seed Co., Inc.  
Vaughan's Seed Store  
Waller-Franklin Seed Co.  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.

### PERENNIALS

American Bulb Co.  
Bodger Seeds, Ltd.  
Buckman, Denholm & Holden Seed Co.  
Robert Buist Company  
W. Atlee Burpee Co.  
Burrell Seeds, Inc.  
Condon Bros., Seedsmen  
Comstock, Ferre & Co.  
Corneli Seed Co.  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Herbst Brothers  
Holmes Seed Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
The Wm. Macdonald Seed Co.  
The J. Chas. McCullough Seed Co.  
Charles R. Moore  
John Mosbell Co.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
The Page Seed Co.  
Rex D. Pearce  
I. L. Radwaner Seed Co., Inc.  
Walter S. Schell, Inc.  
Stollers Seed House  
Vaughan's Seed Store  
U. S. Seed Co., Inc.  
Waller-Franklin Seed Co.  
T. W. Wood & Sons

### SWEET PEAS

American Bulb Co.  
Bodger Seeds, Ltd.  
C. S. Brent Seed Co.  
Buckman, Denholm & Holden Seed Co.  
Robert Buist Company  
W. Atlee Burpee Co.  
Burrell Seeds, Inc.  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Co.  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Herbst Brothers  
Kelly Seed Co.  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
The Wm. Macdonald Seed Co.  
J. Chas. McCullough Seed Co.  
Charles R. Moore  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
The Page Seed Co.  
Pieters-Wheeler Seed Co.  
I. L. Radwaner Seed Co., Inc.

Waldo Rohnert Co.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Sherwood Seed Co.  
Standard Seed Farms Co.  
Stollers Seed House  
U. S. Seed Co., Inc.  
Vaughan's Seed Store  
Waller-Franklin Seed Co.  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.

### NOVELTIES

American Bulb Co.  
Bodger Seeds, Ltd.  
Buckman, Denholm & Holden Seed Co.  
W. Atlee Burpee Co.  
Burrell Seed, Inc.  
Condon Bros., Seedsmen  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
The Chas. C. Hart Seed Co.  
Herbst Brothers  
Kelly Seed Co.  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
The Wm. Macdonald Seed Co.  
J. Chas. McCullough Seed Co.  
Charles R. Moore  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Rex D. Pearce  
I. L. Radwaner Seed Co., Inc.  
Walter S. Schell, Inc.  
Stollers Seed House  
U. S. Seed Co., Inc.  
Vaughan's Seed Store  
Waller-Franklin Seed Co.  
T. W. Wood & Sons

### TREE SEEDS

Bodger Seeds, Ltd.  
Buckman, Denholm & Holden Seed Co.  
Burrell Seeds, Inc.  
Condon Bros., Seedsmen  
Herbst Brothers  
The Nebraska Seed Co.

Rex D. Pearce  
I. L. Radwaner Seed Co., Inc.  
Walter S. Schell, Inc.  
Stollers Seed House  
U. S. Seed Co., Inc.

### WILD FLOWERS

Bodgers Seeds, Ltd.  
Ferry-Morse Seed Co.  
Herbst Brothers  
Kelly Seed Co.  
F. Lagomarsino & Sons  
Chas. H. Lilly Co.  
Wm. Macdonald Seed Co.  
J. Chas. McCullough Seed Co.  
Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northrup, King & Co., Mpls.  
L. L. Olds Seed Co.  
Vaughan's Seed Store

### ZINNIAS

American Bulb Co.  
Bodger Seed, Ltd.  
Bowman Seed Co.  
Robt. Buist Co.  
W. Atlee Burpee Co.  
Burrell Seeds, Inc.  
Comstock, Ferre & Co.  
Corneli Seed Co.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
Chas. C. Hart Seed Co.  
Herbst Brothers  
Kelly Seed Co.  
F. Lagomarsino & Sons  
Chas. H. Lilly Co.  
Wm. Macdonald Seed Co.  
J. Chas. McCullough Seed Co.  
John Mosbell Co.  
Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northrup, King & Co., Mpls.  
L. L. Olds Seed Co.  
Page Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Vaughan's Seed Store  
Waller-Franklin Seed Co.  
T. W. Wood & Sons

Twin City Seed Co.  
Valker-Christensen Co.  
Vaughan's Seed Store  
Owen T. Watts  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
Young & Conway  
Yuma Co. Farmers Mktg. Assn.

### AUSTRIAN WINTER PEAS

The Belt Seed Co.  
Blue Mt. Seed Growers Assn.  
Condon Bros., Seedsmen  
Corneli Seed Co.  
International Seed, Inc.  
Jenks-White Seed Co.  
F. Lagomarsino & Sons  
R. E. Lambert & Sons  
The Chas. H. Lilly Co.  
Julius Loewith, Inc.  
Ed. F. Mangelsdorf & Bro., Inc.  
Mark Means Co.  
Charles R. Moore  
Robt. Nicholson Seed Co.  
Northrup, King & Co. (Bomberger Div.)  
Northwestern Seed Growers, Inc.  
Paramount Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Russell-Heckle Seed Co.  
Wm. G. Scarlett & Co.  
F. F. Smith & Co., Inc.  
Snelson Seed Co.  
Transcontinental Seed, Inc.  
T. W. Wood & Sons

### BEGGARWEED—

### FLORIDA

D. H. Gilbert Seed Co., Inc.  
Grand Island Nurseries  
R. E. Lambert & Sons  
Simpson Nursery Co.  
T. W. Wood & Sons

### BENT GRASS

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
The Belt Seed Co.  
The Bowman Seed Co.  
Robt. Buist Co.  
Cargill, Inc.  
Arthur R. Cone  
Corneli Seed Co.  
Craver-Dickinson Seed Co.  
The Albert Dickinson Co.  
J. L. Donley & Bro.  
Duryea Seed Co., Inc.  
Engbretson Seed Co.  
A. Ertag, Inc.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Holmes Seed Co.  
International Seed, Inc.  
Jenks-White Seed Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
Lewis & Clark Seed Co., Inc.  
The Chas. H. Lilly Co.  
Julius Loewith, Inc.  
Ed. F. Mangelsdorf & Bro., Inc.  
The J. Chas. McCullough Seed Co.  
Charles R. Moore  
Robt. Nicholson Seed Co.  
Northrup, King & Co. (Bomberger Div.)  
L. L. Olds Seed Co.  
Ouren Seed Co.  
A. S. Paterson & Coy, Ltd.  
The Philadelphia Seed Co., Inc.  
I. L. Radwaner Seed Co., Inc.  
Rudy-Patrick Seed Co.  
Wm. G. Scarlett & Co.  
Walter S. Schell, Inc.  
O. M. Scott & Sons Co.  
The Stanford Seed Co.  
Transcontinental Seed, Inc.  
Twin City Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
Wright, Stephenson & Coy, Ltd.

### BENT STOLONS

O. M. Scott & Sons Co.  
Stollers Seed House  
F. H. Woodruff & Sons, Inc.

### BERMUDA GRASS

The Barteldes Seed Co.

## Wholesale Field Seed

### ALFALFA

The Ackerman Co.  
The Barteldes Seed Co.  
Hijos de S. V. Bellotti  
The Belt Seed Co.  
Blue Mt. Seed Growers Assn.  
N. Bonahoom Seed Co.  
The Bowman Seed Co.  
C. S. Brent Seed Co.  
Robt. Buist Company  
Capital Fuel, Feed & Seed Co.  
Cargill, Inc.  
Roscoe J. Carl & Son  
Arthur R. Cone  
Condon Bros., Seedsmen  
Corneli Seed Co.  
Dakota Improved Seed Co.  
The Albert Dickinson Co.  
Craver-Dickinson Seed Co.  
Davenport Seed Co.  
J. L. Donley & Bro.  
Duryea Seed Co., Inc.  
Leslie Edgerton  
A. Ertag, Inc.  
Farmers Union Grain & Supply Co.  
Ferry-Morse Seed Co.  
Funk Bros. Seed Co.  
Globe Seed & Feed Co.  
Goldberg Seed & Feed Co.  
The Gooding Seed Co.  
Griswold Seed & Nursery Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Holmes Seed Co.  
Edgar F. Hurff Co.  
Idaho Grimm Alfalfa Seed Growers Assn., Inc.  
International Seed, Inc.  
Interstate Seed & Grain Co.  
Jenks-White Seed Co.  
Keller Seed Store  
Kelly Seed Co.  
H. C. King & Sons, Inc.  
F. Lagomarsino & Sons  
Lakin Seed Co.  
D. Landreth Seed Co.  
R. E. Lambert & Sons  
Land O'Lakes Creameries, Inc.  
Law, Somner Pty., Ltd.  
The Chas. H. Lilly Co.  
Julius Loewith, Inc.

Louisville Seed Co.  
Magill & Co.  
Ed. F. Mangelsdorf & Bro., Inc.  
H. J. Mayer  
McCabe Bros. Grain Co., Ltd  
The J. Chas. McCullough Seed Co.  
Michael-Leonard Co.  
Montana Seed Co.  
Charles R. Moore  
National Seed Co.  
The Nebraska Seed Co.  
Newday Seeds, Inc.  
Robt. Nicholson Seed Co.  
Northern Canadian Seed Sales  
Northern Field Seed Co.  
Northrup, King & Co.  
Northrup, King & Co. (Bomberger Div.)  
Northwestern Seed Co., Inc.  
Northwestern Seed Growers, Inc.  
L. L. Olds Seed Co.  
Ouren Seed Co.  
The Page Seed Co.  
Paramount Seed Co.  
Peppard Seed Co.  
The Philadelphia Seed Co., Inc.  
Prunty Seed & Grain Co.  
Purcell Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Ross Seed Co.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
E. F. Sanguinetti  
Wm. G. Scarlett & Co.  
Walter S. Schell, Inc.  
J. M. Schultz Seed Co.  
O. M. Scott & Sons Co.  
Seaboard Seed Co.  
Sedgwick Alfalfa Mills  
Geo. P. Sexauer & Son  
Shultz Seed Co., Inc.  
F. F. Smith & Co., Inc.  
Sommer Bros. Seed Co.  
J. H. Speers & Co., Ltd.  
The Stanford Seed Co.  
Steele Briggs Seed Co., Ltd.  
Stollers Seed House  
Transcontinental Seed, Inc.

Hijos de S. V. Bellotti  
The Belt Seed Co.  
The Bowman Seed Co.  
Robt. Buist Co.  
Capital Fuel, Feed & Seed Co.  
Cornell Seed Co.  
Cuff-Archias Seed Co.  
Duryea Seed Co., Inc.  
Ferry-Morse Seed Co.  
International Seed, Inc.  
F. Lagomarsino & Sons  
R. E. Lambert & Sons  
D. Landreth Seed Co.  
Julius Loewith, Inc.  
Ed. F. Mangelsdorf & Bro.,  
Inc.  
The J. Chas. McCullough Seed  
Seed Co.  
Charles R. Moore  
Robt. Nicholson Seed Co.  
Northrup, King & Co. (Bom-  
berger Div.)  
Purcell Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Ross Seed Co., Inc.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
E. F. Sanguinetti  
Wm. G. Scarlett & Co.  
Sedgwick Alfalfa Mills  
Snelson Seed Co.  
Stollers Seed House  
Owen T. Watts  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
Yuma Co. Farmers Mktg.  
Assn.

### BIRDSRAPE OR RUEBSEN

Cornell Seed Co.  
Duryea Seed Co., Inc.  
Julius Loewith, Inc.  
Ed. F. Mangelsdorf & Bro.,  
Inc.  
The J. Chas. McCullough Seed  
Co.  
H. J. Mayer  
Charles R. Moore  
The Nebraska Seed Co.  
Philadelphia Seed Co.  
Wm. G. Scarlett & Co.  
Stollers Seed House  
T. W. Wood & Sons

### BLUE GRASS

The Ackerman Co.  
Associated Seed Growers, Inc.  
The Belt Seed Co.  
The Barteldes Seed Co.  
The Bowman Seed Co.  
C. S. Brent Seed Co.  
Robt. Buist Co.  
Cargill, Inc.  
Arthur R. Cone  
Condon Bros., Seedsmen  
Cornell Seed Co.  
Craver-Dickinson Seed Co.  
Dakota Improved Seed Co.  
The Albert Dickinson Co.  
J. L. Donley & Bro.  
Duryea Seed Co., Inc.  
Leslie Edgerton  
A. Ertag, Inc.  
Ferry-Morse Seed Co.  
Funk Bros. Seed Co.  
Ging & Company  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Holmes Seed Co.  
International Seed, Inc.  
Jenks-White Seed Co.  
Kellogg Kelly Seed Co.  
Geo. Keller & Sons  
Kelly Seed Co.  
F. Lagomarsino & Sons  
R. E. Lambert & Sons  
D. Landreth Seed Co.  
The Chas. H. Lilly Co.  
Julius Loewith, Inc.  
Louisville Seed Co.  
Ed. F. Mangelsdorf & Bro.,  
Inc.  
H. J. Mayer  
The J. Chas. McCullough  
Seed Co.  
Chas. R. Moore  
National Seed Co., Inc.  
The Nebraska Seed Co.  
Newday Seeds, Inc.  
Robt. Nicholson Seed Co.  
Nishna Valley Seed Co.  
Northern Field Seed Co.  
Northrup, King & Co. (Bom-  
berger Div.)  
Northwestern Seed Co., Inc.  
L. L. Olds Seed Co.  
Ouren Seed Co.  
The Page Seed Co.  
Peppard Seed Co.  
The Philadelphia Seed Co.,  
Inc.  
Prunty Seed & Grain Co.  
Purcell Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Ross Seed Co.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Wm. G. Scarlett & Co.  
Walter S. Schell, Inc.

J. M. Schultz Seed Co.  
Seaboard Seed Co.  
Geo. P. Sexauer & Son  
O. M. Scott & Sons Co.  
Shultz Seed Co., Inc.  
Sommer Bros. Seed Co.  
Sphar & Gay Seed Co.  
The Stanford Seed Co.  
Steele, Briggs Seed Co., Ltd.  
Stollers Seed House  
Transcontinental Seed, Inc.  
Twin City Seed Co.  
Vaughan's Seed Store  
Owen T. Watts  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
Young & Conway

### BROME GRASS

The Barteldes Seed Co.  
The Belt Seed Co.  
Blue Mt. Seed Growers Assn.  
The Bowman Seed Co.  
Cargill, Inc.  
Cornell Seed Co.  
Craver-Dickinson Seed Co.  
Dakota Improved Seed Co.  
The Albert Dickinson Co.  
Duryea Seed Co., Inc.  
Leslie Edgerton  
Ferry-Morse Seed Co.  
Funk Bros. Seed Co.  
Goldberg Seed & Feed Co.  
The Gooding Seed Co.  
Griswold Seed & Nursery Co.  
Hamilton Seed & Coal Co.  
International Seed, Inc.  
Interstate Seed & Grain Co.  
Jenks-White Seed Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
Land O' Lakes Creameries,  
Inc.  
Julius Loewith, Inc.  
Magill & Co.  
Ed. F. Mangelsdorf & Bro.,  
Inc.  
McCabe Bros. Grain Co., Ltd.  
The J. Chas. McCullough  
Seed Co.  
Mark Means Co.  
Michael-Leonard Seed Co.  
Chas. R. Moore  
The Nebraska Seed Co.  
Newday Seeds, Inc.  
Northern Canadian Seed  
Sales  
Northern Field Seed Co.  
Northrup, King & Co., (Bom-  
berger Div.)  
Northrup, King & Co., Mpls.  
Northwestern Seed Co.  
Northwestern Seed Growers,  
Inc.  
L. L. Olds Seed Co.  
Ouren Seed Co.  
Peppard Seed Co.  
Purcell Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Rudy-Patrick Seed Co.  
Wm. G. Scarlett & Co.  
Sedgwick Alfalfa Mills  
Geo. P. Sexauer & Son  
J. H. Speers & Co., Ltd.  
The Stanford Seed Co.  
Steele, Briggs Seed Co., Ltd.  
Stollers Seed House  
Twin City Seed Co.  
Walker-Christensen Co.  
Vaughan's Seed Store  
F. H. Woodruff & Sons, Inc.

### CANE

The Barteldes Seed Co.  
The Belt Seed Co.  
N. Bonahoom Seed Co.  
The Bowman Seed Co.  
C. S. Brent Seed Co.  
Robt. Buist Co.  
Cargill, Inc.  
Cornell Seed Co.  
The Albert Dickinson Co.  
Funk Bros. Seed Co.  
Griswold Seed & Nursery Co.  
Hamilton Seed & Coal Co.  
Holmes Seed Co.  
International Seed, Inc.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
R. E. Lambert & Sons  
Louisville Seed Co.  
Ed. F. Mangelsdorf & Bro.,  
Inc.  
The J. Chas. McCullough  
Seed Co.  
Chas. R. Moore  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northwestern Seed Co., Inc.  
L. L. Olds Seed Co.  
Ouren Seed Co.  
Peppard Seed Co.  
The Philadelphia Seed Co.,  
Inc.  
Purcell Seed Co.  
Ross Seed Co.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Wm. G. Scarlett & Co.  
Walter S. Schell, Inc.

Sedgwick Alfalfa Mills  
George P. Sexauer & Son  
Snelson Seed Co.  
The Stanford Seed Co.  
Stollers Seed House  
Twin City Seed Co.  
Walker-Christensen Co.  
Owen T. Watts  
T. W. Wood & Sons

### CARPET GRASS (Paspalum Compressum)

R. E. Lambert & Sons  
Law, Somner Pty., Ltd.  
Julius Loewith, Inc.  
McHutchison & Co.  
Chas. R. Moore  
Robt. Nicholson Seed Co.  
W. T. Nolin  
Wm. G. Scarlett & Co.  
T. W. Wood & Sons

### CLOVER—ALSIKE

The Ackerman Co.  
Hijos de S. V. Bellotti  
The Belt Seed Co.  
Blue Mountain Seed Growers  
Assn.  
C. S. Brent Seed Co.  
Robert Buist Company  
Capital Fuel, Feed & Seed Co.  
Cargill, Inc.  
The Albert Dickinson Co.  
J. L. Donley & Bro.  
A. Ertag, Inc.  
Roscoe J. Carl & Son  
Arthur R. Cone  
Condon Bros., Seedsmen  
Cornell Seed Co.  
Craver-Dickinson Seed Co.  
Duryea Seed Co., Inc.  
Leslie Edgerton  
Farmer Seed & Nursery Co.  
Ferry-Morse Seed Co.  
Funk Bros. Seed Co.  
Globe Seed & Feed Co.  
Goldberg Seed & Feed Co.  
The Gooding Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Henry Hirsch & Sons, Inc.  
Holmes Seed Co.  
International Seed, Inc.  
Interstate Seed & Grain Co.  
Jenks-White Seed Co.  
Geo. Keller & Sons  
Kelly Seed Co.  
F. Lagomarsino & Sons  
Land O'Lakes Creameries,  
Inc.  
D. Landreth Seed Co.  
The Chas. H. Lilly Co.  
Julius Loewith, Inc.  
Louisville Seed Co.  
McCabe Bros. Grain Co., Ltd.  
The J. Chas. McCullough  
Seed Co.  
Magill & Co.  
Ed. F. Mangelsdorf & Bro.,  
Inc.  
Mark Means Co.  
H. J. Mayer  
Chas. R. Moore  
National Seed Co., Inc.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northern Field Seed Co.  
Northrup, King & Co., (Bom-  
berger Div.)  
Northrup, King & Co., Mpls.  
Northwestern Seed Co.  
Northwestern Seed Growers,  
Inc.

L. L. Olds Seed Co.  
The O & M Seed Co.  
Ouren Seed Co.  
The Page Seed Co.  
Peppard Seed Co.  
The Philadelphia Seed Co.,  
Inc.  
Prunty Seed & Grain Co.  
Purcell Seed Co., Inc.  
I. L. Radwaner Seed Co., Inc.  
Ross Seed Co.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Wm. G. Scarlett & Co.  
Walter S. Schell, Inc.  
J. M. Schultz Seed Co.  
O. M. Scott & Sons Co.  
Seaboard Seed Co.  
Geo. P. Sexauer & Son  
Shultz Seed Co., Inc.  
Sommer Bros. Seed Co.  
Steele, Briggs Seed Co., Ltd.  
Stollers Seed House  
Transcontinental Seed, Inc.  
Twin City Seed Co.  
Vaughan's Seed Store  
Owen T. Watts  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
Young & Conway

Ed. F. Mangelsdorf & Bro.,  
Inc.  
Mark Means Co.  
H. J. Mayer  
Chas. R. Moore  
National Seed Co., Inc.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northern Field Seed Co.  
Northrup, King & Co., (Bom-  
berger Div.)  
Northrup, King & Co., Mpls.  
Northwestern Seed Co.  
Northwestern Seed Growers,  
Inc.

L. L. Olds Seed Co.  
The O & M Seed Co.  
Ouren Seed Co.  
The Page Seed Co.  
Peppard Seed Co.  
The Philadelphia Seed Co.,  
Inc.

Prunty Seed & Grain Co.  
Purcell Seed Co., Inc.  
I. L. Radwaner Seed Co., Inc.  
Ross Seed Co.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Wm. G. Scarlett & Co.  
Walter S. Schell, Inc.  
J. M. Schultz Seed Co.  
O. M. Scott & Sons Co.  
Seaboard Seed Co.  
Geo. P. Sexauer & Son  
Shultz Seed Co., Inc.  
Sommer Bros. Seed Co.  
Steele, Briggs Seed Co., Ltd.  
Stollers Seed House  
Transcontinental Seed, Inc.  
Twin City Seed Co.  
Vaughan's Seed Store  
Owen T. Watts  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
Young & Conway

### CLOVER—ALYCE

The Belt Seed Co.  
Duryea Seed Co., Inc.  
The Chas. C. Hart Seed Co.  
International Seed, Inc.  
Kelly Seed Co.  
R. E. Lambert & Sons

Chas. R. Moore  
Robert Nicholson Seed Co.  
L. L. Olds Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Russell-Heckle Seed Co.  
Snelson Seed Co.  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.

### CLOVER—BURK

The Belt Seed Co.  
Capital Fuel, Feed & Seed Co.  
Ferry-Morse Seed Co.  
International Seed, Inc.  
F. Lagomarsino & Sons  
R. E. Lambert & Sons  
Chas. R. Moore  
Robt. Nicholson Seed Co.  
Northrup, King & Co. (Bom-  
berger Div.)  
Ostberg Seed Co.  
Paramount Seed Co.  
Russell-Heckle Seed Co.  
F. F. Smith & Co., Inc.  
Snelson Seed Co.  
Stollers Seed House  
T. W. Wood & Sons

### CLOVER—CRIMSON

The Belt Seed Co.  
C. S. Brent Seed Co.  
Robert Buist Company  
Capital Fuel, Feed & Seed Co.  
Condon Bros., Seedsmen  
Cornell Seed Co.  
Craver-Dickinson Seed Co.  
The Albert Dickinson Co.  
Duryea Seed Co., Inc.  
A. Ertag, Inc.  
Ferry-Morse Seed Co.  
Ging & Company  
The Chas. C. Hart Seed Co.  
International Seed, Inc.  
Jenks-White Seed Co.  
F. Lagomarsino & Sons  
R. E. Lambert & Sons  
D. Landreth Seed Co.  
The Chas. H. Lilly Co.  
Julius Loewith, Inc.  
Louisville Seed Co.  
The J. Chas. McCullough  
Seed Co.  
Ed. F. Mangelsdorf & Bro.,  
Inc.

H. J. Mayer  
Chas. R. Moore  
National Seed Co., Inc.  
Robt. Nicholson Seed Co.  
Ostberg Seed Co.  
The Philadelphia Seed Co.,  
Inc.  
Purcell Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Ross Seed Co., Inc.  
Russell-Heckle Seed Co.  
Wm. G. Scarlett & Co.  
Walter S. Schell, Inc.  
J. M. Schultz Seed Co.  
Seaboard Seed Co.  
Shultz Seed Co., Inc.  
Snelson Seed Co.  
Transcontinental Seed, Inc.  
Owen T. Watts  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.

### CLOVER—LADINO

The Belt Seed Co.  
Blue Mountain Seed Growers  
Assn.  
Capital Fuel, Feed & Seed Co.  
Arthur R. Cone  
The Albert Dickinson Co.  
Craver-Dickinson Seed Co.  
Duryea Seed Co., Inc.  
Ferry-Morse Seed Co.  
Globe Seed & Feed Co.  
The Gooding Seed Co.  
The Chas. C. Hart Seed Co.  
Holmes Seed Co.  
International Seed, Inc.  
Jenks-White Seed Co.  
Josephine Growers Co-Op.  
Assn.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
The Chas. H. Lilly Co.  
The J. Chas. McCullough  
Seed Co.  
Mark Means Co.  
Chas. R. Moore  
Northrup, King & Co. (Bom-  
berger Div.)  
Ostberg Seed Co.  
Paramount Seed Co.  
The Philadelphia Seed Co.,  
Inc.  
Russell-Heckle Seed Co.  
William G. Scarlett & Co.  
Walter S. Schell, Inc.  
Seaboard Seed Co.  
F. F. Smith & Co., Inc.  
Transcontinental Seed, Inc.  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.

### CLOVER—MAMMOTH RED

Ackerman Co.  
C. S. Brent Seed Co.

Cargill, Inc.  
 Roscoe J. Carl & Son  
 Capital Fuel, Feed & Seed Co.  
 Corneli Seed Co.  
 Craver-Dickinson Seed Co.  
 Davenport Seed Co.  
 Albert Dickinson Co.  
 Duryea Seed Co., Inc.  
 Leslie Edgerton  
 Funk Bros. Seed Co.  
 Ging & Company  
 Globe Seed & Feed Co.  
 Hamilton Seed & Coal Co.  
 International Seed, Inc.  
 Jenks-White Seed Co.  
 Geo. Keller & Sons  
 Kelly Seed Co.  
 H. C. King & Sons  
 F. Lagomarsino & Sons  
 R. E. Lambert & Sons  
 D. Landreth Seed Co.  
 Chas. H. Lilly Co.  
 Julius Loewith, Inc.  
 Louisville Seed Co.  
 Ed. F. Mangelsdorf & Bro.,  
 Inc.  
 H. J. Mayer  
 McCabe Bros. Grain Co., Ltd.  
 The J. Chas. McCullough  
 Seed Co.  
 Michael-Leonard Co.  
 Chas. R. Moore  
 National Seed Co., Inc.  
 Nebraska Seed Co.  
 Northrup, King & Co.  
 Northwestern Seed Co., Inc.  
 Northwestern Seed Growers,  
 Inc.  
 L. L. Olds Seed Co.  
 Ostberg Seed Co.  
 Ouren Seed Co.  
 Page Seed Co.  
 Peppard Seed Co.  
 Philadelphia Seed Co., Inc.  
 Purcell Seed Co.  
 Ross Seed Co., Inc.  
 Rudy-Patrick Seed Co.  
 Wm. G. Scarlett & Co.  
 J. M. Schultz Seed Co.  
 O. M. Scott & Sons Co.  
 Seaboard Seed Co.  
 Geo. P. Sexauer & Son  
 The Stanford Seed Co.  
 Steele, Briggs Seed Co., Ltd.  
 Stollers Seed House  
 Transcontinental Seed, Inc.  
 Vaughan's Seed Store  
 Owen T. Watts  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.  
 Wright, Stephenson & Coy.,  
 Ltd.  
 Young & Conway

**CLOVER—PERSIAN**

Corneli Seed Co.  
 Duryea Seed Co., Inc.  
 F. Lagomarsino & Sons  
 R. E. Lambert & Sons  
 W. T. Nolin

**CLOVER—RED**

The Ackerman Co.  
 The Barteldes Seed Co.  
 The Belt Seed Co.  
 Blue Mountain Seed Growers  
 Assn.  
 C. S. Brent Seed Co.  
 Robt. Buist Co.  
 Capital Fuel, Feed & Seed Co.  
 Cargill, Inc.  
 Roscoe J. Carl & Son  
 Arthur R. Cone  
 Condon Bros., Seedsmen  
 Corneli Seed Co.  
 Craver-Dickinson Seed Co.  
 Davenport Seed Co.  
 The Albert Dickinson Co.  
 J. L. Donley & Bro.  
 Duryea Seed Co.  
 Leslie Edgerton  
 A. Ertag, Inc.  
 Farmer Seed & Nursery Co.  
 Ferry-Morse Seed Co.  
 Funk Bros. Seed Co.  
 Globe Seed & Feed Co.  
 The Gooding Seed Co.  
 Griswold Seed & Nursery Co.  
 Hamilton Seed & Coal Co.  
 The Chas. C. Hart Seed Co.  
 Henry Hirsch & Sons, Inc.  
 Holmes Seed Co.  
 Idaho Grimm Alfalfa Seed  
 Growers Assn., Inc.  
 International Seed, Inc.  
 Interstate Seed & Grain Co.  
 Jenks-White Seed Co.  
 Kelly Seed Co.  
 Geo. Keller & Sons  
 H. C. King & Sons, Inc.  
 F. Lagomarsino & Sons  
 R. E. Lambert & Sons  
 D. Landreth Seed Co.  
 Land O'Lakes Creameries,  
 Inc.  
 The Chas. H. Lilly Co.  
 Julius Loewith, Inc.  
 Louisville Seed Co.  
 Ed. F. Mangelsdorf & Bro.,  
 Inc.

McCabe Bros. Grain Co., Ltd.  
 The J. Chas. McCullough  
 Seed Co.  
 Magill & Co.  
 H. J. Mayer  
 Montana Seed Co.  
 Chas. R. Moore  
 National Seed Co., Inc.  
 The Nebraska Seed Co.  
 Robert, Nicholson Seed Co.  
 W. T. Nolin  
 Northern Field Seed Co.  
 Northrup, King & Co. (Bom-  
 berger Div.)  
 Northrup, King & Co., Mpls.  
 Northwestern Seed Co.  
 Edgar L. Oakes & Co.  
 L. L. Olds Seed Co.  
 The O & M Seed Co.  
 Ostberg Seed Co.  
 Ouren Seed Co.  
 The Page Seed Co.  
 A. S. Paterson & Coy, Ltd.  
 Peppard Seed Co.  
 The Philadelphia Seed Co.,  
 Inc.  
 Prunty Seed & Grain Co.  
 Purcell Seed Co., Inc.  
 I. L. Radwaner Seed Co., Inc.  
 Ross Seed Co.  
 Rudy-Patrick Seed Co.  
 Russell-Heckle Seed Co.  
 Seaboard Seed Co.  
 Wm. G. Scarlett & Co.  
 Walter S. Schell, Inc.  
 J. M. Schultz Seed Co.  
 O. M. Scott & Sons Co.  
 Geo. P. Sexauer & Son  
 Shultz Seed Co., Inc.  
 Sommer Bros. Seed Co.  
 The Stanford Seed Co.  
 Steele, Briggs Seed Co., Ltd.  
 Stollers Seed House  
 Transcontinental Seed, Inc.  
 Twin City Seed Co.  
 Vaughan's Seed Store  
 Owen T. Watts  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.  
 Wright, Stephenson & Coy.,  
 Ltd.  
 Young & Conway

**CLOVER—STRAWBERRY**

Blue Mountain Seed Growers  
 Assn.  
 F. Lagomarsino & Sons  
 F. H. Woodruff & Sons, Inc.

**CLOVER—  
SUBTERRANEAN**

Law, Somner Pty., Ltd.

**CLOVER—SWEET**

The Ackerman Co.  
 The Barteldes Seed Co.  
 The Belt Seed Co.  
 The Bowman Seed Co.  
 Robt. Buist Co.  
 C. S. Brent Seed Co.  
 Capital Fuel, Feed & Seed Co.  
 Cargill, Inc.  
 Roscoe J. Carl & Son  
 Condon Bros., Seedsmen  
 Corneli Seed Co.  
 Craver-Dickinson Seed Co.  
 Dakota Improved Seed Co.  
 The Albert Dickinson Co.  
 J. L. Donley & Bro.  
 Duryea Seed Co., Inc.  
 Leslie Edgerton  
 Farmers Union Grain & Sup-  
 ply Co.  
 Ferry-Morse Seed Co.  
 Funk Bros. Seed Co.  
 Ging & Company  
 Globe Seed & Feed Co.  
 Goldberg Seed & Feed Co.  
 Griswold Seed & Nursery Co.  
 Hamilton Seed & Coal Co.  
 The Chas. C. Hart Seed Co.  
 Henry Hirsch & Sons  
 Holmes Seed Co.  
 Edgar F. Hurff Co.  
 International Seed, Inc.  
 Interstate Seed & Grain Co.  
 Jenks-White Seed Co.  
 Geo. Keller & Sons  
 Kelly Seed Co.  
 F. Lagomarsino & Sons  
 Lakin Seed Co.  
 D. Landreth Seed Co.  
 Land O'Lakes Creameries,  
 Inc.  
 The Chas. H. Lilly Co.  
 Louisville Seed Co.  
 Magill & Co.  
 Ed. F. Mangelsdorf & Bro.,  
 Inc.  
 H. J. Mayer  
 McCabe Bros. Grain Co., Ltd.  
 The J. Chas. McCullough  
 Seed Co.  
 Montana Seed Co.  
 Chas. R. Moore  
 National Seed Co., Inc.  
 The Nebraska Seed Co.  
 Robt. Nicholson Seed Co.  
 Newday Seeds, Inc.

Northern Canadian Seed  
 Sales  
 Northern Field Seed Co.  
 Northrup, King & Co. (Bom-  
 berger Div.)  
 Northrup, King & Co., Mpls.  
 Northwestern Seed Co.  
 Northwestern Seed Growers,  
 Inc.  
 L. L. Olds Seed Co.  
 The O & M Seed Co.  
 Ostberg Seed Co.  
 Ouren Seed Co.  
 Peppard Seed Co.  
 The Philadelphia Seed Co.,  
 Inc.  
 Prunty Seed & Grain Co.  
 Purcell Seed Co.  
 Ross Seed Co.  
 Rudy-Patrick Seed Co.  
 Russell-Heckle Seed Co.  
 Wm. G. Scarlett & Co.  
 Walter S. Schell, Inc.  
 J. M. Schultz Seed Co.  
 O. M. Scott & Sons Co.  
 Seaboard Seed Co.  
 Sedgwick Alfalfa Mills  
 Geo. P. Sexauer & Son  
 Shultz Seed Co., Inc.  
 Sommer Bros. Seed Co.  
 The Stanford Seed Co.  
 Steele, Briggs Seed Co., Ltd.  
 Stollers Seed House  
 Transcontinental Seed, Inc.  
 Twin City Seed Co.  
 Valke-Christensen Co.  
 Owen T. Watts  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.  
 Young & Conway

**CLOVER—  
YELLOW SWEET**

Ackerman Co.  
 Barteldes Seed Co.  
 Blue Mt. Seed Growers Assn.  
 Bowman Seed Co.  
 C. S. Brent Seed Co.  
 Cargill, Inc.  
 Roscoe J. Carl & Son  
 Corneli Seed Co.  
 Davenport Seed Co.  
 Duryea Seed Co., Inc.  
 Leslie Edgerton  
 Goldberg Seed & Feed Co.  
 Ging & Company  
 Gooding Seed Co.  
 Geo. Keller & Sons  
 Kelly Seed Co.  
 H. C. King & Sons  
 F. Lagomarsino & Sons  
 R. E. Lambert & Sons  
 D. Landreth Seed Co.  
 Land O' Lakes Creameries,  
 Inc.

Chas. H. Lilly Co.  
 Julius Loewith, Inc.  
 Magill & Co.  
 Ed. F. Mangelsdorf & Bro.,  
 Inc.  
 McCabe Bros. Grain Co., Ltd.  
 The J. Chas. McCullough Seed  
 Co.  
 Michael-Leonard Co.  
 Chas. R. Moore  
 Nebraska Seed Co.  
 Newday Seeds, Inc.  
 Northern Canadian Seed  
 Sales  
 Northrup, King & Co. (Bom-  
 berger Div.)  
 Northrup, King & Co., Mpls.  
 Northwestern Seed Co.  
 Edgar L. Oakes & Co.  
 L. L. Olds Seed Co.  
 Page Seed Co.  
 Peppard Seed Co.  
 Philadelphia Seed Co.  
 Purcell Seed Co.  
 Ross Seed Co.  
 Rudy-Patrick Seed Co.  
 Wm. G. Scarlett & Co.  
 J. M. Schultz Seed Co.  
 Seaboard Seed Co.  
 Geo. P. Sexauer & Son  
 Stoller's Seed House  
 Owen T. Watts  
 Young & Conway

**CLOVER—WHITE**

The Belt Seed Co.  
 The Bowman Seed Co.  
 C. S. Brent Seed Co.  
 Robt. Buist Co.  
 Capital Fuel, Feed & Seed Co.  
 Cargill, Inc.  
 Condon Bros., Seedsmen  
 Corneli Seed Co.  
 Craver-Dickinson Seed Co.  
 The Albert Dickinson Co.  
 J. L. Donley & Bro.  
 Duryea Seed Co., Inc.  
 Leslie Edgerton  
 A. Ertag, Inc.  
 Ferry-Morse Seed Co.  
 Funk Bros. Seed Co.  
 Globe Seed & Feed Co.  
 The Gooding Seed Co.  
 Hamilton Seed & Coal Co.

The Chas. C. Hart Seed Co.  
 Holmes Seed Co.  
 Edgar F. Hurff Co.  
 International Seed, Inc.  
 Jenks-White Seed Co.  
 Kellogg Kelly Seed Co.  
 Kelly Seed Co.  
 F. Lagomarsino & Sons  
 R. E. Lambert & Sons  
 Land O'Lakes Creameries,  
 Inc.  
 D. Landreth Seed Co.  
 Law, Somner Pty., Ltd.  
 The Chas. H. Lilly Co.  
 Julius Loewith, Inc.  
 Louisville Seed Co.  
 Ed. F. Mangelsdorf & Bro.,  
 Inc.  
 H. J. Mayer  
 McCabe Bros. Grain Co., Ltd.  
 The J. Chas. McCullough  
 Seed Co.  
 Mark Means Co.  
 Chas. R. Moore  
 National Seed Co., Inc.  
 The Nebraska Seed Co.  
 Robt. Nicholson Seed Co.  
 W. T. Nolin  
 Northern Field Seed Co.  
 Northrup, King & Co. (Bom-  
 berger Div.)  
 Northwestern Seed Growers,  
 Inc.  
 L. L. Olds Seed Co.  
 Ostberg Seed Co.  
 Ouren Seed Co.  
 The Page Seed Co.  
 Peppard Seed Co.  
 A. S. Paterson & Coy, Ltd.  
 The Philadelphia Seed Co.,  
 Inc.

Prunty Seed & Grain Co.  
 Purcell Seed Co.  
 I. L. Radwaner Seed Co., Inc.  
 Ross Seed Co., Inc.  
 Rudy-Patrick Seed Co.  
 Russell-Heckle Seed Co.  
 Wm. G. Scarlett & Co.  
 Walter S. Schell, Inc.  
 J. M. Schultz Seed Co.  
 O. M. Scott & Sons Co.  
 Seaboard Seed Co.  
 Geo. P. Sexauer & Son  
 Shultz Seed Co., Inc.  
 Snelson Seed Co.  
 The Stanford Seed Co.  
 Stollers Seed House  
 Transcontinental Seed, Inc.  
 Twin City Seed Co.  
 Vaughan's Seed Store  
 Owen T. Watts  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.  
 Wright, Stephenson & Coy.,  
 Ltd.

**CLOVER—YELLOW HOP**

Albert Dickinson Co.  
 Duryea Seed Co., Inc.  
 Jenks-White Seed Co.  
 R. E. Lambert & Sons  
 Chas. H. Lilly Co.  
 Julius Loewith, Inc.  
 Robt. Nicholson Seed Co.  
 W. T. Nolin

**CLOVER—WILD WHITE**

Blue Mountain Seed Growers  
 Assn.  
 C. S. Brent Seed Co.  
 Capital Fuel, Feed & Seed Co.  
 Corneli Seed Co.  
 Albert Dickinson Seed Co.  
 Craver-Dickinson Seed Co.  
 Duryea Seed Co., Inc.  
 Ging & Company  
 Jenks-White Seed Co.  
 Kelly Seed Co.  
 R. E. Lambert & Sons  
 D. Landreth Seed Co.  
 Chas. H. Lilly Co.  
 Julius Loewith, Inc.  
 H. J. Mayer  
 The J. Chas. McCullough Seed  
 Co.  
 Chas. R. Moore  
 Ostberg Seed Co.  
 Philadelphia Seed Co.  
 Wm. G. Scarlett & Co.  
 Seaboard Seed Co.  
 The Stanford Seed Co.  
 Transcontinental Seed, Inc.  
 F. H. Woodruff & Sons, Inc.  
 Wright, Stephenson & Coy.,  
 Ltd.

**CORN—FIELD**

The Barteldes Seed Co.  
 The Belt Seed Co.  
 N. Bonahoom Seed Co.  
 The Bowman Seed Co.  
 C. S. Brent Seed Co.  
 Robt. Buist Co.  
 Cargill, Inc.  
 C. S. Clark & Sons  
 Arthur R. Cone  
 Condon Bros., Seedsmen  
 Corneli Seed Co.  
 Council Bluffs Seed Co.  
 Craver-Dickinson Seed Co.  
 Dakota Improved Seed Co.



The Albert Dickinson Co.  
 J. L. Donley & Bro.  
 Farmer Seed & Nursery Co.  
 Ferry-Morse Seed Co.  
 Hamilton Seed & Coal Co.  
 Funk Bros. Seed Co.  
 The Chas. C. Hart Seed Co.  
 Holmes Seed Co.  
 Edgar F. Hurff Co.  
 Interstate Seed & Grain Co.  
 Jacques Seed Co.  
 Jenks-White Seed Co.  
 Kellogg Kelly Seed Co.  
 Kelly Seed Co.  
 F. Lagomarsino & Sons  
 Land O' Lakes Creameries,  
 Inc.  
 R. E. Lambert & Sons  
 D. Landreth Seed Co.  
 Lewis Seed Co.  
 Louisville Seed Co.  
 Magill & Co.  
 Ed. F. Mangelsdorf & Bro.,  
 Inc.  
 McCabe Bros. Grain Co., Ltd.  
 The J. Chas. McCullough Seed  
 Co.  
 Michael-Leonard Co.  
 Chas. R. Moore  
 The Nebraska Seed Co.  
 Newday Seeds, Inc.  
 Robt. Nicholson Seed Co.  
 Nishna Valley Seed Co.  
 W. T. Nolin  
 Northern Field Seed Co.  
 L. L. Olds Seed Co.  
 The O & M Seed Co.  
 Ouren Seed Co.  
 The Page Seed Co.  
 Peppard Seed Co.  
 The Philadelphia Seed Co.,  
 Inc.  
 Purcell Seed Co.  
 Riemers' Farms  
 Ross Seed Co., Inc.  
 Russell-Heckle Seed Co.  
 Wm. G. Scarlett & Co.  
 Walter S. Schell, Inc.  
 O. M. Scott & Sons Co.  
 Seaboard Seed Co.  
 Sedgwick Alfalfa Mills  
 George P. Sexauer & Son  
 Shultz Seed Co., Inc.  
 Shuler & Smoak  
 Snelson Seed Co.  
 The Stanford Seed Co.  
 Stollers Seed House  
 Tracy & Son Farms  
 Twin City Seed Co.  
 Vaughan's Seed Store  
 Owen T. Watts  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.

### CORN—FLINT

Cargill, Inc.  
 C. S. Clark & Sons  
 Comstock, Ferre & Co.  
 Council Bluffs Seed Co.  
 Jenks-White Seed Co.  
 H. C. King & Sons  
 F. Lagomarsino & Sons  
 R. E. Lambert & Sons  
 Land O' Lakes Creameries,  
 Inc.  
 McCabe Bros. Grain Co., Ltd.  
 Chas. R. Moore  
 Nebraska Seed Co.  
 Northrup, King & Co., Mpls.  
 O. & M. Seed Co.  
 Edgar L. Oakes & Co.  
 L. L. Olds Seed Co.  
 Page Seed Co.  
 Philadelphia Seed Co.  
 J. C. Robinson Seed Co.  
 Wm. G. Scarlett & Co.  
 Geo. P. Sexauer & Son  
 The Stanford Seed Co.  
 T. W. Wood & Sons

### CORN (Hybrid)

Barteldes Seed Co.  
 C. S. Brent Seed Co.  
 Bowman Seed Co.  
 Cargill, Inc.  
 C. S. Clark & Sons  
 Condon Bros. Seedsmen  
 Corneli Seed Co.  
 Council Bluffs Seed Co.  
 Dakota Improved Seed Co.  
 Davenport Seed Co.  
 Funk Bros. Seed Co.  
 Hamilton Seed & Coal Co.  
 International Seed, Inc.  
 Jacques Seed Co.  
 Jenks-White Seed Co.  
 Kellogg Kelly Seed Co.  
 Kelly Seed Co.  
 H. C. King & Sons  
 F. Lagomarsino & Sons  
 Land O' Lakes Creameries,  
 Inc.  
 R. E. Lambert & Sons  
 Louisville Seed Co.  
 Ed. F. Mangelsdorf & Bro., Inc.  
 McCabe Bros. Grain Co., Ltd.  
 The J. Chas. McCullough Seed  
 Co.  
 Michael-Leonard Co.

Chas. R. Moore  
 National Seed Co.  
 Nebraska Seed Co.  
 Newday Seeds, Inc.  
 Nishna Valley Seed Co.  
 Northrup, King & Co., Mpls.  
 Northwestern Seed Co.  
 O. & M. Seed Co.  
 Ouren Seed Co.  
 Edgar L. Oakes & Co.  
 L. L. Olds Seed Co.  
 Page Seed Co.  
 Peppard Seed Co.  
 Philadelphia Seed Co.  
 Purcell Seed Co.  
 J. C. Robinson Seed Co.  
 Ross Seed Co.  
 Wm. G. Scarlett & Co.  
 O. M. Scott & Sons Co.  
 Seaboard Seed Co.  
 Geo. P. Sexauer & Son  
 Shultz Seed Co., Inc.  
 Stollers Seed House  
 Stanford Seed Co.  
 Tracy & Son Farms  
 Owen T. Watts  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.

### COTTON

Corneli Seed Co.  
 R. E. Lambert & Sons  
 Robt. Nicholson Seed Co.  
 Russell-Heckle Seed Co.  
 Shuler & Smoak  
 Snelson Seed Co.  
 (Sea Island Long Staple  
 only)  
 T. W. Woods & Sons

### COWPEAS

Associated Seed Growers, Inc.  
 The Belt Seed Co.  
 C. S. Brent Seed Co.  
 Robert Buist Company  
 Condon Bros. Seedsmen  
 Corneli Seed Co.  
 Ferry-Morse Seed Co.  
 Funk Bros. Seed Co.  
 Ging & Company  
 The Chas. C. Hart Seed Co.  
 Edgar F. Hurff Co.  
 Kelly Seed Co.  
 F. Lagomarsino & Sons  
 R. E. Lambert & Sons  
 D. Landreth Seed Co.  
 Julius Loewith, Inc.  
 Louisville Seed Co.  
 Ed. F. Mangelsdorf & Bro.,  
 Inc.  
 The J. Chas. McCullough Seed  
 Co.  
 Chas. R. Moore  
 National Seed Co., Inc.  
 Robt. Nicholson Seed Co.  
 Peppard Seed Co.  
 The Philadelphia Seed Co.,  
 Inc.  
 Prunty Seed & Grain Co.  
 Purcell Seed Co.  
 Ross Seed Co.  
 Rudy-Patrick Seed Co.  
 Russell-Heckle Seed Co.  
 Wm. G. Scarlett & Co.  
 J. M. Schultz Seed Co.  
 Seaboard Seed Co.  
 Sedgwick Alfalfa Mills  
 Shuler & Smoak  
 Shultz Seed Co., Inc.  
 Snelson Seed Co.  
 Stollers Seed House  
 Owen T. Watts  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.  
 Young & Conway

### CRESTED DOGSTAIL

The Belt Seed Co.  
 Craver-Dickinson Seed Co.  
 Duryea Seed Co., Inc.  
 The Chas. C. Hart Seed Co.  
 International Seed, Inc.  
 Jenks-White Seed Co.  
 F. Lagomarsino & Sons  
 Julius Loewith, Inc.  
 The J. Chas. McCullough Seed  
 Co.  
 A. S. Paterson & Coy. Ltd.  
 I. L. Radwaner Seed Co., Inc.  
 Wm. G. Scarlett & Co.  
 The Stanford Seed Co.  
 Transcontinental Seed, Inc.  
 F. H. Woodruff & Sons, Inc.  
 Wright, Stephenson & Coy  
 Ltd.

### CRESTED WHEAT GRASS

Barteldes Seed Co.  
 Blue Mt. Seed Growers Assn.  
 Bowman Seed Co.  
 Cargill, Inc.  
 Corneli Seed Co.  
 The Albert Dickinson Co.  
 Leslie Edgerton  
 Farmers Union Grain & Sup-  
 ply Co.  
 Goldberg Seed & Feed Co.  
 The Gooding Seed Co.  
 Griswold Seed & Nursery Co.

Jenks-White Seed Co.  
 H. C. King & Sons  
 F. Lagomarsino & Sons  
 Lakin Seed Co.  
 Land O' Lakes Creameries,  
 Inc.  
 The Chas. H. Lilly Co.  
 Julius Loewith, Inc.  
 Ed. F. Mangelsdorf & Bro.,  
 Inc.  
 Magill & Co.  
 McCabe Bros. Grain Co., Ltd.  
 The J. Chas. McCullough Seed  
 Co.  
 Montana Seed Co.  
 Nebraska Seed Co.  
 Newday Seeds, Inc.  
 Robt. Nicholson Seed Co.  
 Northern Canadian Seed  
 Sales  
 Northrup, King & Co. (Bom-  
 berger Div.)  
 Northrup, King & Co., Mpls.  
 Edgar L. Oakes & Co.  
 L. L. Olds Seed Co.  
 Ouren Seed Co.  
 Peppard Seed Co.  
 Philadelphia Seed Co.  
 Rudy-Patrick Seed Co.  
 Geo. P. Sexauer & Son  
 Steele, Briggs Seed Co., Ltd.  
 Valker-Christensen Co.  
 F. H. Woodruff & Sons, Inc.

### CROTALARIA

The Belt Seed Co.  
 Corneli Seed Co.  
 D. H. Gilbert Seed Co., Inc.  
 R. E. Lambert & Sons  
 Julius Loewith, Inc.  
 Robt. Nicholson Seed Co.  
 Riemers' Farms  
 Russell-Heckle Seed Co.  
 Wm. G. Scarlett & Co.  
 Simpson Nursery Co.  
 Snelson Seed Co.  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.

### DALLIS GRASS (Paspalum Dilatum)

The Belt Seed Co.  
 Ferry-Morse Seed Co.  
 International Seed, Inc.  
 F. Lagomarsino & Sons  
 R. E. Lambert & Sons  
 Law, Somner Pty., Ltd.  
 Julius Loewith, Inc.  
 Chas. R. Moore  
 Robt. Nicholson Seed Co.  
 W. T. Nolin  
 Northrup, King & Co. (Bom-  
 berger Div.)  
 Riemers' Farms  
 Russell-Heckle Seed Co.  
 Wm. G. Scarlett & Co.  
 Snelson Seed Co.  
 Transcontinental Seed, Inc.  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.  
 Yuma Co. Farmers Mktg.  
 Assn.

### ESPARSETTE OR SANFOIN

Duryea Seed Co., Inc.  
 Julius Loewith, Inc.

### FESCUES

Associated Seed Growers, Inc.  
 The Belt Seed Co.  
 Blue Mt. Seed Growers Assn.  
 C. S. Brent Seed Co.  
 Robt. Buist Co.  
 Arthur R. Cone  
 Craver-Dickinson Seed Co.  
 Corneli Seed Co.  
 The Albert Dickinson Co.  
 J. L. Donley & Bro.  
 Duryea Seed Co., Inc.  
 Engbretson Seed Co.  
 A. Ertag, Inc.  
 Ferry-Morse Seed Co.  
 Hamilton Seed & Coal Co.  
 The Chas. C. Hart Seed Co.  
 Holmes Seed Co.  
 International Seed, Inc.  
 Jenks-White Seed Co.  
 Kelly Seed Co.  
 F. Lagomarsino & Sons  
 D. Landreth Seed Co.  
 Lewis & Clark Seed Co., Inc.  
 The Chas. H. Lilly Co.  
 Julius Loewith, Inc.  
 Ed. F. Mangelsdorf & Bro.,  
 Inc.  
 McCabe Bros. Grain Co., Ltd.  
 The J. Chas. McCullough Seed  
 Co.  
 Chas. R. Moore  
 Northern Canadian Seed  
 Sales  
 Northrup, King & Co. (Bom-  
 berger Div.)  
 Northrup, King & Co., Mpls.  
 Northwestern Seed Growers,  
 Inc.  
 L. L. Olds Seed Co.  
 Olsen's Seed Farms  
 A. S. Paterson & Coy. Ltd.

Peppard Seed Co.  
 The Philadelphia Seed Co.,  
 Inc.  
 Rudy-Patrick Seed Co.  
 Wm. G. Scarlett & Co.  
 O. M. Scott & Sons Co.  
 Seaboard Seed Co.  
 The Stanford Seed Co.  
 Stollers Seed House  
 Transcontinental Seed, Inc.  
 Twin City Seed Co.  
 Vaughan's Seed Store  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.  
 Wright, Stephenson & Coy,  
 Ltd.

### FETERITA

The Barteldes Seed Co.  
 N. Bonahoom Seed Co.  
 The Bowman Seed Co.  
 Capital Fuel, Feed & Seed Co.  
 Corneli Seed Co.  
 Ed. F. Mangelsdorf & Bro.,  
 Inc.  
 The J. Chas. McCullough Seed  
 Co.  
 Robt. Nicholson Seed Co.  
 L. L. Olds Seed Co.  
 Peppard Seed Co.  
 Rudy-Patrick Seed Co.  
 Russell-Heckle Seed Co.  
 Sedgwick Alfalfa Mills  
 Geo. P. Sexauer & Son  
 Snelson Seed Co.

### FIELD PEAS

The Belt Seed Co.  
 C. S. Brent Seed Co.  
 Robt. Buist Co.  
 Cargill, Inc.  
 Arthur R. Cone  
 Condon Bros. Seedsmen  
 Corneli Seed Co.  
 Craver-Dickinson Seed Co.  
 The Albert Dickinson Co.  
 Duryea Seed Co., Inc.  
 Leslie Edgerton  
 A. Ertag, Inc.  
 Ferry-Morse Seed Co.  
 The Chas. C. Hart Seed Co.  
 Holmes Seed Co.  
 Edgar F. Hurff Co.  
 International Seed, Inc.  
 Interstate Seed & Grain Co.  
 Jenks-White Seed Co.  
 F. Lagomarsino & Sons  
 R. E. Lambert & Sons  
 Law, Somner Pty., Ltd.  
 Leckenby Seed Co.  
 The Chas. H. Lilly Co.  
 Julius Loewith, Inc.  
 Louisville Seed Co.  
 Magill & Co.  
 Ed. F. Mangelsdorf & Bro.,  
 Inc.  
 McCabe Bros. Grain Co., Ltd.  
 The J. Chas. McCullough Seed  
 Co.  
 Mark Means Co.  
 Montana Seed Co.  
 Chas. R. Moore  
 Robt. Nicholson Seed Co.  
 Northrup, King & Co.  
 (Bomberger Div.)  
 Northwestern Seed Growers,  
 Inc.  
 L. L. Olds Seed Co.  
 The Page Seed Co.  
 Paramount Seed Co.  
 A. S. Paterson & Coy. Ltd.  
 The Philadelphia Seed Co.,  
 Inc.  
 Prunty Seed & Grain Co.  
 I. L. Radwaner Seed Co., Inc.  
 Rudy-Patrick Seed Co.  
 Russell-Heckle Seed Co.  
 Wm. G. Scarlett & Co.  
 Sedgwick Alfalfa Mills  
 Geo. P. Sexauer & Son  
 Shuler & Smoak  
 Shultz Seed Co., Inc.  
 F. F. Smith & Co., Inc.  
 Snelson Seed Co.  
 J. H. Speers & Co., Ltd.  
 The Stanford Seed Co.  
 Stollers Seed House  
 Transcontinental Seed, Inc.  
 Twin City Seed Co.  
 Owen T. Watts  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.  
 Wright, Stephenson & Coy,  
 Ltd.

### GRASSES—FANCY

The Belt Seed Co.  
 Blue Mt. Seed Growers Assn.  
 The Bowman Seed Co.  
 Condon Bros., Seedsmen  
 Corneli Seed Co.  
 Craver-Dickinson Seed Co.  
 The Albert Dickinson Co.  
 J. L. Donley & Bro.  
 Duryea Seed Co., Inc.  
 Engbretson Seed Co.  
 Ferry-Morse Seed Co.  
 Hamilton Seed & Coal Co.  
 The Chas. C. Hart Seed Co.  
 Holmes Seed Co.

International Seed, Inc.  
 Jenks-White Seed Co.  
 Kelly Seed Co.  
 F. Lagomarsino & Sons  
 Lewis & Clark Seed Co., Inc.  
 The Chas. H. Lilly Co.  
 Julius Loewith, Inc.  
 Ed. F. Mangelsdorf & Bro.  
 Inc.  
 The J. Chas. McCullough Seed  
 Co.  
 Chas. R. Moore  
 The Nebraska Seed Co.  
 Newday Seeds, Inc.  
 Northrup, King & Co.  
 (Bomberger Div.)  
 Northrup, King & Co., Mpls.  
 L. L. Olds Seed Co.  
 Olsen's Seed Farms  
 Ostberg Seed Co.  
 Ouren Seed Co.  
 Peppard Seed Co.  
 The Philadelphia Seed Co.,  
 Inc.  
 Prunty Seed & Grain Co.  
 Purcell Seed Co.  
 I. L. Radwaner Seed Co., Inc.  
 Ross Seed Co.  
 Rudy-Patrick Seed Co.  
 Wm. G. Scarlett & Co.  
 O. M. Scott & Sons Co.  
 Seaboard Seed Co.  
 Shultz Seed Co., Inc.  
 The Stanford Seed Co.  
 Stollers Seed House  
 Transcontinental Seed, Inc.  
 Twin City Seed Co.  
 Vaughan's Seed Store  
 Owen T. Watts  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.  
 Yuma County Farmers Mktg.  
 Assn.

### GROHOMA

The Barteldes Seed Co.  
 N. Bonahoom Seed Co.  
 The Bowman Seed Co.  
 Capital Fuel, Feed & Seed Co.  
 Corneli Seed Co.  
 Funk Bros. Seed Co.  
 Griswold Seed & Nursery Co.  
 Kelly Seed Co.  
 Ed. F. Mangelsdorf & Bro.,  
 Inc.  
 The J. Chas. McCullough Seed  
 Co.  
 Robt. Nicholson Seed Co.  
 Peppard Seed Co.  
 Rudy-Patrick Seed Co.  
 Russell-Heckle Seed Co.  
 Sedgwick Alfalfa Mills  
 Geo. P. Sexauer & Son  
 Shultz Seed Co., Inc.  
 Snelson Seed Co.  
 Twin City Seed Co.

### HEGARI

The Barteldes Seed Co.  
 N. Bonahoom Seed Co.  
 The Bowman Seed Co.  
 Capital Fuel, Feed & Seed Co.  
 Corneli Seed Co.  
 Funk Bros. Seed Co.  
 Griswold Seed & Nursery Co.  
 Hamilton Seed & Coal Co.  
 R. E. Lambert & Sons  
 Ed. F. Mangelsdorf & Bro.,  
 Inc.  
 The J. Chas. McCullough  
 Seed Co.  
 Robt. Nicholson Seed Co.  
 Northwestern Seed Co.  
 Ouren Seed Co.  
 Peppard Seed Co.  
 Rudy-Patrick Seed Co.  
 Russell-Heckle Seed Co.  
 Sedgwick Alfalfa Mills  
 Geo. P. Sexauer & Son  
 Snelson Seed Co.  
 Twin City Seed Co.  
 T. W. Wood & Sons  
 Yuma Co. Farmers Mktg.  
 Assn.

### HEMP

C. S. Brent Seed Co.  
 Corneli Seed Co.  
 The Albert Dickinson Seed  
 Co.  
 Duryea Seed Co., Inc.  
 Hamilton Seed & Coal Co.  
 Ed. Mangelsdorf & Bros., Inc.  
 The J. Chas. McCullough  
 Seed Co.  
 The Philadelphia Seed Co.,  
 Inc.  
 Prunty Seed & Grain Co.  
 Rudy-Patrick Seed Co.  
 Wm. G. Scarlett & Co.  
 The Stanford Seed Co.  
 Twin City Seed Co.  
 Owen T. Watts

### JOHNSON GRASS

Capital Fuel, Feed & Seed  
 Co.  
 Corneli Seed Co.  
 F. Lagomarsino & Sons  
 R. E. Lambert & Sons  
 Ed. F. Mangelsdorf & Bro.,  
 Inc.

Robt. Nicholson Seed Co.  
 Snelson Seed Co.

### KAFIR CORN

The Barteldes Seed Co.  
 N. Bonahoom Seed Co.  
 The Bowman Seed Co.  
 Robert Buist Co.  
 Corneli Seed Co.  
 Duryea Seed Co., Inc.  
 Griswold Seed & Nursery Co.  
 Hamilton Seed & Coal Co.  
 Kelly Seed Co.  
 Ed. F. Mangelsdorf & Bro.,  
 Inc.  
 The J. Chas. McCullough  
 Seed Co.  
 The Nebraska Seed Co.  
 Robt. Nicholson Seed Co.  
 L. L. Olds Seed Co.  
 Ouren Seed Co.  
 Peppard Seed Co.  
 The Philadelphia Seed Co.,  
 Inc.  
 Rudy-Patrick Seed Co.  
 Russell-Heckle Seed Co.  
 Wm. G. Scarlett & Co.  
 Sedgwick Alfalfa Mills  
 Geo. P. Sexauer & Son  
 Snelson Seed Co.  
 Stollers Seed House  
 T. W. Wood & Sons

### KUDZU

C. S. Brent Seed Co.  
 Corneli Seed Co.  
 Duryea Seed Co., Inc.  
 R. E. Lambert & Sons  
 Julius Loewith, Inc.  
 Peppard Seed Co.  
 I. L. Radwaner Seed Co., Inc.  
 Wm. G. Scarlett & Co.  
 Snelson Seed Co.

### LAWN MIXTURES

Ackerman Co.  
 American Bulb Co.  
 Associated Seed Growers,  
 Inc.

The Barteldes Seed Co.  
 The Belt Seed Co.  
 The Bowman Seed Co.  
 C. S. Brent Seed Co.  
 Robert Buist Co.  
 Cargill, Inc.  
 Arthur R. Cone  
 Condon Bros., Seedsmen  
 Corneli Seed Co.  
 Craver-Dickinson Seed Co.  
 The Albert Dickinson Co.  
 J. L. Donley & Bro.  
 Duryea Seed Co., Inc.  
 Ferry-Morse Seed Co.  
 Funk Bros. Seed Co.  
 Hamilton Seed & Coal Co.  
 The Chas. C. Hart Seed Co.  
 Holmes Seed Co.  
 Kelly Seed Co.  
 F. Lagomarsino & Sons  
 D. Landreth Seed Co.  
 The Chas. H. Lilly Co.  
 Louisville Seed Co.  
 Magill & Co.  
 Ed. F. Mangelsdorf & Bro.,  
 Inc.  
 McCabe Bros. Grain Co., Ltd.  
 The J. Chas. McCullough  
 Seed Co.  
 Chas. R. Moore  
 The Nebraska Seed Co.  
 Robt. Nicholson Seed Co.  
 Northrup, King & Co.  
 (Bomberger Div.)  
 Northrup, King & Co., Mpls.  
 L. L. Olds Seed Co.  
 O & M Seed Co.  
 Ostberg Seed Co.  
 Ouren Seed Co.  
 The Page Seed Co.  
 Peppard Seed Co.  
 The Philadelphia Seed Co.,  
 Inc.  
 Prunty Seed & Grain Co.  
 I. L. Radwaner Seed Co., Inc.  
 Ross Seed Co.  
 Rudy-Patrick Seed Co.  
 Russell-Heckle Seed Co.  
 Seaboard Seed Co.  
 Wm. G. Scarlett & Co.  
 Walter S. Schell, Inc.  
 O. M. Scott & Sons Co.  
 Sommer Bros. Seed Co.  
 Shultz Seed Co., Inc.  
 Geo. P. Sexauer & Son  
 The Stanford Seed Co.  
 Stollers Seed House  
 Transcontinental Seed, Inc.  
 Twin City Seed Co.  
 Vaughan's Seed Store  
 Owen T. Watts  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.

### LESPEDEZA

The Barteldes Seed Co.  
 The Belt Seed Co.  
 The Bowman Seed Co.  
 C. S. Brent Seed Co.  
 Corneli Seed Co.  
 Craver-Dickinson Seed Co.  
 Funk Bros. Seed Co.  
 The Albert Dickinson Co.

Hamilton Seed & Coal Co.  
 The Chas. C. Hart Seed Co.  
 Holmes Seed Co.  
 International Seed, Inc.  
 Geo. Keller & Sons  
 Kelly Seed Co.  
 F. Lagomarsino & Sons  
 R. E. Lambert & Sons  
 Louisville Seed Co.  
 Ed. F. Mangelsdorf & Bro.,  
 Inc.  
 D. R. Mayo Seed Co.  
 The J. Chas. McCullough  
 Seed Co.  
 Chas. R. Moore  
 National Seed Co., Inc.  
 The Nebraska Seed Company  
 Robt. Nicholson Seed Co.  
 Northwestern Seed Co.  
 L. L. Olds Seed Co.  
 Ouren Seed Co.  
 Peppard Seed Co.  
 The Philadelphia Seed Co.,  
 Inc.  
 Prunty Seed & Grain Co.  
 Purcell Seed Co., Inc.  
 Riemers' Farms  
 Ross Seed Co.  
 Rudy-Patrick Seed Co.  
 Russell-Heckle Seed Co.  
 Seaboard Seed Co.  
 Wm. G. Scarlett & Co.  
 J. M. Schultz Seed Co.  
 Shultz Seed Co., Inc.  
 Sedgwick Alfalfa Mills  
 Geo. P. Sexauer & Son  
 J. P. Snapp & Son  
 Snelson Seed Co.  
 Stollers Seed House  
 Owen T. Watts  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.  
 Young & Conway

### LUPINES

Hijos de S. V. Bellotti  
 Corneli Seed Co.  
 Duryea Seed Co., Inc.  
 R. E. Lambert & Sons  
 Julius Loewith, Inc.  
 I. L. Radwaner Seed Co., Inc.  
 Snelson Seed Co.  
 F. H. Woodruff & Sons, Inc.

### MAPLE PEAS

Blue Mountain Seed Growers  
 Assn.  
 Duryea Seed Co., Inc.  
 Julius Loewith, Inc.  
 F. Lagomarsino & Sons  
 Law, Somner Pty., Ltd.  
 The J. Chas. McCullough  
 Seed Co.  
 Philadelphia Seed Co.  
 Wm. G. Scarlett & Co.  
 Wright, Stephenson & Coy,  
 Ltd.

### MELILOTUS INDICA

C. S. Brent Seed Co.  
 Capital Fuel, Feed & Seed  
 Co.  
 Cargill, Inc.  
 Corneli Seed Co.  
 Cuff-Archias Seed Co.  
 Albert Dickinson Co.  
 Duryea Seed Co., Inc.  
 Kelly Seed Co.  
 F. Lagomarsino & Sons  
 R. E. Lambert & Sons  
 Chas. R. Moore  
 Nebraska Seed Co.  
 Robt. Nicholson Seed Co.  
 Northrup, King & Co.  
 (Bomberger Div.)  
 Paramount Seed Co.  
 Yuma Co. Farmers Mktg.  
 Assn.

### MICHELS

Blue Mt. Seed Growers Assn.  
 Corneli Seed Co.  
 Duryea Seed Co., Inc.  
 Globe Seed & Feed Co.  
 The Gooding Seed Co.  
 Kelly Seed Co.  
 F. Lagomarsino & Sons  
 Leckenby Seed Co.  
 The J. Chas. McCullough  
 Seed Co.  
 Chas. R. Moore  
 Robt. Nicholson Seed Co.  
 Northwestern Seed Growers,  
 Inc.  
 Rudy-Patrick Seed Co.  
 Stollers Seed House  
 F. H. Woodruff & Sons, Inc.

### MILLETS

The Barteldes Seed Co.  
 The Belt Seed Co.  
 N. Bonahoom Seed Co.  
 The Bowman Seed Co.  
 Robert Buist Co.  
 C. S. Brent Seed Co.  
 Cargill, Inc.  
 Arthur R. Cone  
 Corneli Seed Co.  
 Craver-Dickinson Seed Co.  
 Dakota Improved Seed Co.  
 The Albert Dickinson Co.  
 Duryea Seed Co., Inc.  
 Leslie Edgerton

Ferry-Morse Seed Co.  
 Funk Bros. Seed Co.  
 Hamilton Seed & Coal Co.  
 The Chas. C. Hart Seed Co.  
 Holmes Seed Co.  
 Edgar F. Hurff Co.  
 Interstate Seed & Grain Co.  
 Kelly Seed Co.  
 F. Lagomarsino & Sons  
 R. E. Lambert & Sons  
 Law, Somner Pty., Ltd.  
 Louisville Seed Co.  
 Magill & Co.  
 Ed. F. Mangelsdorf & Bro.,  
 Inc.  
 D. R. Mayo Seed Co.  
 McCabe Bros. Grain Co., Ltd.  
 The J. Chas. McCullough  
 Seed Co.  
 Chas. R. Moore  
 The Nebraska Seed Co.  
 Newday Seeds, Inc.  
 Robt. Nicholson Seed Co.  
 L. L. Olds Seed Co.  
 Ouren Seed Co.  
 The Page Seed Co.  
 Peppard Seed Co.  
 The Philadelphia Seed Co.,  
 Inc.  
 Prunty Seed & Grain Co.  
 Purcell Seed Co.  
 Riemers' Farms  
 Ross Seed Co.  
 Rudy-Patrick Seed Co.  
 Russell-Heckle Seed Co.  
 Wm. G. Scarlett & Co.  
 Walter S. Schell, Inc.  
 J. M. Schultz Seed Co.  
 Sedgwick Alfalfa Mills  
 Geo. P. Sexauer & Son  
 Shultz Seed Co., Inc.  
 Snelson Seed Co.  
 (Cattail and Brown Top)  
 The Stanford Seed Co.  
 Transcontinental Seed, Inc.  
 Twin City Seed Co.  
 Valker-Christensen Co.  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.

### MILO MAIZE

The Barteldes Seed Co.  
 N. Bonahoom Seed Co.  
 The Bowman Seed Co.  
 Capital Fuel, Feed & Seed Co.  
 Corneli Seed Co.  
 Duryea Seed Co., Inc.  
 Ferry-Morse Seed Co.  
 Kelly Seed Co.  
 F. Lagomarsino & Sons  
 Ed. F. Mangelsdorf & Bro.,  
 Inc.  
 The J. Chas. McCullough  
 Seed Co.  
 The Nebraska Seed Co.  
 Robt. Nicholson Seed Co.  
 Northrup, King & Co.  
 (Bomberger Div.)  
 L. L. Olds Seed Co.  
 Paramount Seed Co.  
 Peppard Seed Co.  
 The Philadelphia Seed Co.,  
 Inc.  
 Rudy-Patrick Seed Co.  
 Russell-Heckle Seed Co.  
 Wm. G. Scarlett & Co.  
 Sedgwick Alfalfa Mills  
 Geo. P. Sexauer & Son  
 F. F. Smith & Co., Inc.  
 Snelson Seed Co.  
 Stollers Seed House  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.

### MUNG BEANS

Corneli Seed Co.  
 R. E. Lambert & Sons  
 Julius Loewith, Inc.  
 The J. Chas. McCullough  
 Seed Co.  
 Robt. Nicholson Seed Co.  
 J. M. Schultz Seed Co.  
 Snelson Seed Co.

### OAT GRASS

The Belt Seed Co.  
 C. S. Brent Seed Co.  
 Cargill, Inc.  
 Corneli Seed Co.  
 Duryea Seed Co., Inc.  
 The Chas. C. Hart Seed Co.  
 Jenks-White Seed Co.  
 F. Lagomarsino & Sons  
 The Chas. H. Lilly Co.  
 Julius Loewith, Inc.  
 The J. Chas. McCullough  
 Seed Co.  
 Chas. R. Moore  
 National Seed Co.  
 Northwestern Seed Growers,  
 Inc.  
 Peppard Seed Co.  
 The Philadelphia Seed Co.,  
 Inc.  
 Russell-Heckle Seed Co.  
 Wm. G. Scarlett & Co.  
 Stollers Seed House  
 The Wetzel Seed Co., Inc.  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.

## OIL SEEDS

Chas. H. Lilly Co.  
McCabe Bros. Grain Co., Ltd.  
The J. Chas. McCullough  
Seed Co.  
Wm. G. Scarlett & Co.

## ORCHARD GRASS

The Belt Seed Co.  
C. S. Brent Seed Co.  
Cargill, Inc.  
Corneli Seed Co.  
Craver-Dickinson Seed Co.  
The Albert Dickinson Co.  
Duryea Seed Co., Inc.  
A. Ertag, Inc.  
Ferry-Morse Seed Co.  
Funk Bros. Seed Co.  
The Chas. C. Hart Seed Co.  
Holmes Seed Co.  
Jenks-White Seed Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
R. E. Lambert & Sons  
D. Landreth Seed Co.  
Law, Somner Pty., Ltd.  
The Chas. H. Lilly Co.  
Julius Loewith, Inc.  
Louisville Seed Co.  
Ed. F. Mangelsdorf & Bro.,  
Inc.  
H. J. Mayer  
The J. Chas. McCullough  
Seed Co.  
Chas. R. Moore  
National Seed Co.  
Northrup, King & Co.  
(Bomberger Div.)  
Northwestern Seed Growers,  
Inc.  
L. L. Olds Seed Co.  
Ouren Seed Co.  
Peppard Seed Co.  
The Philadelphia Seed Co.,  
Inc.  
Purcell Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Ross Seed Co.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Wm. G. Scarlett & Co.  
Walter S. Schell, Inc.  
Seaboard Seed Co.  
Shultz Seed Co., Inc.  
The Stanford Seed Co.  
Stollers Seed House  
Transcontinental Seed, Inc.  
Twin City Seed Co.  
Owen T. Watts  
The Wetsel Seed Co., Inc.  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
Wright, Stephenson & Coy,  
Ltd.  
Young & Conway

## PASTURE MIXTURES

The Belt Seed Co.  
C. S. Brent Seed Co.  
The Bowman Seed Co.  
Robert Buist Co.  
Cargill, Inc.  
Condon Bros., Seedsmen  
Arthur R. Cone  
Corneli Seed Co.  
Craver-Dickinson Seed Co.  
The Albert Dickinson Seed  
Co.  
J. L. Donley & Bro.  
Duryea Seed Co., Inc.  
Ferry-Morse Seed Co.  
Funk Bros. Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Holmes Seed Co.  
Jenks-White Seed Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
The Chas. H. Lilly Co.  
Louisville Seed Co.  
McCabe Bros. Grain Co., Ltd.  
Magill & Co.  
Ed. F. Mangelsdorf & Bro.,  
Inc.  
The J. Chas. McCullough  
Seed Co.  
Michael-Leonard Co.  
Chas. R. Moore  
National Seed Co., Inc.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
W. T. Nolin  
Northrup, King & Co.  
(Bomberger Div.)  
Northwestern Seed Co.  
Northwestern Seed Growers,  
Inc.  
L. L. Olds Seed Co.  
Ouren Seed Co.  
Peppard Seed Co.  
Prunty Seed & Grain Co.  
Purcell Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Ross Seed Co.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
William G. Scarlett & Co.  
Walter S. Schell, Inc.

O. M. Scott & Sons Co.  
Seaboard Seed Co.  
Geo. P. Sexauer & Son  
The Stanford Seed Co.  
Stollers Seed House  
Transcontinental Seeds, Inc.  
Twin City Seed Co.  
Owen T. Watts  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
**PHALARIS TUBEROSE**  
Law, Somner Pty., Ltd.

## POA TRIVIALIS

Ackerman Co.  
Associated Seed Growers,  
Inc.  
Barteldes Seed Co.  
C. S. Brent Seed Co.  
Robert Buist Co.  
Cargill, Inc.  
Corneli Seed Co.  
Albert Dickinson Co.  
Craver-Dickinson Seed Co.  
Duryea Seed Co., Inc.  
Funk Bros. Seed Co.  
Hamilton Seed & Coal Co.  
International Seed, Inc.  
Jenks-White Seed Co.  
Kelly Seed Co.  
H. C. King & Sons  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
Chas. H. Lilly Co.  
Julius Loewith, Inc.  
Louisville Seed Co.  
Ed. F. Mangelsdorf & Bro.,  
Inc.  
H. J. Mayer  
The J. Chas. McCullough  
Seed Co.  
Chas. R. Moore  
John Mosbell Co.  
National Seed Co., Inc.  
Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northrup, King & Co.  
(Bomberger Div.)  
L. L. Olds Seed Co.  
Ouren Seed Co.  
Peppard Seed Co.  
Philadelphia Seed Co., Inc.  
Ross Seed Co., Inc.  
Rudy-Patrick Seed Co.  
Wm. G. Scarlett & Co.  
J. M. Schultz Seed Co.  
O. M. Scott & Sons Co.  
Geo. P. Sexauer & Son  
The Stanford Seed Co.  
Steele, Briggs Seed Co., Ltd.  
Stollers Seed House  
Owen T. Watts  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.

## RAPE

The Belt Seed Co.  
Bowman Seed Co.  
C. S. Brent Seed Co.  
Robert Buist Company  
Cargill, Inc.  
Corneli Seed Co.  
Craver-Dickinson Seed Co.  
Dakota Improved Seed Co.  
The Albert Dickinson Co.  
J. L. Donley & Bro.  
Duryea Seed Co., Inc.  
A. Ertag, Inc.  
Ferry-Morse Seed Co.  
Funk Bros. Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Holmes Seed Co.  
International Seed, Inc.  
Jenks-White Seed Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
R. E. Lambert & Sons  
D. Landreth Seed Co.  
Leckenby Seed Co.  
The Chas. H. Lilly Co.  
Julius Loewith, Inc.  
Louisville Seed Co.  
Ed. F. Mangelsdorf & Bro.,  
Inc.  
The J. Chas. McCullough  
Seed Co.  
Mark Means Co.  
Michael-Leonard Co.  
Chas. R. Moore  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northrup, King & Co., Mpls.  
Northwestern Seed Co.  
L. L. Olds Seed Co.  
Ouren Seed Co.  
The Page Seed Co.  
Peppard Seed Co.  
The Philadelphia Seed Co.,  
Inc.  
Prunty Seed & Grain Co.  
Purcell Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Ross Seed Co.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Wm. G. Scarlett & Co.  
Walter S. Schell, Inc.  
J. M. Schultz Seed Co.

Shultz Seed Co., Inc.  
Seaboard Seed Co.  
Geo. P. Sexauer & Son.  
Snelson Seed Co.  
The Stanford Seed Co.  
Stollers Seed House  
Transcontinental Seed, Inc.  
Twin City Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
Wright, Stephenson & Coy,  
Ltd.

## REDTOP

The Ackerman Co.  
Associated Seed Growers, Inc.  
The Belt Seed Co.  
The Bowman Seed Co.  
C. S. Brent Seed Co.  
Robert Buist Company  
Cargill, Inc.  
Condon Bros., Seedsmen  
Arthur R. Cone  
Corneli Seed Co.  
Craver-Dickinson Seed Co.  
The Albert Dickinson Co.  
J. L. Donley & Bro.  
Duryea Seed Co., Inc.  
A. Ertag, Inc.  
Ferry-Morse Seed Co.  
Funk Bros. Seed Co.  
Ging & Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Holmes Seed Co.  
International Seed, Inc.  
Jenks-White Seed Co.  
Kellogg Kelly Seed Co.  
Kelly Seed Co.  
Geo. Keller & Sons  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
R. E. Lambert & Sons  
The Chas. H. Lilly Co.  
Julius Loewith, Inc.  
Louisville Seed Co.  
Ed. F. Mangelsdorf & Bro.,  
Inc.  
H. J. Mayer  
The J. Chas. McCullough  
Seed Co.  
Michael-Leonard Co.  
Chas. R. Moore  
National Seed Co., Inc.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northern Field Seed Co.  
Northrup, King & Co.  
(Bomberger Div.)  
Northrup, King & Co., Mpls.  
Northwestern Seed Co.  
L. L. Olds Seed Co.  
Ostberg Seed Co.  
Ouren Seed Co.  
The Page Seed Co.  
Peppard Seed Co.  
The Philadelphia Seed Co.,  
Inc.  
Prunty Seed & Grain Co.  
Purcell Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Ross Seed Co.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Wm. G. Scarlett & Co.  
J. M. Schultz Seed Co.  
Walter S. Schell, Inc.  
O. M. Scott & Sons Co.  
Shultz Seed Co., Inc.  
Seaboard Seed Co.  
Geo. P. Sexauer & Son  
Snelson Seed Co.  
The Stanford Seed Co.  
Stollers Seed House  
Transcontinental Seed, Inc.  
Twin City Seed Co.  
Vaughan's Seed Store  
Owen T. Watts  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
Young & Conway

## REED CANARY GRASS

The Belt Seed Co.  
Cargill, Inc.  
Corneli Seed Co.  
Craver-Dickinson Seed Co.  
The Albert Dickinson Co.  
Duryea Seed Co., Inc.  
Leslie Edgerton  
Farmer Seed & Nursery Co.  
Ferry-Morse Seed Co.  
Funk Bros. Seed Co.  
Hamilton Seed & Coal Co.  
Holmes Seed Co.  
Interstate Seed & Grain Co.  
Jenks-White Seed Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
The Chas. H. Lilly Co.  
Julius Loewith, Inc.  
Magill & Co.  
Ed. F. Mangelsdorf & Bro.,  
Inc.  
McCabe Bros. Grain Co., Ltd.  
The J. Chas. McCullough  
Seed Co.  
Michael-Leonard Co.  
Chas. R. Moore

The Nebraska Seed Co.  
Newday Seeds, Inc.  
Northrup, King & Co.  
(Bomberger Div.)  
Northrup, King & Co., Mpls.  
Northwestern Seed Co.  
L. L. Olds Seed Co.  
Ouren Seed Co.  
The Philadelphia Seed Co.,  
Inc.  
Rudy-Patrick Seed Co.  
Wm. G. Scarlett & Co.  
Walter S. Schell, Inc.  
Geo. P. Sexauer & Son  
Snelson Seed Co.  
The Stanford Seed Co.  
Stollers Seed House  
Twin City Seed Co.  
Vaughan's Seed Store  
F. H. Woodruff & Sons, Inc.

## RESCUE GRASS

The Belt Seed Co.  
Duryea Seed Co., Inc.  
F. Lagomarsino & Sons  
R. E. Lambert & Sons  
Law, Somner Pty., Ltd.  
Julius Loewith, Inc.  
Chas. R. Moore  
Robt. Nicholson Seed Co.  
A. S. Paterson & Coy, Ltd.  
I. L. Radwaner Seed Co., Inc.  
Snelson Seed Co.  
Stollers Seed House

## RHODES GRASS

The Belt Seed Co.  
Duryea Seed Co., Inc.  
Ferry-Morse Seed Co.  
F. Lagomarsino & Sons  
R. E. Lambert & Sons  
Law, Somner Pty., Ltd.  
Julius Loewith, Inc.  
Chas. R. Moore  
Robt. Nicholson Seed Co.  
Northrup, King & Co.  
(Bomberger Div.)  
I. L. Radwaner Seed Co., Inc.  
William G. Scarlett & Co.  
Snelson Seed Co.  
Stollers Seed House

## RYE GRASS—DOMESTIC

The Ackerman Co.  
Associated Seed Growers, Inc.  
The Belt Seed Co.  
The Bowman Seed Co.  
C. S. Brent Seed Co.  
Robert Buist Company  
Capital Fuel, Feed & Seed  
Co.  
Cargill, Inc.  
Arthur R. Cone  
Corneli Seed Co.  
Craver-Dickinson Seed Co.  
Dakota Improved Seed Co.  
The Albert Dickinson Co.  
J. L. Donley & Bro.  
Duryea Seed Co., Inc.  
A. Ertag, Inc.  
Ferry-Morse Seed Co.  
Funk Bros. Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Holmes Seed Co.  
International Seed, Inc.  
Jenks-White Seed Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
R. E. Lambert & Sons  
D. Landreth Seed Co.  
The Chas. H. Lilly Co.  
Julius Loewith, Inc.  
Louisville Seed Co.  
Ed. F. Mangelsdorf & Bro.,  
Inc.  
H. J. Mayer  
The J. Chas. McCullough  
Seed Co.  
Chas. R. Moore  
National Seed Co., Inc.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northrup, King & Co., Mpls.  
Northrup, King & Co.  
(Bomberger Div.)  
L. L. Olds Seed Co.  
Ostberg Seed Co.  
Ouren Seed Co.  
Paramount Seed Co.  
Peppard Seed Co.  
The Philadelphia Seed Co.,  
Inc.  
Prunty Seed & Grain Co.  
Purcell Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Ross Seed Co., Inc.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Wm. G. Scarlett & Co.  
Walter S. Schell, Inc.  
O. M. Scott & Sons Co.  
Seaboard Seed Co.  
Geo. P. Sexauer & Son  
Shultz Seed Co., Inc.  
F. F. Smith & Co., Inc.  
Snelson Seed Co.  
J. H. Speers & Co., Ltd.  
The Stanford Seed Co.  
Stollers Seed House  
Transcontinental Seed, Inc.

Twin City Seed Co.  
Vaughan's Seed Store  
Owen T. Watts  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
Young & Conway

### RYE GRASS—ENGLISH

C. S. Brent Seed Co.  
Cornell Seed Co.  
Craver-Dickinson Seed Co.  
Dakota Improved Seed Co.  
Duryea Seed Co., Inc.  
International Seed, Inc.  
Jenks-White Seed Co.  
F. Lagomarsino & Sons  
R. E. Lambert & Sons  
D. Landreth Seed Co.  
Chas. H. Lilly Co.  
Julius Loewith, Inc.  
Ed. F. Mangelsdorf & Bro., Inc.

H. J. Mayer  
J. Chas. McCullough Seed Co.  
Michael-Leonard Co.  
John Mosbell Co.  
Northrup, King & Co.  
(Bomberger Div.)  
Philadelphia Seed Co., Inc.  
O. M. Scott & Sons Co.  
The Stanford Seed Co.  
Steele, Briggs Seed Co., Ltd.  
Geo. P. Sexauer & Son  
J. H. Speers & Co., Ltd.  
Stollers Seed House  
Vaughan's Seed Store  
Owen T. Watts  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
Young & Conway

### RYE GRASS—ITALIAN

C. S. Brent Seed Co.  
Robert Buist Company  
Dakota Improved Seed Co.  
International Seed, Inc.  
Jenks-White Seed Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
R. E. Lambert & Sons  
D. Landreth Seed Co.  
Chas. H. Lilly Co.  
Julius Loewith, Inc.  
Ed. F. Mangelsdorf & Bro., Inc.

The J. Chas. McCullough Seed Co.  
Michael-Leonard Co.  
John Mosbell Co.  
Nebraska Seed Co.  
Northrup, King & Co. (Bomberger Div.)  
Philadelphia Seed Co., Inc.  
Wm. G. Scarlett & Co.  
Geo. P. Sexauer & Son  
O. M. Scott & Sons Co.  
The Stanford Seed Co.  
Steele, Briggs Seed Co., Ltd.  
Vaughan's Seed Store  
Owen T. Watts  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
Wright, Stephenson & Coy, Ltd.

### RYE GRASS—PERENNIAL

The Ackerman Co.  
The Bowman Seed Co.  
C. S. Brent Seed Co.  
Robert Buist Company  
Craver-Dickinson Seed Co.  
Duryea Seed Co., Inc.  
Funk Bros. Seed Co.  
International Seed, Inc.  
Jenks-White Seed Co.  
H. C. King & Sons  
F. Lagomarsino & Sons  
R. E. Lambert & Sons  
D. Landreth Seed Co.  
Law, Somner Pty., Ltd.  
Chas. H. Lilly Co.  
Julius Loewith, Inc.  
Ed. F. Mangelsdorf & Bro., Inc.

The J. Chas. McCullough Seed Co.  
Michael-Leonard Co.  
John Mosbell Co.  
Nebraska Seed Co.  
Northrup, King & Co.  
(Bomberger Div.)  
Ostberg Seed Co.  
Philadelphia Seed Co., Inc.  
A. S. Paterson & Coy, Ltd.  
Seaboard Seed Co.  
Wm. G. Scarlett & Co.  
O. M. Scott & Sons Co.  
Geo. P. Sexauer & Son  
Snelson Seed Co.  
J. H. Speers & Co., Ltd.  
The Stanford Seed Co.  
Steele, Briggs Seed Co., Ltd.  
Vaughan's Seed Store  
Owen T. Watts  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
Wright, Stephenson & Coy, Ltd.

### ROSEN RYE

The Belt Seed Co.

C. S. Brent Seed Co.  
Robert Buist Company  
Cargill, Inc.  
Arthur R. Cone  
Cornell Seed Co.  
The Albert Dickinson Co.  
Craver-Dickinson Seed Co.  
Farmer Seed & Nursery Co.  
Funk Bros. Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Holmes Seed Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
Louisville Seed Co.  
The J. Chas. McCullough Seed Co.  
Northrup, King & Co., Mpls.  
The Page Seed Co.  
The Philadelphia Seed Co., Inc.  
Purcell Seed Co.  
Russell-Heckle Seed Co.  
Wm. G. Scarlett & Co.  
Walter S. Schell, Inc.  
Shultz Seed Co., Inc.  
The Stanford Seed Co.  
Stollers Seed House  
Twin City Seed Co.  
Owen T. Watts  
F. H. Woodruff & Sons, Inc.

### SAGRAIN

Cornell Seed Co.  
R. E. Lambert & Sons  
Robt. Nicholson Seed Co.

### SEED GRAINS

The Belt Seed Co.  
The Bowman Seed Co.  
C. S. Brent Seed Co.  
Cargill, Inc.  
Arthur R. Cone  
Condon Bros., Seedsmen  
Cornell Seed Co.  
Craver-Dickinson Seed Co.  
The Albert Dickinson Co.  
J. L. Donley & Bro.  
Funk Bros. Seed Co.  
Globe Seed & Feed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Holmes Seed Co.  
Edgar F. Hurff Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
R. E. Lambert & Sons  
Louisville Seed Co.  
Magill & Co.  
Ed. F. Mangelsdorf & Bro., Inc.

McCabe Bros. Grain Co., Ltd.  
The J. Chas. McCullough Seed Co.  
Montana Seed Co.  
The Nebraska Seed Co.  
Northrup, King & Co., Mpls.  
The O & M Seed Co.  
L. L. Olds Seed Co.  
Ouren Seed Co.  
The Page Seed Co.  
Peppard Seed Co.  
The Philadelphia Seed Co., Inc.  
Purcell Seed Co.  
Riemers' Farms  
Ross Seed Co., Inc.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Wm. G. Scarlett & Co.  
Walter S. Schell, Inc.  
Sedgwick Alfalfa Mills  
Shuler & Smoak  
Shultz Seed Co., Inc.  
Snelson Seed Co.  
J. H. Speers & Co., Ltd.  
The Stanford Seed Co.  
Stollers Seed House  
Tracy & Son Farms  
Twin City Seed Co.  
Owen T. Watts  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.

### SERADELLA

Duryea Seed Co., Inc.  
Julius Loewith, Inc.

### SESBANIA

Capital Fuel, Feed & Seed Co.  
Ferry-Morse Seed Co.  
R. E. Lambert & Sons  
Julius Loewith, Inc.  
Northrup, King & Co.  
(Bomberger Div.)  
Simpson Nursery Co.  
Snelson Seed Co.  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
Yuma Co. Farmers Mktg. Assn.

### SLENDER WHEAT GRASS

Blue Mountain Seed Growers Assn.  
Cargill, Inc.  
Cornell Seed Co.  
Albert Dickinson Co.  
Farmers Union Grain & Supply Co.  
F. Lagomarsino & Sons  
Magill & Co.

Ed. F. Mangelsdorf & Bro., Inc.  
McCabe Bros. Grain Co., Ltd.  
The J. Chas. McCullough Seed Co.  
Nebraska Seed Co.  
Newday Seeds, Inc.  
Steele, Briggs Seed Co., Ltd.  
Geo. P. Sexauer & Son  
Stollers Seed House  
Valker-Christensen Co.

### SORGHUMS

The Barteldes Seed Co.  
The Belt Seed Co.  
The Bowman Seed Co.  
C. S. Brent Seed Co.  
Capital Fuel, Feed & Seed Co.  
Cargill, Inc.  
Condon Bros., Seedsmen  
Cornell Seed Co.  
The Albert Dickinson Co.  
Ferry-Morse Seed Co.  
Funk Bros. Seed Co.  
Griswold Seed & Nursery Co.  
Hamilton Seed & Coal Co.  
Holmes Seed Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
R. E. Lambert & Sons  
Law, Somner Pty., Ltd.  
Ed. F. Mangelsdorf & Bro., Inc.

The J. Chas. McCullough Seed Co.  
Northrup, King & Co., (Bomberger Div.)  
Robt. Nicholson Seed Co.  
L. L. Olds Seed Co.  
Ouren Seed Co.  
Peppard Seed Co.  
The Philadelphia Seed Co., Inc.

Purcell Seed Co.  
Ross Seed Co.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Wm. G. Scarlett & Co.  
Walter S. Schell, Inc.  
Sedgwick Alfalfa Mills  
Geo. P. Sexauer & Son  
F. F. Smith & Co., Inc.  
Snelson Seed Co.  
The Stanford Seed Co.  
Stollers Seed House  
Twin City Seed Co.  
Valker-Christensen Co.  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.

### SOYBEANS

The Ackerman Co.  
Hijos de S. V. Bellotti  
The Belt Seed Co.  
N. Bonahoom Seed Co.  
The Bowman Seed Co.  
C. S. Brent Seed Co.  
Robert Buist Company  
Cargill, Inc.  
Arthur R. Cone  
Condon Bros., Seedsmen  
Cornell Seed Co.  
Craver-Dickinson Seed Co.  
Davenport Seed Co.  
The Albert Dickinson Co.  
J. L. Donley & Bro.  
Duryea Seed Co., Inc.  
Funk Bros. Seed Co.  
Ging & Co.  
Grisom & Co., Inc.  
Griswold Seed & Nursery Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Holmes Seed Co.  
Edgar F. Hurff Co.  
Geo. Keller & Sons  
Kelly Seed Co.  
F. Lagomarsino & Sons  
R. E. Lambert & Sons  
D. Landreth Seed Co.  
Julius Loewith, Inc.  
Louisville Seed Co.  
Magill & Co.  
Ed. F. Mangelsdorf & Bro., Inc.

McCabe Bros. Grain Co., Ltd.  
The J. Chas. McCullough Seed Co.  
Charles R. Moore  
National Seed Co.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
W. T. Nolin  
Northwestern Seed Co.  
L. L. Olds Seed Co.  
The O & M Seed Co.  
Ouren Seed Co.  
The Page Seed Co.  
Peppard Seed Co.  
The Philadelphia Seed Co., Inc.

Prunty Seed & Grain Co.  
Purcell Seed Co.  
Riemers' Farms  
Ross Seed Co.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Wm. G. Scarlett & Co.  
Walter S. Schell, Inc.  
J. M. Schultze Seed Co.  
O. M. Scott & Sons Co.  
Seaboard Seed Co.

Geo. P. Sexauer & Son  
Schuler & Smoak  
Shultz Seed Co., Inc.  
Snelson Seed Co.  
Sommer Bros. Seed Co.  
The Stanford Seed Co.  
Stollers Seed House  
Twin City Seed Co.  
Vaughan's Seed Store  
Owen T. Watts  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
Young & Conway

### SPURRY

Duryea Seed Co., Inc.  
Julius Loewith, Inc.  
Stollers Seed House

### SUDAN GRASS

The Ackerman Co.  
The Belt Seed Co.  
N. Bonahoom Seed Co.  
The Bowman Seed Co.  
The Barteldes Seed Co.  
Robert Buist Co.  
C. S. Brent Seed Co.  
The Albert-Dickinson Co.  
Capital Fuel, Feed & Seed Co.  
Cargill, Inc.

Arthur R. Cone  
Cornell Seed Co.  
Craver-Dickinson Seed Co.  
Dakota Improved Seed Co.  
J. L. Donley & Bro.  
Duryea Seed Co., Inc.  
Leslie Edgerton  
Ferry-Morse Seed Co.  
Funk Bros. Seed Co.  
Griswold Seed & Nursery Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Holmes Seed Co.  
Jenks-White Seed Co.  
Geo. Keller & Sons  
Kelly Seed Co.  
F. Lagomarsino & Sons  
R. E. Lambert & Sons  
D. Landreth Seed Co.  
Land O'Lakes Creameries, Inc.

Law, Somner Pty., Ltd.  
The Chas. H. Lilly Co.  
Julius Loewith, Inc.  
Louisville Seed Co.  
Ed. F. Mangelsdorf & Bro., Inc.

The J. Chas. McCullough Seed Co.  
Charles R. Moore  
National Seed Co., Inc.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northrup, King & Co. (Bomberger Div.)

Northwestern Seed Co.  
L. L. Olds Seed Co.  
Ouren Seed Co.  
The Page Seed Co.  
Paramount Seed Co.  
Peppard Seed Co.  
The Philadelphia Seed Co., Inc.

Prunty Seed & Grain Co.  
Purcell Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Ross Seed Co., Inc.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Wm. G. Scarlett & Co.  
Walter S. Schell, Inc.

J. M. Schultze Seed Co.  
O. M. Scott & Sons Co.  
Seaboard Seed Co.  
Sedgwick Alfalfa Mills  
Geo. P. Sexauer & Son  
Shultz Seed Co., Inc.  
F. F. Smith & Co., Inc.  
Snelson Seed Co.

The Stanford Seed Co.  
Stollers Seed House  
Transcontinental Seed, Inc.  
Twin City Seed Co.  
Valker-Christensen Co.  
Vaughan's Seed Store  
Owen T. Watts

T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
Young & Conway  
Yuma Co. Farmers Mktg. Assn.

### SUNFLOWER

Hijos de S. V. Bellotti  
The Belt Seed Co.  
The Bowman Seed Co.  
Robert Buist Co.  
Arthur R. Cone  
Cornell Seed Co.  
The Albert Dickinson Co.  
J. L. Donley & Bro.

Duryea Seed Co., Inc.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
Julius Loewith, Inc.  
Ed. F. Mangelsdorf & Bro., Inc.

The J. Chas. McCullough Seed Co.  
 Chas. R. Moore  
 Robt. Nicholson Seed Co.  
 Northrup, King & Co.  
 (Bomberger Div.)  
 Northrup, King & Co., Mpls.  
 L. L. Olds Seed Co.  
 Ouren Seed Co.  
 The Page Seed Co.  
 Paramount Seed Co.  
 The Philadelphia Seed Co., Inc.  
 Prunty Seed & Grain Co.  
 Purcell Seed Co.  
 I. L. Radwaner Seed Co., Inc.  
 Rudy-Patrick Seed Co.  
 Russell-Heckle Seed Co.  
 Wm. G. Scarlett & Co.  
 Walter S. Schell, Inc.  
 Shultz Seed Co., Inc.  
 F. F. Smith & Co., Inc.  
 Snelson Seed Co.  
 The Stanford Seed Co.  
 Transcontinental Seed, Inc.  
 Twin City Seed Co.  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.

#### THISTLE

Cornell Seed Co.  
 Duryea Seed Co., Inc.  
 Chas. H. Lilly Co.  
 Ed. F. Mangelsdorf & Bro., Inc.  
 The J. Chas. McCullough Seed Co.  
 Robt. Nicholson Seed Co.  
 Wm. G. Scarlett & Co.

#### TIMOTHY

The Ackerman Co.  
 The Barteldes Seed Co.  
 The Belt Seed Co.  
 The Bowman Seed Co.  
 C. S. Brent Seed Co.  
 Robt. Buist Co.  
 Cargill, Inc.  
 Roscoe J. Carl & Son  
 Arthur R. Cone  
 Condon Bros., Seedsmen  
 Cornell Seed Co.  
 Craver-Dickinson Seed Co.  
 Davenport Seed Co.  
 The Albert Dickinson Co.  
 J. L. Donley & Bro.  
 Duryea Seed Co., Inc.  
 Leslie Edgerton  
 A. Ertag, Inc.  
 Ferry-Morse Seed Co.  
 Funk Bros. Seed Co.  
 Ging & Co.  
 Goldberg Seed & Feed Co.  
 Hamilton Seed & Coal Co.  
 The Chas. C. Hart Seed Co.  
 Henry Hirsch & Sons, Inc.  
 Holmes Seed Co.  
 Edgar F. Hurff Co.  
 International Seed, Inc.  
 Jenks-White Seed Co.  
 Geo. Keller & Sons  
 Kelly Seed Co.  
 F. Lagomarsino & Sons  
 D. Landreth Seed Co.  
 Land O'Lakes Creameries, Inc.  
 The Chas. H. Lilly Co.  
 Julius Loewith, Inc.  
 Louisville Seed Co.  
 Magill & Co.  
 Ed. F. Mangelsdorf & Bro., Inc.  
 H. J. Mayer  
 McCabe Bros. Grain Co., Ltd.  
 The J. Chas. McCullough Seed Co.  
 Charles R. Moore  
 National Seed Co., Inc.  
 The Nebraska Seed Co.  
 Newday Seeds, Inc.  
 Northern Canadian Seed Sales

Northern Field Seed Co.  
 Northrup, King & Co., Mpls.  
 Northrup, King & Co., (Bomberger Div.)  
 Northwestern Seed Co., Inc.  
 Northwestern Seed Growers, Inc.  
 L. L. Olds Seed Co.  
 The O. & M. Seed Co.  
 Ouren Seed Co.  
 The Page Seed Co.  
 Peppard Seed Co.  
 The Philadelphia Seed Co., Inc.  
 Prunty Seed & Grain Co.  
 Purcell Seed Co.  
 I. L. Radwaner Seed Co., Inc.  
 Ross Seed Co.  
 Rudy-Patrick Seed Co.  
 Russell-Heckle Seed Co.  
 Wm. G. Scarlett & Co.  
 Walter S. Schell, Inc.  
 J. M. Schultz Seed Co.  
 O. M. Scott & Sons Co.  
 Seaboard Seed Co.  
 Geo. P. Sexauer & Son  
 Shultz Seed Co., Inc.  
 Sommer Bros. Seed Co.  
 The Stanford Seed Co.

Stollers Seed House  
 Transcontinental Seed, Inc.  
 Twin City Seed Co.  
 Vaughan's Seed Store  
 Owen T. Watts  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.  
 Wright, Stephenson & Coy, Ltd.  
 Young & Conway

#### TOBACCO SEED

C. S. Brent Seed Co.  
 Robt. Buist Co.  
 The Bowman Seed Co.  
 Cornell Seed Co.  
 Ferry-Morse Seed Co.  
 The Chas. C. Hart Seed Co.  
 Holmes Seed Co.  
 Julius Loewith, Inc.  
 The J. Chas. McCullough Seed Co.  
 L. L. Olds Seed Co.  
 Shuler & Smoak  
 J. P. Snapp & Son  
 T. W. Wood & Sons

#### TREFOIL—BIRDSFOOT

The Belt Seed Co.  
 Arthur R. Cone  
 Duryea Seed Co., Inc.  
 A. Ertag, Inc.  
 Julius Loewith, Inc.  
 Ed. F. Mangelsdorf & Bro., Inc.  
 Northrup, King & Co. (Bomberger Division)  
 Russell-Heckle Seed Co.  
 Snelson Seed Co.  
 Transcontinental Seed, Inc.  
 F. H. Woodruff & Sons, Inc.

#### TREFOIL—YELLOW

The Belt Seed Co.  
 C. S. Brent Seed Co.  
 Arthur R. Cone  
 Craver-Dickinson Seed Co.  
 Duryea Seed Co., Inc.  
 A. Ertag, Inc.  
 International Seed, Inc.  
 Jenks-White Seed Co.  
 R. E. Lambert & Sons  
 Julius Loewith, Inc.  
 Ed. F. Mangelsdorf & Bro., Inc.  
 H. J. Mayer  
 Robt. Nicholson Seed Co.  
 Northrup, King & Co. (Bomberger Division)  
 Russell-Heckle Seed Co.  
 Snelson Seed Co.  
 The Stanford Seed Co.  
 Transcontinental Seed, Inc.  
 F. H. Woodruff & Sons, Inc.

#### VELVET BEANS

Cornell Seed Co.  
 R. E. Lambert & Sons  
 Robt. Nicholson Seed Co.  
 Russell-Heckle Seed Co.  
 Shuler & Smoak  
 Snelson Seed Co.  
 T. W. Wood & Sons

#### VETCH—AUGUSTA

Duryea Seed Co., Inc.  
 F. Lagomarsino & Sons  
 R. E. Lambert & Sons  
 Simpson Nursery Co.

#### VETCH—HAIRY OR WINTER

The Belt Seed Co.  
 C. S. Brent Seed Co.  
 Robt. Buist Co.  
 Capital Fuel, Feed & Seed Co.  
 Arthur R. Cone  
 Cornell Seed Co.  
 Craver-Dickinson Seed Co.  
 The Albert Dickinson Co.  
 J. L. Donley & Bro.  
 Duryea Seed Co., Inc.  
 Ferry-Morse Seed Co.  
 Funk Bros. Seed Co.  
 The Chas. C. Hart Seed Co.  
 Henry Hirsch & Sons  
 Holmes Seed Co.  
 Edgar F. Hurff Co.  
 International Seed, Inc.  
 Jenks-White Seed Co.  
 Kelly Seed Co.  
 F. Lagomarsino & Sons  
 R. E. Lambert & Sons  
 Leckenby Seed Co.  
 Lewis Seed Co.  
 The Chas. H. Lilly Co.  
 Julius Loewith, Inc.  
 Louisville Seed Co.  
 Ed. F. Mangelsdorf & Bro., Inc.  
 The J. Chas. McCullough Seed Co.  
 Chas. R. Moore  
 National Seed Co., Inc.  
 Robt. Nicholson Seed Co.  
 Northrup, King & Co. (Bomberger Div.)  
 Northrup, King & Co., Mpls.  
 L. L. Olds Seed Co.  
 The Page Seed Co.  
 Paramount Seed Co.  
 The Philadelphia Seed Co., Inc.

I. L. Radwaner Seed Co., Inc.  
 Ross Seed Co., Inc.  
 Rudy-Patrick Seed Co.  
 Russell-Heckle Seed Co.  
 Wm. G. Scarlett & Co.  
 Walter S. Schell, Inc.  
 O. M. Scott & Sons Co.  
 Seaboard Seed Co.  
 F. F. Smith & Co., Inc.  
 Snelson Seed Co.  
 The Stanford Seed Co.  
 Stollers Seed House  
 Transcontinental Seed, Inc.  
 Twin City Seed Co.  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.

#### VETCH—SPRING OR COMMON

The Belt Seed Co.  
 Robt. Buist Co.  
 Capital Fuel, Feed & Seed Co.  
 Arthur R. Cone  
 Cornell Seed Co.  
 Craver-Dickinson Seed Co.  
 The Albert Dickinson Seed Co.  
 J. L. Donley & Bro.  
 Duryea Seed Co., Inc.  
 Ferry-Morse Seed Co.  
 Funk Bros. Seed Co.  
 The Chas. C. Hart Seed Co.  
 Henry Hirsch & Sons  
 Holmes Seed Co.  
 International Seed, Inc.  
 Jenks-White Seed Co.  
 H. C. King & Sons, Inc.  
 F. Lagomarsino & Sons  
 R. E. Lambert & Sons  
 Leckenby Seed Co.  
 The Chas. H. Lilly Co.  
 Julius Loewith, Inc.  
 Louisville Seed Co.  
 Ed. F. Mangelsdorf & Bro., Inc.  
 The J. Chas. McCullough Seed Co.  
 Charles R. Moore  
 National Seed Co.  
 Robt. Nicholson Seed Co.  
 Northrup, King & Co., Mpls.  
 Northrup, King & Co. (Bomberger Div.)  
 L. L. Olds Seed Co.  
 The Page Seed Co.  
 Paramount Seed Co.  
 The Philadelphia Seed Co., Inc.

I. L. Radwaner Seed Co., Inc.  
 Ross Seed Co.  
 Rudy-Patrick Seed Co.  
 Russell-Heckle Seed Co.  
 Wm. G. Scarlett & Co.  
 Walter S. Schell, Inc.  
 O. M. Scott & Sons Co.  
 Seaboard Seed Co.  
 Snelson Seed Co.  
 The Stanford Seed Co.  
 Stollers Seed House  
 Transcontinental Seed, Inc.  
 Twin City Seed Co.  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.

#### VETCH—PANONICA

The Belt Seed Co.  
 Arthur R. Cone  
 Cornell Seed Co.  
 Craver-Dickinson Seed Co.  
 The Albert Dickinson Seed Co.  
 J. L. Donley & Bro.  
 Duryea Seed Co., Inc.  
 Ferry-Morse Seed Co.  
 Funk Bros. Seed Co.  
 The Chas. C. Hart Seed Co.  
 Henry Hirsch & Sons  
 Holmes Seed Co.  
 International Seed, Inc.  
 Jenks-White Seed Co.  
 F. Lagomarsino & Sons  
 R. E. Lambert & Sons  
 Leckenby Seed Co.  
 The Charles H. Lilly Co.  
 Julius Loewith, Inc.  
 Louisville Seed Co.  
 Ed. F. Mangelsdorf & Bro., Inc.  
 Charles R. Moore  
 National Seed Co.  
 Robt. Nicholson Seed Co.  
 Northrup, King & Co. (Bomberger Div.)  
 Northrup, King & Co., Mpls.  
 L. L. Olds Seed Co.  
 The Page Seed Co.  
 Paramount Seed Co.  
 The Philadelphia Seed Co., Inc.  
 I. L. Radwaner Seed Co., Inc.  
 Ross Seed Co.  
 Rudy-Patrick Seed Co.  
 Russell-Heckle Seed Co.  
 Wm. G. Scarlett & Co.  
 Walter S. Schell, Inc.  
 O. M. Scott & Sons Co.  
 Seaboard Seed Co.  
 Snelson Seed Co.  
 The Stanford Seed Co.  
 Stollers Seed House

Transcontinental Seed, Inc.  
 Twin City Seed Co.  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.

#### WHEAT GRASS

The Belt Seed Co.  
 Blue Mt. Seed Growers Assn.  
 The Bowman Seed Co.  
 Cargill, Inc.  
 Cornell Seed Co.  
 Dakota Improved Seed Co.  
 Duryea Seed Co., Inc.  
 Farmers Union Grain & Supply Co.  
 Griswold Seed & Nursery Co.  
 The Chas. C. Hart Seed Co.  
 Interstate Seed & Grain Co.  
 F. Lagomarsino & Sons  
 Lakin Seed Co.  
 The Chas. H. Lilly Co.  
 Julius Loewith, Inc.  
 Magill & Co.  
 Ed. F. Mangelsdorf & Bro., Inc.  
 McCabe Bros. Grain Co., Ltd.  
 The J. Chas. McCullough Seed Co.  
 Montana Seed Co.  
 The Nebraska Seed Co.  
 Newday Seeds, Inc.  
 Northern Canadian Seed Sales  
 Ouren Seed Co.  
 Peppard Seed Co.  
 William G. Scarlett & Co.  
 Walter S. Schell, Inc.  
 J. H. Speers & Co., Ltd.  
 The Stanford Seed Co.  
 Sollers Seed House  
 Twin City Seed Co.  
 Valke-Christensen Co.  
 F. H. Woodruff & Sons, Inc.

#### YARROW

The Belt Seed Co.  
 Cornell Seed Co.  
 Duryea Seed Co., Inc.  
 Julius Loewith, Inc.  
 The J. Chas. McCullough Seed Co.  
 Chas. R. Moore  
 A. S. Paterson & Coy, Ltd.  
 I. L. Radwaner Seed Co., Inc.  
 F. H. Woodruff & Sons, Inc.  
 Wright, Stephenson & Coy, Ltd.

## Wholesale Garden

### ARTICHOKE

Associated Seed Growers, Inc.  
 The Barteldes Seed Co.  
 Robt. Buist Co.  
 Comstock, Ferre & Co.  
 Condon Bros., Seedsmen  
 Cornell Seed Co. (Jerusalem)  
 Ferry-Morse Seed Co.  
 The Chas. C. Hart Seed Co.  
 F. Lagomarsino & Sons  
 D. Landreth Seed Co.  
 Charles R. Moore  
 The Nebraska Seed Co.  
 Robt. Nicholson Seed Co.  
 L. L. Olds Seed Co.  
 Geo. R. Pedrick & Sons  
 I. L. Radwaner Seed Co., Inc.  
 Stollers Seed House  
 U. S. Seed Co.  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.  
 Zwaan & Van der Molen

### ASPARAGUS

Associated Seed Growers, Inc.  
 The Barteldes Seed Co.  
 Buckham Denholm & Holden Seed Co.  
 Robt. Buist Co.  
 Burgess Seed & Plant Co.  
 W. Atlee Burpee Co.  
 Comstock, Ferre & Co.  
 Condon Bros., Seedsmen  
 Cornell Seed Co.  
 Ferry-Morse Seed Co.  
 The Chas. C. Hart Seed Co.  
 Holmes Seed Co.  
 Edgar F. Hurff Co.  
 Kelly Seed Co.  
 F. Lagomarsino & Sons  
 D. Landreth Seed Co.  
 The J. Chas. McCullough Seed Co.  
 Charles R. Moore  
 The Nebraska Seed Co.  
 Robt. Nicholson Seed Co.  
 L. L. Olds Seed Co.  
 Geo. R. Pedrick & Sons  
 I. L. Radwaner Seed Co., Inc.  
 Walter S. Schell, Inc.  
 Stollers Seed House  
 U. S. Seed Co.  
 Vaughan's Seed Store  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.

**BEANS—BUSH**

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
Hijos de S. V. Bellotti  
C. S. Brent Seed Co.  
The Bowman Seed Co.  
Alfred J. Brown Seed Co.  
Robert Buist Co.  
Burgess Seed & Plant Co.  
W. Atlee Burpee Co.  
Burrell Seeds, Inc.  
Comstock, Ferre & Co.  
Arthur R. Cone  
Condon Bros., Seedsmen  
Corneli Seed Co.  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Filer Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Holmes Seed Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
Law, Somner Pty., Ltd.  
McCrea Seed Co., Inc.  
The J. Chas. McCullough Seed Co.  
Mark Means Co.  
Michael-Leonard Co.  
Charles R. Moore  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northrup, King & Co.  
L. L. Olds Seed Co.  
The Page Seed Co.  
Geo. R. Pedrick & Sons  
I. L. Radwaner Seed Co., Inc.  
Rogers Bros. Seed Co.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Starr Seed Co.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
Washburn-Wilson Seed Co.  
Max F. Wilhelm, Seedsman  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
S. D. Woodruff & Sons, Inc.

**BEANS—FAVA**

Robt. Buist Co.  
W. Atlee Burpee Co.  
Comstock, Ferre & Co.  
Corneli Seed Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
Chas. H. Lilly Co.  
McCrea Seed Co., Inc.  
Michael-Leonard Co.  
Northrup, King & Co.  
Stollers Seed House  
U. S. Seed Co.  
Zwaan & Van der Molen

**BEANS—HORSE**

Comstock, Ferre & Co.  
Corneli Seed Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
Law, Somner Pty., Ltd.  
The Chas. H. Lilly Co.  
Northrup, King & Co.  
A. S. Paterson & Coy, Ltd.  
I. L. Radwaner Seed Co.  
Rogers Bros. Seed Co.  
Stollers Seed House  
F. H. Woodruff & Sons, Inc.  
Wright, Stephenson & Coy, Ltd.

**BEANS—LIMA  
(Bush and Pole)**

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
Hijos de S. V. Bellotti  
The Bowman Seed Co.  
C. S. Brent Seed Co.  
Alfred J. Brown Seed Co.  
Robt. Buist Company  
W. Atlee Burpee Co.  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Co.  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Holmes Seed Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
The Chas. H. Lilly Co.  
McCrea Seed Co., Inc.  
The J. Chas. McCullough Seed Co.  
Michael-Leonard Co.  
Charles R. Moore  
John Mosbell Co.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
L. L. Olds Seed Co.  
The Page Seed Co.  
Geo. R. Pedrick & Sons  
I. L. Radwaner Seed Co., Inc.  
Rogers Bros. Seed Co.

Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Sherwood Seed Co.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
Max F. Wilhelm, Seedsman  
T. W. Wood Sons  
F. H. Woodruff & Sons, Inc.  
S. D. Woodruff & Sons, Inc.

**BEANS—POLE**

The Barteldes Seed Co.  
The Bowman Seed Co.  
Hijos de S. V. Bellotti  
C. S. Brent Seed Co.  
Alfred J. Brown Seed Co.  
Robt. Buist Company  
W. Atlee Burpee Co.  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Co.  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Holmes Seed Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
Law, Somner Pty., Ltd.  
McCrea Seed Co., Inc.  
The J. Chas. McCullough Seed Co.  
Michael-Leonard Co.  
Charles R. Moore  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northrup, King & Co.  
L. L. Olds Seed Co.  
The Page Seed Co.  
Geo. R. Pedrick & Sons  
I. L. Radwaner Seed Co., Inc.  
Rogers Bros. Seed Co.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
Washburn-Wilson Seed Co.  
Max F. Wilhelm, Seedsman  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.

**BEANS—RUNNER**

Barteldes Seed Co.  
W. Atlee Burpee Co.  
C. S. Brent Seed Co.  
Comstock, Ferre & Co.  
Corneli Seed Co.  
Ferry-Morse Seed Co.  
H. C. King & Sons  
F. Lagomarsino & Sons  
Law, Somner Pty., Ltd.  
Chas. H. Lilly Co.  
McCrea Seed Co., Inc.  
Northrup, King & Co.  
Shuler & Smoak  
Max F. Wilhelm, Seedsman  
T. W. Wood & Sons

**BEET**

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
Hijos de S. V. Bellotti  
The Bowman Seed Co.  
J. A. Boyce Co.  
Branlan Seed Growers Co., Inc.  
C. S. Brent Seed Co.  
Alfred J. Brown Seed Co.  
Robert Buist Company  
W. Atlee Burpee Co.  
Alf. Christianson  
Comstock, Ferre & Co.  
Arthur R. Cone  
Condon Bros., Seedsmen  
Corneli Seed Company  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Griscom & Co., Inc.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Holmes Seed Co.  
Kelly Seed Co.  
Norval E. Kirby  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
Law, Somner Pty., Ltd.  
Leckenby Seed Co.  
The Chas. H. Lilly Co.  
J. Chas. McCullough Seed Co.  
Charles R. Moore  
John Mosbell Co. (also Sugar Beets)  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northrup, King & Co.  
L. L. Olds Seed Co.  
The Page Seed Co.  
Paramount Seed Co.  
Geo. R. Pedrick & Sons  
Pieters-Wheeler Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Waldo Rohnert Co.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.

Walter S. Schell, Inc.  
Sherwood Seed Co.  
Peter Sluis  
Standard Seed Farms Co.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
S. D. Woodruff & Sons, Inc.  
Zwaan & Van der Molen

**BROCCOLI**

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
Hijos de S. V. Bellotti  
J. A. Boyce Co.  
Robert Buist Company  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Company  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
The Chas. C. Hart Seed Co.  
Herbst Brothers  
Holmes Seed Co.  
Kelly Seed Co.  
Norval E. Kirby  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
J. M. Lupton & Son  
The J. Chas. McCullough Seed Co.  
John Mosbell Co.  
Charles R. Moore  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
L. L. Olds Seed Co.  
Geo. R. Pedrick & Sons  
I. L. Radwaner Seed Co., Inc.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
S. D. Woodruff & Sons, Inc.  
Zwaan & Van der Molen

**BRUSSELS SPROUTS**

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
J. A. Boyce Co.  
Robert Buist Company  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Co.  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
Chas. C. Hart Seed Co.  
Herbst Brothers  
Holmes Seed Co.  
Kelly Seed Co.  
Norval E. Kirby  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
J. M. Lupton & Son  
The J. Chas. McCullough Seed Co.  
Charles R. Moore  
John Mosbell Co.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
L. L. Olds Seed Co.  
Geo. R. Pedrick & Sons  
I. L. Radwaner Seed Co., Inc.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
Zwaan & Van der Molen

**CABBAGE**

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
Hijos de S. V. Bellotti  
J. A. Boyce Co.  
C. S. Brent Seed Co.  
Alfred J. Brown Seed Co.  
Robert Buist Company  
W. Atlee Burpee Co.  
Alf. Christianson  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Company  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Herbst Bros.  
Holmes Seed Co.  
Kelly Seed Co.  
Norval E. Kirby  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
Leckenby Seed Co.  
The Chas. H. Lilly Co.  
J. M. Lupton & Son  
The J. Chas. McCullough Seed Co.  
Charles R. Moore  
John Mosbell Co.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northrup, King & Co.

L. L. Olds Seed Co.  
The Page Seed Co.  
Geo. R. Pedrick & Sons  
I. L. Radwaner Seed Co., Inc.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Peter Sluis  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
Wisconsin Cabbage Seed Co. (Yellows Resistant)  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
S. D. Woodruff & Sons, Inc.  
Zwaan & Van der Molen

**CANTALOUPE**

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
Hijos de S. V. Bellotti  
The Bowman Seed Co.  
C. S. Brent Seed Co.  
Alfred J. Brown Seed Co.  
Robert Buist Company  
Burgess Seed & Plant Co.  
Burrell Seeds, Inc.  
W. Atlee Burpee Co.  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Company  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
H. D. Garwood Seed Co.  
D. H. Gilbert Seed Co., Inc.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Holmes Seed Co.  
Kelly Seed Co.  
H. C. King & Sons  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
The J. Chas. McCullough Seed Co.  
Charles R. Moore  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
L. L. Olds Seed Co.  
The Page Seed Co.  
Paramount Seed Co.  
Geo. R. Pedrick & Sons  
I. L. Radwaner Seed Co., Inc.  
The J. C. Robinson Seed Co.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.

**CARROT**

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
Hijos de S. V. Bellotti  
The Bowman Seed Co.  
Branlan Seed Growers Co., Inc.  
C. S. Brent Seed Co.  
Alfred J. Brown Seed Co.  
Robert Buist Company  
W. Atlee Burpee Co.  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Company  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Herbst Brothers  
Holmes Seed Co.  
Kelly Seed Co.  
Norval E. Kirby  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
The Chas. H. Lilly Co.  
The J. Chas. McCullough Seed Co.  
Mark Means Co.  
Charles R. Moore  
John Mosbell Co.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northrup, King & Co.  
L. L. Olds Seed Co.  
The Page Seed Co.  
Paramount Seed Co.  
Geo. R. Pedrick & Sons  
Pieters-Wheeler Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Waldo Rohnert Co.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Walter Schell, Inc.  
Sherwood Seed Co.  
F. F. Smith & Co., Inc.  
Standard Seed Farms Co.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
S. D. Woodruff & Sons, Inc.  
Zwaan & Van der Molen

**CAULIFLOWER**

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
Hijos de S. V. Bellotti

J. A. Boyce Co.  
 Alfred J. Brown Seed Co.  
 Robert Buist Company  
 W. Atlee Burpee Co.  
 Comstock, Ferre & Co.  
 Condon Bros., Seedsmen  
 Corneli Seed Company  
 Crosman Seed Corp.  
 Ferry-Morse Seed Co.  
 Hamilton Seed & Coal Co.  
 The Chas. C. Hart Seed Co.  
 Herbst Brothers  
 Holmes Seed Co.  
 Kelly Seed Co.  
 Norval E. Kirby  
 F. Lagomarsino & Sons  
 D. Landreth Seed Co.  
 J. M. Lupton & Son  
 The J. Chas. McCullough Seed Co.  
 Charles R. Moore  
 John Mosbell Co.  
 The Nebraska Seed Co.  
 Robt. Nicholson Seed Co.  
 L. L. Olds Seed Co.  
 The Page Seed Co.  
 Geo. R. Pedrick & Sons  
 I. L. Radwaner Seed Co., Inc.  
 Walter S. Schell, Inc.  
 Stollers Seed House  
 U. S. Seed Co.  
 Vaughan's Seed Store  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.  
 Zwaan & Van der Molen

### CELERIAC

Associated Seed Growers, Inc.  
 The Barteldes Seed Co.  
 Robert Buist Company  
 W. Atlee Burpee Co.  
 Comstock, Ferre & Co.  
 Condon Bros., Seedsmen  
 Corneli Seed Company  
 Crosman Seed Corp.  
 Ferry-Morse Seed Co.  
 Hamilton Seed & Coal Co.  
 The Chas. C. Hart Seed Co.  
 Herbst Brothers  
 Holmes Seed Co.  
 Kelly Seed Co.  
 Norval E. Kirby  
 F. Lagomarsino & Sons  
 D. Landreth Seed Co.  
 The J. Chas. McCullough Seed Co.  
 Charles R. Moore  
 John Mosbell Co.  
 The Nebraska Seed Co.  
 L. L. Olds Seed Co.  
 Geo. R. Pedrick & Sons  
 Pieters-Wheeler Seed Co.  
 I. L. Radwaner Seed Co., Inc.  
 Waldo Rohnert Co.  
 Walter S. Schell, Inc.  
 Stollers Seed House  
 U. S. Seed Co.  
 Vaughan's Seed Store  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.  
 Zwaan & Van der Molen

### CELERY

Associated Seed Growers, Inc.  
 The Barteldes Seed Co.  
 Braslan Seed Growers Co., Inc.  
 C. S. Brent Seed Co.  
 Robert Buist Company  
 W. Atlee Burpee Co.  
 Comstock, Ferre & Co.  
 Condon Bros., Seedsmen  
 Corneli Seed Company  
 Ferry-Morse Seed Co.  
 Hamilton Seed & Coal Co.  
 Chas. C. Hart Seed Co.  
 Kelly Seed Co.  
 H. C. King & Sons  
 F. Lagomarsino & Sons  
 D. Landreth Seed Co.  
 The J. Chas. McCullough Seed Co.  
 Michael-Leonard Co.  
 John Mosbell Co.  
 Nebraska Seed Co.  
 Robt. Nicholson Seed Co.  
 Northrup, King & Co.  
 L. L. Olds Seed Co.  
 Page Seed Co.  
 Pieters-Wheeler Seed Co.  
 I. L. Radwaner Seed Co., Inc.  
 Waldo Rohnert Co.  
 Sherwood Seed Co.  
 Shuler & Smoak  
 Stollers Seed House  
 U. S. Seed Co.  
 Vaughan's Seed Store  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.

### CHICORY

Associated Seed Growers, Inc.  
 The Barteldes Seed Co.  
 J. A. Boyce Co.  
 Robert Buist Co.  
 Comstock, Ferre & Co.  
 Condon Bros., Seedsmen  
 Corneli Seed Co.  
 Crosman Seed Corp.

Ferry-Morse Seed Co.  
 The Chas. C. Hart Seed Co.  
 Herbst Brothers  
 Holmes Seed Co.  
 Kelly Seed Co.  
 Norval E. Kirby  
 F. Lagomarsino & Sons  
 D. Landreth Seed Co.  
 Charles R. Moore  
 John Mosbell Co.  
 The Nebraska Seed Co.  
 L. L. Olds Seed Co.  
 Geo. R. Pedrick & Sons  
 I. L. Radwaner Seed Co., Inc.  
 Waldo Rohnert Co.  
 Walter S. Schell, Inc.  
 Stollers Seed House  
 U. S. Seed Co.  
 Vaughan's Seed Store  
 F. H. Woodruff & Sons, Inc.  
 Zwaan & Van der Molen

### COLLARD

Associated Seed Growers, Inc.  
 The Barteldes Seed Co.  
 Robert Buist Company  
 W. Atlee Burpee Co.  
 Comstock, Ferre & Co.  
 Condon Bros., Seedsmen  
 Corneli Seed Co.  
 Crosman Seed Corp.  
 Ferry-Morse Seed Co.  
 The Chas. C. Hart Seed Co.  
 Holmes Seed Co.  
 Kelly Seed Co.  
 Norval E. Kirby  
 F. Lagomarsino & Sons  
 D. Landreth Seed Co.  
 The J. Chas. McCullough Seed Co.  
 Charles R. Moore  
 John Mosbell Co.  
 The Nebraska Seed Co.  
 Robt. Nicholson Seed Co.  
 L. L. Olds Seed Co.  
 Geo. R. Pedrick & Sons  
 I. L. Radwaner Seed Co., Inc.  
 Russell-Heckle Seed Co.  
 Walter S. Schell, Inc.  
 U. S. Seed Co.  
 Vaughan's Seed Store  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.  
 Zwaan & Van der Molen

### CORN SALAD

Associated Seed Growers, Inc.  
 The Barteldes Seed Co.  
 Robert Buist Co.  
 Comstock, Ferre & Co.  
 Corneli Seed Co.  
 Ferry-Morse Seed Co.  
 Hamilton Seed & Coal Co.  
 Kelly Seed Co.  
 Norval E. Kirby  
 F. Lagomarsino & Sons  
 D. Landreth Seed Co.  
 The J. Chas. McCullough Seed Co.  
 Michael-Leonard Co.  
 Chas. R. Moore  
 Nebraska Seed Co.  
 Northrup, King & Co.  
 L. L. Olds Seed Co.  
 U. S. Seed Co.  
 Vaughan's Seed Store  
 T. W. Wood & Sons  
 Zwaan & Van der Molen

### CORN—SWEET

Associated Seed Growers, Inc.  
 The Barteldes Seed Co.  
 The Bowman Seed Co.  
 C. S. Brent Seed Co.  
 Alfred J. Brown Seed Co.  
 Robert Buist Company  
 Burgess Seed & Plant Co.  
 W. Atlee Burpee Co.  
 C. S. Clark & Sons  
 Comstock, Ferre & Co.  
 Arthur R. Cone  
 Condon Bros., Seedsmen  
 Corneli Seed Company  
 Council Bluffs Seed Co.  
 Crosman Seed Corp.  
 Farmer Seed & Nursery Co.  
 Ferry-Morse Seed Co.  
 Hamilton Seed & Coal Co.  
 The Chas. C. Hart Seed Co.  
 Holmes Seed Co.  
 Jacques Seed Co.  
 Kelly Seed Co.  
 F. Lagomarsino & Sons  
 D. Landreth Seed Co.  
 McCabe Bros. Grain Co., Ltd.  
 The J. Chas. McCullough Seed Co.  
 Michael-Leonard Co.  
 Charles R. Moore  
 The Nebraska Seed Co.  
 Robt. Nicholson Seed Co.  
 Northrup, King & Co.  
 O & M Seed Co.  
 L. L. Olds Seed Co.  
 The Page Seed Co.  
 Geo. R. Pedrick & Sons  
 I. L. Radwaner Seed Co., Inc.  
 J. C. Robinson Seed Co.  
 Rogers Bros. Seed Co.

Rudy-Patrick Seed Co.  
 Russell-Heckle Seed Co.  
 Walter S. Schell, Inc.  
 Stollers Seed House  
 U. S. Seed Co.  
 Vaughan's Seed Store  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.  
 S. D. Woodruff & Sons, Inc.

### CORN (Hybrid)

Associated Seed Growers, Inc.  
 The Barteldes Seed Co.  
 The Bowman Seed Co.  
 C. S. Brent Seed Co.  
 Robert Buist Company  
 W. Atlee Burpee Co.  
 C. S. Clark & Sons  
 Condon Bros., Seedsmen  
 Comstock, Ferre & Co.  
 Corneli Seed Company  
 Council Bluffs Seed Co.  
 Ferry-Morse Seed Co.  
 Hamilton Seed & Coal Co.  
 Chas. C. Hart Seed Co.  
 Jacques Seed Co.  
 Kelly Seed Co.  
 H. C. King & Sons  
 F. Lagomarsino & Sons  
 D. Landreth Seed Co.  
 The J. Chas. McCullough Seed Co.  
 Michael-Leonard Co.  
 Chas. R. Moore  
 Robt. Nicholson Seed Co.  
 Nebraska Seed Co.  
 Northrup, King & Co.  
 O & M Seed Co.  
 Edgar L. Oakes & Co.  
 L. L. Olds Seed Co.  
 Page Seed Co.  
 I. L. Radwaner Seed Co., Inc.  
 J. C. Robinson Seed Co.  
 Rogers Bros. Seed Co.  
 Stanford Seed Co.  
 Stollers Seed House  
 U. S. Seed Co.  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.

### CRESS

Associated Seed Growers, Inc.  
 The Barteldes Seed Co.  
 Robert Buist Company  
 Comstock, Ferre & Co.  
 Condon Bros., Seedsmen  
 Corneli Seed Co.  
 Crosman Seed Corp.  
 Ferry-Morse Seed Co.  
 The Chas. C. Hart Seed Co.  
 Holmes Seed Co.  
 Norval E. Kirby  
 F. Lagomarsino & Sons  
 D. Landreth Seed Co.  
 Charles R. Moore  
 John Mosbell Co.  
 The Nebraska Seed Co.  
 L. L. Olds Seed Co.  
 Geo. R. Pedrick & Sons  
 I. L. Radwaner Seed Co., Inc.  
 Walter S. Schell, Inc.  
 Peter Sluis  
 Stollers Seed House  
 U. S. Seed Co.  
 Vaughan's Seed Store  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.  
 Zwaan & Van der Molen

### CUCUMBER

Associated Seed Growers, Inc.  
 The Barteldes Seed Co.  
 Hijos de S. V. Bellotti  
 The Bowman Seed Co.  
 C. S. Brent Seed Co.  
 Alfred J. Brown Seed Co.  
 Robert Buist Company  
 Burgess Seed & Plant Co.  
 W. Atlee Burpee Co.  
 Burrell Seeds, Inc.  
 Comstock, Ferre & Co.  
 Arthur R. Cone  
 Condon Bros., Seedsmen  
 Corneli Seed Company  
 Crosman Seed Corp.  
 Ferry-Morse Seed Co.  
 H. D. Garwood Seed Co.  
 Hamilton Seed & Coal Co.  
 The Chas. C. Hart Seed Co.  
 Herbst Brothers  
 Holmes Seed Co.  
 Edgar F. Hurff Co.  
 Kelly Seed Co.  
 F. Lagomarsino & Sons  
 D. Landreth Seed Co.  
 The J. Chas. McCullough Seed Co.  
 Charles R. Moore  
 John Mosbell Co.  
 The Nebraska Seed Co.  
 Robt. Nicholson Seed Co.  
 Northrup, King & Co.  
 L. L. Olds Seed Co.  
 The Page Seed Co.  
 Geo. R. Pedrick & Sons  
 I. L. Radwaner Seed Co., Inc.  
 The J. C. Robinson Seed Co.  
 Lawrence Robinson & Sons  
 Rudy-Patrick Seed Co.  
 Russell-Heckle Seed Co.

Walter S. Schell, Inc.  
 Starr Seed Co.  
 Stollers Seed House  
 U. S. Seed Co.  
 Vaughan's Seed Store  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.  
 S. D. Woodruff & Sons, Inc.

### DANDELION

Associated Seed Growers, Inc.  
 The Barteldes Seed Co.  
 Robert Buist Co.  
 W. Atlee Burpee Co.  
 Comstock, Ferre & Co.  
 Condon Bros., Seedsmen  
 Corneli Seed Co.  
 Crosman Seed Corp.  
 Ferry-Morse Seed Co.  
 The Chas. C. Hart Seed Co.  
 Herbst Brothers  
 Holmes Seed Co.  
 F. Lagomarsino & Sons  
 D. Landreth Seed Co.  
 Charles R. Moore  
 John Mosbell Co.  
 The Nebraska Seed Co.  
 L. L. Olds Seed Co.  
 Geo. R. Pedrick & Sons  
 I. L. Radwaner Seed Co., Inc.  
 Walter S. Schell, Inc.  
 Stollers Seed House  
 U. S. Seed Co.  
 Vaughan's Seed Store  
 F. H. Woodruff & Sons, Inc.

### DILL

Pieters-Wheeler Seed Co.  
 Waldo Rohnert Co.

### EGG PLANT

Associated Seed Growers, Inc.  
 The Barteldes Seed Co.  
 The Bowman Seed Co.  
 Alfred J. Brown Seed Co.  
 Robert Buist Company  
 W. Atlee Burpee Co.  
 Comstock, Ferre & Co.  
 Condon Bros., Seedsmen  
 Corneli Seed Company  
 Crosman Seed Corp.  
 Ferry-Morse Seed Co.  
 Hamilton Seed & Coal Co.  
 The Chas. C. Hart Seed Co.  
 Herbst Brothers  
 Holmes Seed Co.  
 Edgar F. Hurff Co.  
 Kelly Seed Co.  
 F. Lagomarsino & Sons  
 D. Landreth Seed Co.  
 The J. Chas. McCullough Seed Co.  
 Charles R. Moore  
 John Mosbell Co.  
 The Nebraska Seed Co.  
 Robt. Nicholson Seed Co.  
 L. L. Olds Seed Co.  
 The Page Seed Co.  
 Geo. R. Pedrick & Sons  
 I. L. Radwaner Seed Co., Inc.  
 Russell-Heckle Seed Co.  
 Walter S. Schell, Inc.  
 J. P. Snapp & Son  
 Stollers Seed House  
 U. S. Seed Co.  
 Vaughan's Seed Store  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.  
 S. D. Woodruff & Sons, Inc.

### ENDIVE

Associated Seed Growers, Inc.  
 The Barteldes Seed Co.  
 The Bowman Seed Co.  
 Robert Buist Company  
 W. Atlee Burpee Co.  
 Comstock, Ferre & Co.  
 Condon Bros., Seedsmen  
 Corneli Seed Company  
 Crosman Seed Corp.  
 Ferry-Morse Seed Co.  
 Hamilton Seed & Coal Co.  
 The Chas. C. Hart Seed Co.  
 Herbst Brothers  
 Holmes Seed Co.  
 Kelly Seed Co.  
 Norval E. Kirby  
 F. Lagomarsino & Sons  
 D. Landreth Seed Co.  
 The J. Chas. McCullough Seed Co.  
 Charles R. Moore  
 John Mosbell Co.  
 The Nebraska Seed Company  
 Robert Nicholson Seed Co.  
 L. L. Olds Seed Co.  
 The Page Seed Co.  
 Geo. R. Pedrick & Sons  
 Pieters-Wheeler Seed Co.  
 I. L. Radwaner Seed Co., Inc.  
 Waldo Rohnert Co.  
 Russell-Heckle Seed Co.  
 Walter S. Schell, Inc.  
 Sherwood Seed Co.  
 Standard Seed Farms Co.  
 Stollers Seed House  
 U. S. Seed Co.  
 Vaughan's Seed Store  
 T. W. Wood & Sons  
 F. H. Woodruff & Sons, Inc.  
 Zwaan & Van der Molen

## GOURD

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
Bodger Seeds, Ltd.  
Buckman, Denholm & Holden  
Seed Co.  
Robert Buist Company  
Burgess Seed & Plant Co.  
W. Atlee Burpee Co.  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Co.  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
The Chas. C. Hart Seed Co.  
Holmes Seed Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
The J. Chas. McCullough  
Seed Co.  
Charles R. Moore  
The Nebraska Seed Company  
Robt. Nicholson Seed Co.  
L. L. Olds Seed Co.  
Geo. R. Pedrick & Sons  
I. L. Radwaner Seed Co., Inc.  
The J. C. Robinson Seed Co.  
Lawrence Robinson & Sons  
Walter S. Schell, Inc.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store

## HERBS

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
Hijos de S. V. Bellotti  
Buckman, Denholm & Holden  
Seed Co.  
Robert Buist Company  
Burrell Seeds, Inc.  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Co.  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Griscom & Co., Inc.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Holmes Seed Co.  
Kelly Seed Co.  
Norval E. Kirby  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
The J. Chas. McCullough  
Seed Co.  
Charles R. Moore  
John Mosbell Co.  
The Nebraska Seed Company  
Robt. Nicholson Seed Co.  
L. L. Olds Seed Co.  
The Page Seed Co.  
Geo. R. Pedrick & Sons  
Pieters-Wheeler Seed Co.  
(Dill only)  
I. L. Radwaner Seed Co., Inc.  
Waldo Rohnert Co. (Dill)  
Walter S. Schell, Inc.  
Standard Seed Farms Co.  
(Sweet Basil)  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
Zwaan & Van der Molen

## KALE

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
J. A. Boyce Co.  
C. S. Brent Seed Co.  
Robert Buist Company  
W. Atlee Burpee Co.  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Co.  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Herbst Brothers  
Holmes Seed Co.  
Kelly Seed Co.  
Norval E. Kirby  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
Leckenby Seed Co.  
The Chas. H. Lilly Co.  
J. M. Lupton & Son  
D. R. Mayo Seed Co.  
The J. Chas. McCullough  
Seed Co.  
Mark Means Co.  
Charles R. Moore  
John Mosbell Co.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
L. L. Olds Seed Co.  
The Page Seed Co.  
Geo. R. Pedrick & Sons  
I. L. Radwaner Seed Co., Inc.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Peter Sluis  
Stollers Seed House  
U. S. Seed Co.

Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
S. D. Woodruff & Sons, Inc.  
Zwaan & Van der Molen

## KOHLRABI

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
The Bowman Seed Co.  
J. A. Boyce Co.  
Robert Buist Company  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Company  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Herbst Brothers  
Holmes Seed Co.  
Kelly Seed Co.  
Norval E. Kirby  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
Leckenby Seed Co.  
The Chas. H. Lilly Co.  
J. M. Lupton & Son  
The J. Chas. McCullough  
Seed Co.  
Charles R. Moore  
John Mosbell Co.  
The Nebraska Seed Company  
Robt. Nicholson Seed Co.  
L. L. Olds Seed Co.  
The Page Seed Co.  
Geo. R. Pedrick & Sons  
I. L. Radwaner Seed Co., Inc.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
Zwaan & Van der Molen

## LEEK

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
Hijos de S. V. Bellotti  
Robert Buist Company  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Company  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Herbst Brothers  
Holmes Seed Co.  
Kelly Seed Co.  
Norval E. Kirby  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
The J. Chas. McCullough Seed  
Co.  
Charles R. Moore  
John Mosbell Co.  
The Nebraska Seed Company  
L. L. Olds Seed Co.  
The Page Seed Co.  
Paramount Seed Co.  
Geo. R. Pedrick & Sons  
I. L. Radwaner Seed Co., Inc.  
Waldo Rohnert Co.  
Walter S. Schell, Inc.  
Standard Seed Farms Co.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
Zwaan & Van der Molen

## LETTUCE

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
Hijos de S. V. Bellotti  
The Bowman Seed Co.  
Braslan Seed Growers Co.,  
Inc.  
C. S. Brent Seed Co.  
Alfred J. Brown Seed Co.  
Robert Buist Company  
W. Atlee Burpee Co.  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Arthur R. Cone  
Corneli Seed Company  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Herbst Brothers  
Holmes Seed Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
The J. Chas. McCullough Seed  
Co.  
Charles R. Moore  
John Mosbell Co.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northrup, King & Co.  
L. L. Olds Seed Co.  
The Page Seed Co.  
Geo. R. Pedrick & Sons  
I. L. Radwaner Seed Co., Inc.  
Lawrence Robinson & Sons  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.

I. L. Radwaner Seed Co., Inc.  
Waldo Rohnert Co.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Sherwood Seed Co.  
Standard Seed Farms Co.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
S. D. Woodruff & Sons, Inc.

## MANGEL

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
The Bowman Seed Co.  
J. A. Boyce Co.  
C. S. Brent Seed Co.  
Robert Buist Company  
Aif Christianson  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Company  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Herbst Brothers  
Holmes Seed Co.  
Kelly Seed Co.  
Norval E. Kirby  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
Leckenby Seed Co.  
The Chas. H. Lilly Co.  
The J. Chas. McCullough Seed  
Co.  
Charles R. Moore  
John Mosbell Co.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
L. L. Olds Seed Co.  
The Page Seed Co.  
Paramount Seed Co.  
Geo. R. Pedrick & Sons  
Pieters-Wheeler Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Peter Sluis  
Standard Seed Farms Co.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
Zwaan & Van der Molen

## MUSKMELOON

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
Hijos de S. V. Bellotti  
The Bowman Seed Co.  
C. S. Brent Seed Co.  
Alfred J. Brown Seed Co.  
Robert Buist Company  
Burgess Seed & Plant Co.  
W. Atlee Burpee Co.  
Burrell Seeds, Inc.  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Company  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
H. D. Garwood Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Holmes Seed Co.  
Edgar F. Hurff Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
The J. Chas. McCullough Seed  
Co.  
Charles R. Moore  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northrup, King & Co.  
L. L. Olds Seed Co.  
The Page Seed Co.  
Paramount Seed Co.  
Geo. R. Pedrick & Sons  
I. L. Radwaner Seed Co., Inc.  
The J. C. Robinson Seed Co.  
Lawrence Robinson & Sons  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.

## MUSTARD

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
The Bowman Seed Co.  
J. A. Boyce Co.  
C. S. Brent Seed Co.  
Robert Buist Company  
W. Atlee Burpee Co.  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Company  
Crosman Seed Corp.  
A. Ertag, Inc.

Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Herbst Brothers  
Holmes Seed Co.  
Edgar F. Hurff Co.  
Kelly Seed Co.  
Norval E. Kirby  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
Leckenby Seed Co.  
The Chas. H. Lilly Co.  
The J. Chas. McCullough Seed  
Co.  
Mark Means Co.  
D. R. Mayo Seed Co.  
Charles R. Moore  
John Mosbell Co.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northwestern Seed Growers,  
Inc.  
L. L. Olds Seed Co.  
Geo. R. Pedrick & Sons  
Pieters-Wheeler Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Waldo Rohnert Co.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Sherwood Seed Co.  
Standard Seed Farms Co.  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
Zwaan & Van der Molen

## MUSTARD-CHINESE

Associated Seed Growers, Inc.  
Barteldes Seed Co.  
C. S. Brent Seed Co.  
J. A. Boyce Co.  
Robert Buist Company  
W. Atlee Burpee Co.  
Comstock, Ferre & Co.  
Corneli Seed Co.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
Chas. C. Hart Seed Co.  
Herbst Brothers  
Kelly Seed Co.  
Norval E. Kirby  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
Michael-Leonard Co.  
Chas. R. Moore  
John Mosbell Co.  
Nebraska Seed Co.  
Robert Nicholson Seed Co.  
Northrup, King & Co.  
L. L. Olds Seed Co.  
Pieters-Wheeler Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Waldo Rohnert Co.  
Sherwood Seed Co.  
Stollers Seed House  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
Zwaan & Van der Molen

## OKRA

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
C. S. Brent Seed Co.  
Robert Buist Company  
W. Atlee Burpee Co.  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Company  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Holmes Seed Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
The J. Chas. McCullough Seed  
Co.  
Charles R. Moore  
John Mosbell Co.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
L. L. Olds Seed Co.  
Geo. R. Pedrick & Sons  
I. L. Radwaner Seed Co., Inc.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.

## ONION SEED

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
Hijos de S. V. Bellotti  
Braslan Seed Growers Co.,  
Inc.  
C. S. Brent Seed Co.  
Alfred J. Brown Seed Co.  
Robert Buist Company  
W. Atlee Burpee Co.  
Burrell Seeds, Inc.  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Company  
Crosman Seed Corp.  
Ferry-Morse Seed Co.



H. D. Garwood Seed Co.  
Griscom & Co. Inc.  
Hamilton Seeds & Coal Co.  
The Chas. C. Hart Seed Co.  
Herbst Brothers  
Hollenbach's Seed Store  
Holmes Seed Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
The Chas. H. Lilly Co.  
The J. Chas. McCullough Seed Co.

Charles R. Moore  
John Mosbell Co.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northrup, King & Co.  
L. L. Olds Seed Co.  
The Page Seed Co.  
Paramount Seed Co.  
Geo. R. Pedrick & Sons  
Pieters-Wheeler Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Waldo Rohnert Co.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Sherwood Seed Co.  
F. F. Smith & Co., Inc.  
Standard Seed Farms Co.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
S. D. Woodruff & Sons, Inc.  
Zwaan & Van der Molen

### ONION SETS

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
Alfred J. Brown Seed Co.  
Robert Buist Company  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Company  
Ferry-Morse Seed Co.  
Griswold Seed & Nursery Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Hollenbach's Seed Store  
Holmes Seed Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
The Chas. H. Lilly Co.  
The J. Chas. McCullough Seed Co.

Michael-Leonard Co.  
Charles R. Moore  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
L. L. Olds Seed Co.  
The Page Seed Co.  
Geo. R. Pedrick & Sons  
I. L. Radwaner Seed Co., Inc.  
Waldo Rohnert Co.  
(onion bulb)  
Russell-Heckle Seed Co.  
William G. Scarlett & Co.  
Walter S. Schell, Inc.  
J. P. Snapp & Son  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
S. D. Woodruff & Sons, Inc.

### PARSLEY

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
The Bowman Seed Co.  
C. S. Brent Seed Co.  
Robert Buist Company  
W. Atlee Burpee Co.  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Co.  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Herbst Brothers  
Holmes Seed Co.  
Kelly Seed Co.  
Norval E. Kirby  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
The J. Chas. McCullough Seed Co.

Charles R. Moore  
John Mosbell Co.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northrup, King & Co.  
L. L. Olds Seed Co.  
The Page Seed Company  
Geo. R. Pedrick & Sons  
Pieters-Wheeler Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Waldo Rohnert Co.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Sherwood Seed Co.  
Standard Seed Farms Co.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store

Charles R. Moore  
John Mosbell Co.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northrup, King & Co.  
L. L. Olds Seed Co.  
The Page Seed Company  
Geo. R. Pedrick & Sons  
Pieters-Wheeler Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Waldo Rohnert Co.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Sherwood Seed Co.  
Standard Seed Farms Co.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store

Charles R. Moore  
John Mosbell Co.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northrup, King & Co.  
L. L. Olds Seed Co.  
The Page Seed Company  
Geo. R. Pedrick & Sons  
Pieters-Wheeler Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Waldo Rohnert Co.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Sherwood Seed Co.  
Standard Seed Farms Co.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store

T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
S. D. Woodruff & Sons, Inc.  
Zwaan & Van der Molen.

### PARSNIP

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
The Bowman Seed Co.  
C. S. Brent Seed Co.  
Robert Buist Company  
W. Atlee Burpee Co.  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Co.  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Herbst Brothers  
Holmes Seed Co.  
Kelly Seed Co.  
Norval E. Kirby  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
Law, Somner Pty., Ltd.  
The Chas. H. Lilly Co.  
The J. Chas. McCullough Seed Co.

Charles R. Moore  
John Mosbell Co.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northrup, King & Co.  
L. L. Olds Seed Co.  
The Page Seed Co.  
Paramount Seed Co.  
Geo. R. Pedrick & Sons  
Pieters-Wheeler Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Waldo Rohnert Co.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Sherwood Seed Co.  
Standard Seed Farms Co.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
S. D. Woodruff & Sons, Inc.  
Zwaan & Van der Molen

### PEANUTS

The Barteldes Seed Co.  
The Bowman Seed Co.  
W. Atlee Burpee Co.  
Condon Bros., Seedsmen  
Corneli Seed Co.  
Ferry-Morse Seed Co.  
Holmes Seed Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
The J. Chas. McCullough Seed Co.  
The Nebraska Seed Co.  
Robert Nicholson Seed Co.  
L. L. Olds Seed Co.  
Geo. R. Pedrick & Sons  
Prunty Seed & Grain Co.  
I. L. Radwaner Seed Co., Inc.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Snelson Seed Co.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons

### PEAS

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
Hijos de S. V. Bellotti  
The Bowman Seed Co.  
C. S. Brent Seed Co.  
Alfred J. Brown Seed Co.  
Robert Buist Company  
W. Atlee Burpee Co.  
Comstock, Ferre & Co.  
Arthur R. Cone  
Condon Bros., Seedsmen  
Corneli Seed Co.  
Crosman Seed Corp.  
A. Ertag, Inc.  
Ferry-Morse Seed Co.  
Filer Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. S. Hart Seed Co.  
Holmes Seed Co.  
Edgar F. Hurff Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
Law, Somner Pty., Ltd.  
The Chas. H. Lilly Co.  
McCabe Bros. Grain Co., Ltd.  
The J. Chas. McCullough Seed Co.  
Mark Means Co.  
Charles R. Moore  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northrup, King & Co.  
L. L. Olds Seed Co.  
The Page Seed Co.  
Paramount Seed Co.  
A. S. Paterson & Coy, Ltd.

Geo. R. Pedrick & Sons  
I. L. Radwaner Seed Co., Inc.  
Rogers Bros. Seed Co.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Sherwood Seed Co.  
F. F. Smith & Co., Inc.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
Washburn-Wilson Seed Co.  
Max F. Wilhelm, Seedsman  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
S. D. Woodruff & Sons, Inc.  
Wright, Stephenson & Coy, Ltd.

### PEAS—BLACKEYE

Associated Seed Growers, Inc.  
The J. Chas. McCullough Seed Co.  
T. W. Wood & Sons

### PEPPER

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
Hijos de S. V. Bellotti  
The Bowman Seed Co.  
C. S. Brent Seed Co.  
Alfred J. Brown Seed Co.  
Robert Buist Company  
Burgess Seed & Plant Co.  
W. Atlee Burpee Co.  
Burrell Seeds, Inc.  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Co.  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Herbst Brothers  
Holmes Seed Co.  
Edgar F. Hurff Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
The J. Chas. McCullough Seed Co.

Charles R. Moore  
John Mosbell Co.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
L. L. Olds Seed Co.  
The Page Seed Co.  
Geo. R. Pedrick & Sons  
I. L. Radwaner Seed Co., Inc.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
J. P. Snapp & Son  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
Joseph White Co.  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
S. D. Woodruff & Sons, Inc.

### POPPY SEED

Barteldes Seed Co.  
Alfred J. Brown Seed Co.  
Comstock, Ferre & Co.  
Corneli Seed Co.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
Chas. H. Lilly Co.  
The J. Chas. McCullough Seed Co.  
Michael-Leonard Co.  
Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northrup, King & Co.  
L. L. Olds Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Shuler & Smoak  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons

### POTATO—SEED

The Barteldes Seed Co.  
Burgess Seed & Plant Co.  
Condon Bros., Seedsmen  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
Holmes Seed Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
McCabe Bros. Grain Co.  
The Nebraska Seed Co.  
L. L. Olds Seed Co.  
Geo. R. Pedrick & Sons  
I. L. Radwaner Seed Co., Inc.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
S. D. Woodruff & Sons, Inc.

### PUMPKIN

Associated Seed Growers, Inc.

The Barteldes Seed Co.  
The Bowman Seed Co.  
C. S. Brent Seed Co.  
Alfred J. Brown Seed Co.  
Robert Buist Company  
Burgess Seed & Plant Co.  
W. Atlee Burpee Co.  
Burrell Seeds, Inc.  
Comstock, Ferre & Co.  
Condon Bros. Seedsmen  
Corneli Seed Company  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
H. D. Garwood Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. Hart Seed Co.  
Holmes Seed Co.  
Edgar F. Hurff Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
The J. Chas. McCullough Seed Co.  
Charles R. Moore  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
L. L. Olds Seed Co.  
The Page Seed Co.  
Geo. R. Pedrick & Sons  
I. L. Radwaner Seed Co., Inc.  
The J. C. Robinson Seed Co.  
Lawrence Robinson & Sons  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
J. P. Snapp & Son  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.

### RADISH

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
Hijos de S. V. Bellotti  
The Bowman Seed Co.  
J. A. Boyce Co.  
C. S. Brent Seed Co.  
Alfred J. Brown Seed Co.  
Robert Buist Company  
Burgess Seed & Plant Co.  
W. Atlee Burpee Co.  
Burrell Seeds, Inc.  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Company  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Herbst Brothers  
Holmes Seed Co.  
Kelly Seed Co.  
Norval E. Kirby  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
The Chas. H. Lilly Co.  
The J. Chas. McCullough Seed Co.

Michael-Leonard Co.  
Charles R. Moore  
John Mosbell Co.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northrup, King & Co.  
L. L. Olds Seed Co.  
The Page Seed Co.  
Paramount Seed Co.  
Geo. R. Pedrick & Sons  
Pieters-Wheeler Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Waldo Rohnert Co.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Sherwood Seed Co.  
Standard Seed Farms Co.  
Starr Seed Co.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
S. D. Woodruff & Sons, Inc.  
Zwaan & Van der Molen

### RHUBARB

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
The Bowman Seed Co.  
Robert Buist Company  
Burgess Seed & Plant Co.  
W. Atlee Burpee Co.  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Company  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Herbst Brothers  
Holmes Seed Co.  
Edgar F. Hurff Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
Charles R. Moore  
John Mosbell Co.

The Nebraska Seed Co.  
Northrup, King & Co.  
L. L. Olds Seed Co.  
Geo. R. Pedrick & Sons  
I. L. Radwaner Seed Co., Inc.  
Rudy-Patrick Seed Co.  
Walter S. Schell, Inc.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.

### ROOT SEEDS

Associated Seed Growers, Inc.  
J. A. Boyce Co.  
W. Atlee Burpee Co.  
Comstock, Ferre & Co.  
Corneli Seed Co.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
Herbst Brothers  
Kelly Seed Co.  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
Chas. H. Lilly Co.  
The J. Chas. McCullough Seed Co.  
Michael-Leonard Co.  
Chas. R. Moore  
John Mosbell Co.  
Nebraska Seed Co.  
Northrup, King & Co.  
L. L. Olds Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
F. H. Woodruff & Sons, Inc.

### RUTABAGA

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
J. A. Boyce Co.  
Robert Buist Company  
W. Atlee Burpee Co.  
Alf Christianson  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Co.  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Herbst Brothers  
Holmes Seed Co.  
Kelly Seed Co.  
Norval E. Kirby  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
Leckenby Seed Co.  
The Chas. H. Lilly Co.  
The J. Chas. McCullough Seed Co.  
Mark Means Co.  
Charles R. Moore  
John Mosbell Co.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northrup, King & Co.  
L. L. Olds Seed Co.  
The Page Seed Co.  
Geo. R. Pedrick & Sons  
Pieters-Wheeler Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Peter Sluis  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
S. D. Woodruff & Sons, Inc.  
Zwaan & Van der Molen

### SALSIFY

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
Hijos de S. V. Bellotti  
The Bowman Seed Co.  
Braslan Seed Growers Co., Inc.  
C. S. Brent Seed Co.  
Robert Buist Company  
W. Atlee Burpee Co.  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Company  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Holmes Seed Co.  
Kelly Seed Co.  
Norval E. Kirby  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
The J. Chas. McCullough Seed Co.  
Charles R. Moore  
John Mosbell Co.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
L. L. Olds Seed Co.  
The Page Seed Co.  
Geo. R. Pedrick & Sons  
Pieters-Wheeler Seed Co.

I. L. Radwaner Seed Co., Inc.  
Waldo Rohnert Co.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Sherwood Seed Co.  
Standard Seed Farms Co.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
Zwaan & Van der Molen

### SESAME SEEDS

Griscom & Co., Inc.

### SOYBEANS (Edible)

Associated Seed Growers, Inc.

### SPICE

Michael-Leonard Co.  
Northrup, King & Co.

### SPINACH

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
Hijos de S. V. Bellotti  
The Bowman Seed Co.  
J. A. Boyce Co.  
C. S. Brent Seed Co.  
Alfred J. Brown Seed Co.  
Robert Buist Company  
W. Atlee Burpee Co.  
Alf Christianson  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Company  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Herbst Brothers  
Holmes Seed Co.  
Kelly Seed Co.  
Norval E. Kirby  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
Leckenby Seed Co.  
J. M. Lupton & Son  
The Chas. H. Lilly Co.  
The J. Chas. McCullough Seed Co.  
Mark Means Co.  
D. R. Mayo Seed Co.  
Charles R. Moore  
John Mosbell Co.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northrup, King & Co.  
L. L. Olds Seed Co.  
The Page Seed Co.  
Geo. R. Pedrick & Sons  
I. L. Radwaner Seed Co., Inc.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Peter Sluis  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
S. D. Woodruff & Sons, Inc.  
Zwaan & Van der Molen

### SQUASH

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
Hijos de S. V. Bellotti  
The Bowman Seed Co.  
C. S. Brent Seed Co.  
Alfred J. Brown Seed Co.  
Robert Buist Company  
Burgess Seed & Plant Co.  
W. Atlee Burpee Co.  
Burrell Seeds, Inc.  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Company  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
H. D. Garwood Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Holmes Seed Co.  
Edgar F. Hurff Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
The J. Chas. McCullough Seed Co.  
Charles R. Moore  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northrup, King & Co.  
L. L. Olds Seed Co.  
The Page Seed Co.  
Paramount Seed Co.  
Geo. R. Pedrick & Sons  
I. L. Radwaner Seed Co., Inc.  
The J. C. Robinson Seed Co.  
Lawrence Robinson & Sons  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons

F. H. Woodruff & Sons, Inc.  
S. D. Woodruff & Sons, Inc.

### SWISS CHARD

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
The Bowman Seed Co.  
J. A. Boyce Co.  
C. S. Brent Seed Co.  
Robert Buist Company  
W. Atlee Burpee Co.  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Co.  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Herbst Brothers  
Holmes Seed Co.  
Kelly Seed Co.  
Norval E. Kirby  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
Leckenby Seed Co.  
The Chas. H. Lilly Co.  
The J. Chas. McCullough Seed Co.  
Charles R. Moore  
John Mosbell Co.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
L. L. Olds Seed Co.  
The Page Seed Co.  
Paramount Seed Co.  
Geo. R. Pedrick & Sons  
Pieters-Wheeler Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Waldo Rohnert Co.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Sherwood Seed Co.  
Standard Seed Farms Co.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
Zwaan & Van der Molen

### TOMATO

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
The Bowman Seed Co.  
C. S. Brent Seed Co.  
Alfred J. Brown Seed Co.  
Robert Buist Company  
Burgess Seed & Plant Co.  
W. Atlee Burpee Co.  
Burrell Seeds, Inc.  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Company  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Herbst Brothers  
Holmes Seed Co.  
Edgar F. Hurff Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
Law, Somner Pty., Ltd.  
The J. Chas. McCullough Seed Co.  
Charles R. Moore  
John Mosbell Co.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
L. L. Olds Seed Co.  
The Page Seed Co.  
Geo. R. Pedrick & Sons  
I. L. Radwaner Seed Co., Inc.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Francis C. Stokes Co.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
Joseph White Co.  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
S. D. Woodruff & Sons, Inc.

### TURNIP

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
The Bowman Seed Co.  
J. A. Boyce Co.  
C. S. Brent Seed Co.  
Alfred J. Brown Seed Co.  
Robert Buist Company  
W. Atlee Burpee Co.  
Alf Christianson  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Co.  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Herbst Brothers  
Holmes Seed Co.  
Kelly Seed Co.  
Norval E. Kirby

F. Lagomarsino & Sons  
D. Landreth Seed Co.  
Leckenby Seed Co.  
The Chas. H. Lilly Co.  
Mark Means Co.  
D. R. Mayo Seed Co.  
Michael-Leonard Co.  
Charles R. Moore  
John Mosbell Co.  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
Northrup, King & Co.  
L. L. Olds Seed Co.  
The Page Seed Co.  
Geo. R. Pedrick & Sons  
Pieters-Wheeler Seed Co.  
I. L. Radwaner Seed Co., Inc.  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Peter Sluis  
Standard Seed Farms Co.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
S. D. Woodruff & Sons, Inc.  
Zwaan & Van der Molen

### VINE SEEDS

The Barteldes Seed Co.  
The Bowman Seed Co.  
C. S. Brent Seed Co.  
Alfred J. Brown Seed Co.  
Burgess Seed & Plant Co.  
W. Atlee Burpee Co.  
Burrell Seeds, Inc.  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Co.  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
H. D. Garwood Seed Co.  
D. H. Gilbert Seed Co., Inc.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Herbst Brothers  
Holmes Seed Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
The J. Chas. McCullough Seed Co.  
Charles R. Moore  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
L. L. Olds Seed Co.  
Paramount Seed Co.  
Geo. R. Pedrick & Sons  
I. L. Radwaner Seed Co., Inc.  
The J. C. Robinson Seed Co.  
Lawrence Robinson & Sons  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.  
S. D. Woodruff & Sons, Inc.

### WATERMELON

Associated Seed Growers, Inc.  
The Barteldes Seed Co.  
The Bowman Seed Co.  
C. S. Brent Seed Co.  
Alfred J. Brown Seed Co.  
Robert Buist Company  
Burgess Seed & Plant Co.  
W. Atlee Burpee Co.  
Burrell Seeds, Inc.  
Comstock, Ferre & Co.  
Condon Bros., Seedsmen  
Corneli Seed Company  
Crosman Seed Corp.  
Ferry-Morse Seed Co.  
H. D. Garwood Seed Co.  
D. H. Gilbert Seed Co., Inc.  
Hamilton Seed & Coal Co.  
The Chas. C. Hart Seed Co.  
Holmes Seed Co.  
Edgar F. Hurff Co.  
Kelly Seed Co.  
F. Lagomarsino & Sons  
D. Landreth Seed Co.  
The J. Chas. McCullough Seed Co.  
Charles R. Moore  
The Nebraska Seed Co.  
Robt. Nicholson Seed Co.  
L. L. Olds Seed Co.  
The Page Seed Co.  
Paramount Seed Co.  
Geo. R. Pedrick & Sons  
I. L. Radwaner Seed Co., Inc.  
The J. C. Robinson Seed Co.  
Lawrence Robinson & Sons  
Rudy-Patrick Seed Co.  
Russell-Heckle Seed Co.  
Walter S. Schell, Inc.  
Simpson Nursery Co.  
Stollers Seed House  
U. S. Seed Co.  
Vaughan's Seed Store  
T. W. Wood & Sons  
F. H. Woodruff & Sons, Inc.

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Chicago, Illinois

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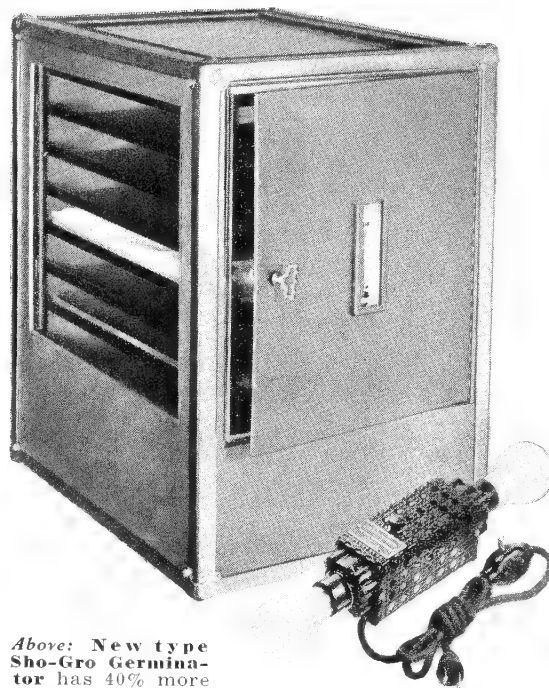
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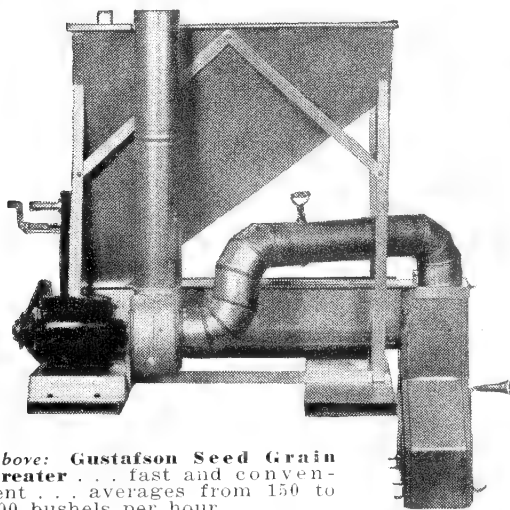
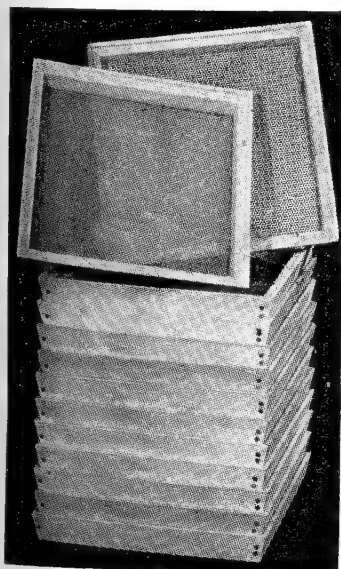
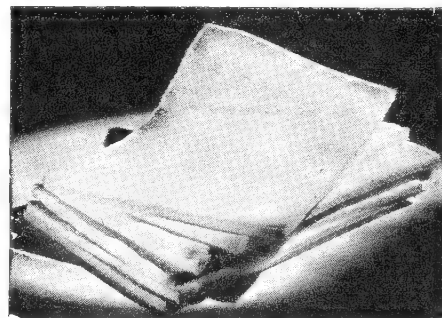
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Many seedsmen, as well as manufacturers, have spent years in building up a demand for their trade-marked merchandise and buyers have acquired the habit of calling for these brands. Sometimes a buyer will not remember the name of the manufacturer or seedsman who produces a certain brand. This alphabetical list of trade-marked brands should prove useful in such cases. These trade marks and slogans are printed as sent to us by seedsmen and manufacturers who advertise in this book. The publisher assumes no responsibility. For names of firms using trade marks not listed here, write us.

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**A. B. Lyman**—alfalfa seed—Peppard Seed Co., Kansas City, Mo.

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**Acme**—seeds—J. Chas. McCullough Seed Co., Cincinnati, Ohio.

**Aero**—field & garden seeds—Griswold Seed & Nursery Co., Lincoln, Nebr.

**Atla Brand**—field seeds—F. F. Smith & Co., Inc., Sacramento, Calif.

**Always No. 1 Grade**—farm seeds—Funk Bros. Seed Co., Bloomington, Ill.

**"American Bulbs—Superior Quality"**—flower bulbs—George Lawler, Monroe, Wash.

**Anchor Brand**—field and garden seeds—Arthur R. Cone, Buffalo, N. Y.

**Antelope**—seeds—The Nebraska Seed Co., Omaha, Nebr.

**A Premium Grade that Does Not Cost a Premium**—field seeds—Davenport Seed Co., Davenport, Iowa.

**Arco Brand**—field and garden seeds—Arthur R. Cone, Buffalo, N. Y.

**As good as grow for you to sow**—garden seeds—Burrell Seeds, Inc., Rocky Ford, Colo.

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**Avalon Brand**—seeds—Rex. D. Pearce, Moorestown, N. J.

**Banner**—seeds—Corneli Seed Co., St. Louis, Mo.

**Barteldes**—field & garden seeds—Barteldes Seed Co., Lawrence, Kan.

**Beakon**—"A Safe Guide to Better Crops" field seeds—Gooding Seed Co., Gooding, Idaho.

**"Bear our Name and Brand, Arco"**—field and garden seeds—Arthur R. Cone, Buffalo, N. Y.

**Beaver Brand**—seeds—Sommer Bros. Seed Co., Pekin, Ill.

**Beaver**—timothy seed—Steele, Briggs Seed Co., Toronto, Ont., Canada.

**Bee Hive**—hardy Utah alfalfa seed—Peppard Seed Co., Kansas City, Mo.

**"Belt's Better Grasses"**—The Belt Seed Co., Inc., Baltimore, Md.

**"Be Satisfied—Use Brent's Premium Seeds"**—C. S. Brent Seed Co., Lexington, Ky.

**"Best at any Price"**—seeds—Keller Seed Store, Shawnee, Okla.

**"Better Be Safe Than Sorry"**—field seeds—Ross Seed Co., Louisville, Ky.

**"Better Seeds, Better Crops"**—Ouren Seed Co., Council Bluffs, Iowa.

**Big Chief**—field seeds—Northwestern Seed Co., Keokuk, Iowa.

**Blackfoot Brand**—alfalfa—Idaho Grimm Alfalfa Seed Growers Assn., Blackfoot, Idaho.

**"Blizzard Belt Seeds are the Best for All Climates"**—garden seeds—Burgess Seed & Plant Co., Galesburg, Mich.

**Blood Tells**—garden seeds—Rogers Bros. Seed Co., Chicago, Ill.

**Blue Label**—dahlia roots—Wayland Dahlia Gardens, Wayland, Mich.

**Blue Ribbon Brand**—field seeds—Allied Seed, Div. of G. L. F. Mills Co.-op., Inc., Ft. Wayne, Ind.

**Blumont Brand**—field seeds—Blue Mountain Seed Growers Assn., La Grande, Ore.

**Bow Brand**—field seeds—Bowman Seed Co., Concordia, Kan.

**"Bred—Not Just Grown"**—garden seeds—Associated Seed Growers, Inc., New Haven, Conn.

**Brent's Premium**—field and garden seeds—C. S. Brent Seed Co., Lexington, Ky.

**Brookside**—lawn grass seed—Peppard Seed Co., Kansas City, Mo.

**"Brown's Tested Seeds—They Grow"**—garden seeds—Alfred J. Brown Seed Co., Grand Rapids, Mich.

**Buckaroo Brand**—garden seeds—Max F. Wilhelmi, Seedsman, Lawrence, Kan.

**Buckeye**—Seeds—J. Chas. McCullough Seed Co., Cincinnati, Ohio.

**"Buist Bulbs Bloom"**—Robert Buist Co., Philadelphia, Pa.

**Buist's Prize Medal**—garden seeds—Robert Buist Co., Philadelphia, Pa.

**Burpeeana**—seeds—W. Atlee Burpee Co., Philadelphia, Pa.

**"Burpee's Seeds Grow"**—W. Atlee Burpee Co., Philadelphia, Pa.

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**"California's Choicest Flower Seed Since 1890"**—Bodger Seeds, Ltd., El Monte, Calif.

**Capitol Brand Seeds**—field seeds and feeds—Capitol Fuel, Feed & Seed Co., Phoenix, Ariz.

**Capitol City Seeds**—F. W. Bolgiano & Co., Inc., Washington, D. C.

**Carlson Brand**—field seeds—Roscoe J. Carl & Son, Lansing, Mich.

**Casco**—field and garden seeds—Cuff-Archias Seed Co., Brawley, Calif.

**Cloister**—lawn grass seed mixture—Associated Seed Growers, Inc., New Haven, Conn.

**Columbia Park**—lawn grass seed—Duryea Seed Co., Inc., New York, N. Y.

**Compass Brand**—field seeds—Davenport Seed Co., Davenport, Iowa.

**Condon's Sure Crop Seeds. None Better at Any Price.** Condon's Seeds Satisfy—Condon Bros. Seedsmen, Rockford, Ill.

**Corn Belt**—field seeds—Northwestern Seed Co., Keokuk, Iowa.

**Cream of the Crop**—field seed, sun cured and field ripened blue grass—Peppard Seed Co., Kansas City, Mo.

**Crebent**—lawn seed—The Chas. H. Lilly Co., Seattle, Wash.

**Crecent**—lawn seed—The Chas. H. Lilly Co., Seattle, Wash.

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**Crystal**—field seeds—Cargill, Inc., Minneapolis, Minn.

**Dakota Leader Brand**—field seeds—Valker-Christensen Co., Minot, N. D.

**DeLuxe Brand**—lawn grass seed mixture—Associated Seed Growers, Inc., New Haven, Conn.

**Disco**—field seeds—Dakota Improved Seed Co., Mitchell, S. D.

**Donley "Super Cleaned"**—field and lawn seeds—J. L. Donley & Bro., Ashland, Ohio.

**Duryea's Central Park**—lawn grass seed—Duryea Seed Co., Inc., New York, N. Y.

**Eagle**—alsike seed—Steele, Briggs Seed Co., Ltd., Toronto, Ont., Canada.

**Echo Brand**—field seeds—Purcell Seed Co., Evansville, Ind.

**Eclipse**—field seeds—Keller Seed Store, Shawnee, Okla.

**"Emblem of Purity in Seeds"**—The Chas. H. Lilly Co., Seattle, Wash.

**Embros**—popcorn—Ed F. Mangelsdorf & Bro., Inc., St. Louis, Mo.

**Emerald**—field seeds—Steele, Briggs Seed Co., Ltd., Toronto, Ont., Canada.

**Emerald**—lawn seeds—J. Chas. McCullough Seed Co., Cincinnati, Ohio.

**Ermine**—timothy seed—Steele, Briggs Seed Co., Ltd., Toronto, Ont., Canada.

**Estate**—lawn seed—Wm. G. Scarlett & Co., Baltimore, Md.

**Evergreen**—farm seeds—The Chas. H. Lilly Co., Seattle, Wash.

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**Falcon**—field seeds—Cargill, Inc., Minneapolis, Minn.

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**Fargo Seed House**—field, garden seeds, seed grain—Magill & Co., Fargo, N. D.

**"Farmers Know Seed That Grow"**—field and garden seeds—Arthur R. Cone, Buffalo, N. Y.

**Far West**—field seeds—Jenks-White Seed Co., Salem, Ore.

**Ferry's Seeds**—field and garden seeds—Ferry-Morse Seed Co., Detroit, Mich.

**"Fewer—But Better Varieties"**—garden seeds—Zwaan & Van der Molen, Voorburg, Holland.

**Fine Green**—lawn seed—F. H. Woodruff & Sons, Inc., Milford, Conn.

**"53 Years' Faithful Service"**—field seeds—E. F. Sanguinetti, Yuma, Ariz.

**Flawn**—lawn seed mixture, especially for the South—F. H. Woodruff & Sons, Inc., Milford, Conn.

**Floradale**—seeds—W. Atlee Burpee Co., Philadelphia, Pa.

**"Flower Seeds of Proven Quality"**—seeds—Buckman, Denholm & Holden Seed Co., Lompoc, Calif.

**For-Get-Me-Not Brand**—grass seeds—Julius Loewith, Inc., New York, N. Y.

**"For the Good of the Country"**—field and grass seed—Seaboard Seed Co., Philadelphia, Pa.

**Fordhook**—seeds—W. Atlee Burpee Co., Philadelphia, Pa.

**"For Land Sake Buy Land O'Lakes Seeds"**—Land O'Lakes Creameries, Inc., Minneapolis, Minn.

**"Forty Years the Best"**—field seeds—Ross Seed Co., Louisville, Ky.

**Funk Farms**—field seeds—Funk Bros. Seed Co., Bloomington, Ill.

**Funk's**—soybean feeds—Funk Bros. Seed Co., Bloomington, Ill.

**G Hybrids**—Funk Bros. Seed Co., Bloomington, Ill.

- Gilbert's Dependable Seed**—field and garden seed—D. H. Gilbert Seed Co., Inc., Monticello, Fla.
- Gilt Edge Brand**—seeds—National Seed Co., Louisville, Ky.
- Gladflower**—flower seeds—W. Atlee Burpee Co., Philadelphia, Pa.
- G. L. F.**—seeds and feed—Cooperative G. L. F. Mills, Inc., Buffalo, N. Y.
- Globe Brand**—specialty feeds and bird seeds—The Albert Dickinson Co., Chicago, Ill.
- Gold**—field seeds—The Ackerman Co., Lima, Ohio.
- Goldinhardt**—seeds—W. Atlee Burpee Co., Philadelphia, Pa.
- Gold Medal**—field seeds—the sure growing kind—Louisville Seed Co., Louisville, Ky.
- Gold Standard**—red top seed—J. M. Schultz Seed Co., Dieterich, Ill.
- Gramercy Park**—lawn grass seed—Duryea Seed Co., Inc., New York, N. Y.
- Greenblade Brand**—lawn grass seed mixture—Associated Seed Growers, Inc., New Haven, Conn.
- Green Mantle Brand**—lawn grass seed mixture—Associated Seed Growers, Inc., New Haven, Conn.
- Greene Park**—lawn grass seed—The Page Seed Co., Greene, N. Y.
- Greenway**—lawn seed—Wm. G. Scarlett & Co., Baltimore, Md.
- Gro-Green Brand**—lawn grass seed mixture—Associated Seed Growers, Inc., New Haven, Conn.
- Gro-Sod**—lawn food—F. H. Woodruff & Sons, Inc., Milford, Conn.
- "Grown by Hurff"**—Edgar F. Hurff Co., Swedesboro, N. Y.
- "Growers of California and Colorado Seeds"**—vine seeds—Lawrence Robinson & Sons, Modesto, Calif.
- Growers of "Merit" Flower Seeds**—Waller-Franklin Seed Co., Guadalupe, Calif.
- "Growers of Select Stocks"**—garden seeds—Pieters Wheeler Seed Co., Gilroy, Calif.
- "Grown Where Dahlias Grow Best"**—dahlias—Wayland Dahlia Gardens, Wayland, Mich.
- "Hardy High Altitude Grown Seeds"**—garden and vine seeds—Burrell Seeds, Inc., Rocky Ford, Colo.
- Hart's**—garden and flower seeds—Chas. C. Hart Seed Co., Wethersfield, Conn.
- Harvest**—field seeds—Wm. G. Scarlett & Co., Baltimore, Md.
- Hawk**—alsike seed—Steele, Briggs Seed Co., Ltd., Toronto, Ont., Canada.
- Hawkeye**—field seeds—Hamilton Seed & Coal Company, Cedar Rapids, Iowa.
- Haymaker**—field seed—Peppard Seed Co., Kansas City, Mo.
- "Heart of the Clover District"**—farm seeds—The Ackerman Co., Lima, Ohio.
- Helderberg Birdsfoot Trefoil**—perennial herb—Eastern, N. Y. Birdsfoot Trefoil Co-op., Inc., Delmar, N. Y.
- "Highest Quality Vine Seeds"**—seeds—H. D. Garwood Seed Co., Rocky Ford, Colo.
- Honor**—field seeds—Stanford Seed Co., Buffalo, N. Y.
- Hoosier-Crost**—hybrid seed corn—Edw. J. Funk & Sons, Kentland, Ind.
- Hormolawn**—lawn seed—Seaboard Seed Co., Philadelphia, Pa.
- Horseshoe**—seeds—Corneli Seed Co., St. Louis, Mo.
- "Hungarian Grown Seeds"**—field seeds—Hungarian Farmers Co-op. Ass'n., Budapest, Hungary.
- Hurff**—garden seeds—Edgar F. Hurff Co., Swedesboro, N. J.
- Idaho Grown Seeds**—field seeds—Edgar L. Oakes & Co., Caldwell, Idaho.
- Imperial**—lawn seed—Philadelphia Seed Co., Philadelphia, Pa.
- Irish Green**—lawn grass seed—Peppard Seed Co., Kansas City, Mo.
- "It Pays to Sow 'Em"**—field seeds—Ross Seed Co., Louisville, Ky.
- Jacques**—sweet corn—Jacques Seed Co., Prescott, Wis.
- Judge Brand**—field seeds—Purcell Seed Co., Evansville, Ind.
- K**—brand seeds—Geo. Keller & Sons, Quincy, Ill.
- "Kelly's Seeds Grow"**—field seeds—Kelly Seed Co., Peoria, Ill.
- Keystone**—seeds—Corneli Seed Co., St. Louis, Mo.
- Kingscrot**—hybrid corn—Northrup, King & Co., Minneapolis, Minn.
- "King's K-Brand Seeds Are Reliable"**—field and garden seeds—H. C. King & Sons, Battle Creek, Mich.
- "Known for Reliability Since 1888—Old Gold Brand Seeds"**—L.L. Olds Seed Co., Madison, Wis.
- Knox's Quality**—farm and garden seeds—Paramount Seed Co., Stockton, Calif.
- Lago**—garden and field seeds—F. Lagomarsino & Sons, Sacramento, Calif.
- "Largest Seed House Below Sea Level"**—field and garden seeds—Cuff-Archias Seed Co., Brawley, Calif.
- La. Grown Seeds**—field seeds—W. T. Nolin, Hamburg, La.
- Land o' Lakes**—field seeds—Land o' Lakes Creameries, Inc., Minneapolis, Minn.
- Landreth's Seeds**—garden seeds—D. Landreth Seed Co., Bristol, Pa.
- Lake of the Woods Brand**—field seeds—Northern Field Seed Co., Winona, Minn.
- Leonard's Seeds**—Michael-Leonard Co., Sioux City, Iowa.
- Liberty**—field seeds—Stanford Seed Co., Buffalo, N. Y.
- Lilly's**—farm and garden seeds—The Chas. H. Lilly Co., Seattle, Wash.
- "Lilly's Purity-Sealed Seeds"**—field and garden seeds—The Chas. H. Lilly Co., Seattle, Wash.
- Lion Brand**—red clover seed—Steele, Briggs Seed Co., Ltd., Toronto, Ont., Canada.
- Lone Star**—bulbs—American Bulb Co., Chicago, Ill.
- M**—all seeds—Ed. F. Mangelsdorf & Bro., Inc., St. Louis, Mo.
- "M Brand Seeds Are Selected for Quality"**—field seeds—Ed. F. Mangelsdorf & Bro., Inc., St. Louis, Mo.
- Marvelawn**—grass seed—The Page Seed Co., Greene, N. Y.
- Master Farm Seeds Brand**—field seeds—Farmer Seed & Nursery Co., Faribault, Minn.
- Maybell**—pure field seeds—Ross Seed Co., Louisville, Ky.
- McCullough's Seeds**—seeds—The J. Chas. McCullough Seed Co., Cincinnati, Ohio.
- Merit**—flower seed—Waller-Franklin Seed Co., Guadalupe, Cal.
- Milford**—grass seed—F. H. Woodruff & Sons, Inc., Milford, Conn.
- Milford Green**—lawn seed mixture—F. H. Woodruff & Sons, Inc., Milford, Conn.
- Minhybrid No. 250—Japanese Hulless Pop Corn**—Farmer Seed & Nursery Co., Faribault, Minn.
- Minrol—Soy Meal**—soybean feed—Funk Bros. Seed Co., Bloomington, Ill.
- National Farm (wholesale) Seed Distributors**—seeds—Advance Seed Co., San Francisco, Calif.
- NBSCO Brand**—field seeds—N. Bonahoom Seed Co., Hastings, Neb.
- Newday**—farm and feed seeds—Newday Seeds, Inc., Fargo, N. D.
- New Idea Brand**—feed—Purcell Seed Co., Evansville, Ind.
- "New Jersey Certified Tomato Seed"**—Geo. R. Pedrick & Sons, Pedricktown, N. J.
- Nicholson's**—garden, field and flower seeds—Robert Nicholson Co., Dallas, Texas.
- Nord**—farm seeds—Twin City Seed Co., Minneapolis, Minn.
- "Northern Grown Farm Seeds"**—Cargill, Inc., Minneapolis, Minn.
- Northland Brand**—farm seeds—Northrup, King & Co., Minneapolis, Minn.
- No. 170**—lawn seed—F. H. Woodruff & Sons, Inc., Milford, Conn.
- No. 177**—lawn seed—F. H. Woodruff & Sons, Inc., Milford, Conn.
- Old English**—lawn seed—Philadelphia Seed Co., Philadelphia, Pa.
- Old Gold**—field, flower and garden seeds—L. L. Olds Seed Co., Madison, Wis.
- Old Homestead**—lawn grass seed—Duryea Seed Co., Inc., New York, N. Y.
- Old Orchard Brand**—seeds—Rex. D. Pearce, Moorestown, N. J.
- Olds**—field seeds—L. L. Olds Seed Co., Madison, Wis.
- O & M**—field, garden, lawn seeds and seed grains—O & M Seed Co., Green Springs, Ohio.
- "O & M Northern Grown Seed Corn and Seed Oats Always Give Best Results"**—field seeds—O & M Seed Co., Green Springs, Ohio.
- Olympic Brand**—true Colonial Bent—The Chas. H. Lilly Co., Seattle, Wash.
- Oregon Certified Brand**—bent grass seed—Lewis & Clark Seed Co., Astoria, Ore.
- Oriole**—field and bird seeds—Wm. G. Scarlett & Co., Baltimore, Md.
- Osco Brand**—field seeds—Ouren Seed Co., Council Bluffs, Iowa.
- "Our Business Is Growing"**—garden seeds—Waldo Rohnert Co., Gilroy, Calif.
- "Our Seeds Grow Friends"**—seeds—The J. Chas. McCullough Seed Co., Cincinnati, Ohio.
- P**—field seeds—A. S. Paterson & Co., Ltd., Dunedin, New Zealand.
- "Page's Standard Quality Seeds"**—garden, field and flower seed—The Page Seed Co., Greene, N. Y.
- Paramount**—field and garden seeds—Paramount Seed Co., Stockton, Calif.
- Pa-Se-Co**—seed corn—The Page Seed Co., Greene, N. Y.
- Patriot Brand**—lawn and farm seeds—Seaboard Seed Co., Philadelphia, Pa.
- Peak of Perfection**—field and garden seeds—Paramount Seed Co., Stockton, Calif.
- Pedrick's**—high quality seeds—George R. Pedrick & Sons, Pedricktown, N. J.
- Pep**—lawn grass seed—Peppard Seed Co., Kansas City, Mo.
- Pep Pop**—popcorn—Peppard Seed Co., Kansas City, Mo.
- Pepseco**—"Cream of the Crop" field seeds—Peppard Seed Co., Kansas City, Mo.
- Perfection**—field seed—Geo. P. Sexauer & Son, Brookings, S. D.
- Permaturf**—lawn seed—Twin City Seed Co., Minneapolis, Minn.
- Pilgrim Brand**—lawn grass seed mixture—Associated Seed Growers, Inc., New Haven, Conn.
- Pine Tree**—farm seeds—The Albert Dickinson Co., Chicago, Ill.
- "Plant Hart's Seeds"**—garden seeds—The Chas. C. Hart Seed Co., Wethersfield, Conn.
- "Plant Page's Seeds—They Grow"**—garden, field and flower seeds—The Page Seed Co., Greene, N. Y.
- Platte**—seeds—The Nebraska Seed Co., Omaha, Nebr.
- Premier**—lawn seed—F. H. Woodruff & Sons, Inc., Milford, Conn.

- Pride**—hybrid seed corn—Twin City Seed Co., Minneapolis, Minn.
- Pride of the North**—farm and lawn seeds—Twin City Seed Co., Minneapolis, Minn.
- Puget Sound Brand**—seeds—Leckenby Seed Co., Seattle, Wash.
- Pure Bred Seeds Brand**—garden seeds—Condon Bros. Seedsmen, Rockford, Ill.
- "Pure Tested Seeds"**—Holmes Seed Co., Canton, Ohio.
- Puritan**—blue grass seed—Sphar & Gay Seed Co., Winchester, Ky.
- Purity**—field, flower and garden seed—Robert Nicholson Seed Co., Dallas, Texas.
- "Purity and Reliability Since 1907"**—seeds—J. P. Snapp & Sons, Limestone, Tenn.
- P-WSCO**—garden seeds—Pieters-Wheeler Seed Co., Gilroy, Calif.
- Quaker**—field seeds—Philadelphia Seed Co., Philadelphia, Pa.
- "Quality H & T Seeds"**—Jacob Hartz Seed Co., Stuttgart, Ark.
- Quality Seeds**—field seeds—Stollers Seed House, Paulding, Ohio.
- "Quality Seeds That Grow"**—field and garden seeds—Valker-Christensen Co., Inc., Minot, N. D.
- Queen City**—seeds—J. Chas. McCullough Seed Co., Cincinnati, Ohio.
- Quicklawn Brand**—lawn grass seed mixture—Associated Seed Growers, Inc., New Haven, Conn.
- Radway's**—garden & field seeds—I. L. Radwaner Seed Co., Inc., New York, N. Y.
- Rbest Feeds Brand**—feeds—The Bowman Seed Co., Concordia, Kans.
- "Red Top People—Tip Top Sales"**—seeds—Shultz Seed Co., Olney, Ill.
- Regal Brand**—seeds—Rudy-Patrick Seed Co., Kansas City, Mo.
- Reliable**—field seed—J. M. Schultz Seed Co., Dieterich, Ill.
- Reliable Seeds Brand**—garden seeds—Waldo Rohnert Co., Gilroy, Calif.
- "Reliable Seed for the South Since 1900"**—field seed—R. E. Lambert & Sons, Darlington, Ala.
- Rex Brand**—seeds—Rudy-Patrick Seed Co., Kansas City, Mo.
- Robin-Seeds**—vine seeds—Lawrence Robinson & Sons, Modesto, Calif.
- Rob-See-Co**—garden seeds and seed corn—J. C. Robinson Seed Co., Waterloo, Nebr.
- Rohco Brand**—lettuce seed—Waldo Rohnert Co., Gilroy, Calif.
- Royal**—field and grass seeds—Rudy-Patrick Seed Co., Kansas City, Mo.
- Santa Barbara Seed Beans**—McCrea Seed Co., Santa Barbara, Calif.
- Scott's**—lawn seed—O. M. Scott & Sons Co., Marysville, Ohio.
- Security**—field seeds—Cargill, Inc., Minneapolis, Minn.
- "Seedsmen For Over a Century"**—garden and lawn seeds, bulbs—Robert Buist Co., Philadelphia, Pa.
- "Seed With a Background"**—pepper and tomato seed—Joseph White Co., Bridgeton, N. J.
- "Seeds of Rare Plants"**—seeds—Rex. D. Pearce, Moorestown, N. J.
- "Seeds That Grow"**—W. Atlee Burpee Co., Philadelphia, Pa.
- "Seeds That Grow"**—garden, field and flower seeds—The Chas. C. Hart Seed Co., Wethersfield, Conn.
- "Seeds That Succeed"**—garden, field and lawn seed—S. D. Woodruff & Sons, Inc., Orange, Conn.
- "Seeds That Grow, Need Any?"**—The Nebraska Seed Co., Omaha, Nebr.
- Service First Brand**—field seeds—International Seed, Inc., New York, N. Y.
- Shaditurf**—lawn seed—Twin City Seed Co., Minneapolis, Minn.
- Shady Lawn Brand**—lawn grass seed mixture—Associated Seed Growers, Inc., New Haven, Conn.
- Shady Nook**—lawn seed—J. Chas. McCullough Seed Co., Cincinnati, Ohio.
- Shady Spot**—lawn grass mixture—Duryea Seed Co., Inc., New York, N. Y.
- "Shields Sells Seeds"**—Shields, Buhl, Idaho.
- "Shurco Seed Sure Success"**—garden seeds—The John Mosbell Co., Montvale, N. J.
- S & S (Service & Satisfaction)**—field and garden seeds—Shuler & Smoak, Orangeburg, S. C.
- "Since 1820"**—Comstock, Ferre & Co., Wethersfield, Conn.
- Sioux**—field, garden and flower seeds—Michael-Leonard Co., Sioux City, Iowa.
- Six Green Stripes**—blue grass seed—The Nebraska Seed Co., Omaha, Nebr.
- Skagit Valley Brand**—garden seeds—J. A. Boyce Co., Mt. Vernon, Wash.
- Solar Brand**—field seeds—Henry Hirsch & Sons, Inc., Toledo, Ohio.
- Soo-Bred**—bantam sweet corn—Michael-Leonard Co., Sioux City, Iowa.
- Sterling**—farm seeds and feeds—Northrup, King & Co., Minneapolis, Minn.
- "Stollers' Quality Seed For All Your Needs"**—Stollers Seed House, Paulding, Ohio.
- Stork**—field seeds—Cargill, Inc., Minneapolis, Minn.
- Suburban**—lawn seed—J. Chas. McCullough Seed Co., Cincinnati, Ohio.
- "Suc-Seed with Page's Seeds"**—field, flower and garden seeds—The Page Seed Co., Greene, N. Y.
- "Suhrco Seed Sure Success"**—garden seeds—John Mosbell Co., Montvale, N. J.
- Sunnybrook**—seeds—W. Atlee Burpee Co., Philadelphia, Pa.
- Sunrise Brand**—strawberry clover—The Chas. H. Lilly Co., Seattle, Wash.
- Superior**—lawn grass mixture—Duryea Seed Co., Inc., New York, N. Y.
- Superfine Brand**—lawn seed—The J. Chas. McCullough Seed Co., Cincinnati, Ohio.
- Supreme**—seed grain, corn and grass seeds—Goldberg Seed & Feed Co., Fargo, N. D.
- Sterling Brand**—farm seeds—Northrup, King & Co., Minneapolis, Minn.
- S-X Brand**—seeds—Geo. P. Sexauer & Son, Brookings, S. D.
- "Tested Radway Seeds—Always Dependable"**—seeds—I. L. Radwaner Seed Co., Inc., New York, N. Y.
- "The Best in Seed Corn"**—C. S. Clark & Sons, Wakeman, Ohio.
- "The Oldest & Largest Seed House in the South"**—T. W. Wood & Sons, Richmond, Va.
- "The Sure Growing Kind"**—field seeds—Louisville Seed Co., Inc., Louisville, Ky.
- "They Grow Better—They Yield Better"**—seeds—Walter S. Schell, Inc., Harrisburg, Pa.
- Thor-o-Brand**—seeds—Law, Sommer Pty., Ltd., Melbourne, Australia.
- Thunderbird Brand**—field seeds—Capital Fuel, Feed & Seed Co., Phoenix, Ariz.
- Tiger**—red clover seed—Steele, Briggs Seed Co., Ltd., Toronto, Ont., Canada.
- "Tiger Brand Seeds for All Your Needs"**—seeds—Sommer Bros. Seed Co., Pekin, Ill.
- T.M.**—garden seeds—Thomas Madsen & Co., New York, N. Y.
- T-N-T Pop Corn**—The Barteldes Seed Co., Lawrence, Kans.
- Top Flight Bantam**—hybrid sweet corn—Michael-Leonard Co., Sioux City, Iowa.
- Trinity Brand**—field and grass seed—The Belt Seed Co., Inc., Baltimore, Md.
- Tru-Green**—lawn seed—J. Chas. McCullough Seed Co., Cincinnati, Ohio.
- Tru-Shade**—lawn seed—F. H. Woodruff & Sons, Inc., Milford, Conn.
- Truval**—field seeds of true value—Purcell Seed Co., Evansville, Ind.
- Turf-Maker**—lawn seed mixture—F. H. Woodruff & Sons, Inc., Milford, Conn.
- U. S. Brand**—garden seeds—United States Seed Co., St. Louis, Mo.
- Utryit**—seeds—The Nebraska Seed Co., Omaha, Nebr.
- Valley**—seeds—J. Chas. McCullough Seed Co., Cincinnati, Ohio.
- Value Brand**—field seeds—Henry Hirsch & Sons, Inc., Toledo, Ohio.
- Vaughan's**—field, garden and grass seeds, and bulbs—Vaughan's Seed Store, Chicago, Ill.
- Village Green**—lawn grass mixtures—Duryea Seed Co., Inc., New York, N. Y.
- Wab**—seeds—W. Atlee Burpee Co., Philadelphia, Pa.
- Waller's**—flower seeds—Waller-Franklin Seed Co., Guadalupe, Calif.
- Washington Park**—lawn seed—J. Chas. McCullough Seed Co., Cincinnati, Ohio.
- W.D.G. Blue Label Dahlias**—Grown where Dahlias grow Best—Wayland Dahlia Gardens, Wayland, Mich.
- "White's Quality Seeds"**—garden seeds—Joseph White Co., Bridgeton, N. J.
- Whiz-Bang**—popcorn—J. Chas. McCullough Seed Co., Cincinnati, Ohio.
- Wolf**—red clover seed—Steele, Briggs Seed Co., Ltd., Toronto, Ont., Canada.
- Woodco Quality**—grass seed—F. H. Woodruff & Sons, Inc., Milford, Conn.
- Wood's Dixie Lawn Grass**—Grows Green in Dixie Sunshine—T. W. Wood & Sons, Richmond, Va.
- Wood's Tested Seeds**—field, garden and flower seeds—T. W. Wood & Sons, Richmond, Va.
- Woodruff Seeds**—vegetable seeds and grasses—F. H. Woodruff & Sons, Inc., Milford, Conn.
- XX-1**—hybrid seed corn—Ed. F. Mangelsdorf & Bro., Inc., St. Louis, Mo.
- Yellows Resistant**—cabbage seed—Wisconsin Cabbage Seed Co., Racine, Wis.
- Yorkshire Park**—lawn grass seed—Duryea Seed Co., Inc., New York, N. Y.
- Zwaan's Snowdrift**—cauliflower seed—Zwaan & Van der Molen, Voorburg Holland.

## Allied Trades

- AA Quality**—fertilizer—American Agricultural Chemical Co., New York, N. Y.
- AA Westcoast**—raffia—McHutchison & Co., New York, N. Y.
- "Ace of Bug Killers"**—insecticide—One-Spot Co., Elkridge, Md.
- Acme**—insecticide—Acme White Lead & Color Works, Detroit, Mich.
- Actirote**—insecticide—Hammond Paint & Chem. Co., Beacon, N. Y.
- A & D**—Peat moss stable bedding—Atkins & Durbrow, New York, N. Y.
- Aeroil**—oil burning equipment—Aeroil Burner Co., Inc., West New York, N. J.
- Agate**—seed scale—Henry Troemner, Philadelphia, Pa.
- Agrico**—fertilizer—American Agricultural Chemical Co., New York, N. Y.
- Alfco**—crab grass killer—American Liquid Fertilizer Co., Marietta, Ohio.
- "A Live Line for Live Dealers"**—garden sprays—Calif. Spray Chemical Corp., Elizabeth, N. J.
- All Purpose Hoe**—garden tools—Easy-fold Mfgr., Faribault, Minn.

- Amalead**—bag seals—E. J. Brooks Co., Newark, N. J.
- American**—peat moss—American Soil Sponge Selling Corp., New York, N. Y.
- American Bean and Pea Thresher**—American Grain Separator Co., Minneapolis, Minn.
- Ames**—cotton bags—Ames Bag Co., Cleveland, Ohio.
- Amesaks**—cotton bags—Ames Bag Co., Cleveland, Ohio.
- Annia-Germ**—fumigant insecticide—Douglas Chem. & Supply Co., Kansas City, Mo.
- Ant-B-Gon**—Ant Control—Calif. Spray Chem. Corp., Elizabeth, N. J.
- Ant Gas**—ant and mole exterminator—Hammond Paint & Chemical Co., Beacon, N. Y.
- Antrap**—ant killer—Hammond Paint & Chem. Co., Beacon, N. Y.
- Antrol**—house and garden pest controls—The A. S. Boyle Co., Jersey City, N. J.
- Antx**—repellent—Nott Mfg. Co., Mt. Vernon, N. Y.
- A.P.G.**—seed packets and catalog envelopes—American Paper Goods Co., Chicago, Ill.
- "A Package Sealed is a Package Saved"**—bag seals—E. J. Brooks Co., Newark, N. J.
- App-L-Set**—plant hormone—Dow Chemical Co., Midland, Mich.
- Ariens-Tiller**—harrow—Ariens Co., Brillion, Wis.
- Arrow**—peat moss—New Amsterdam Import & Supply Co., Inc., New York, N. Y.
- "A Scale for Every Seed Need"**—scales—Detecto-Gram Scales, Brooklyn, N. Y.
- "Automatic Seed Packeting"**—The Brown Bag Filling Machine Co., Fitchburg, Mass.
- B & T Creosote**—C-A-Wood Preserver Co., St. Louis, Mo.
- "Battle Creek Health Foods for Dogs"**—dog foods—Miller's Dog Foods, Battle Creek, Mich.
- Bartlett**—garden and lawn tools, sprayers, tree paints—Bartlett Mfg. Co., Detroit, Mich.
- B-B**—farm and garden specialties—Ball-Biddle Co., Riverton, N. J.
- B-B Dust**—bean beetle dust—Hammond Paint & Chem. Co., Beacon, N. Y.
- Bee Brand**—insecticides and disinfectants—The McCormick Sales Co., Baltimore, Md.
- Bemis "A's"**—standard seamless seed bag of America—Bemis Bro. Bag Co., St. Louis, Mo.
- Bemis Special**—threads for machine closing of bags—Bemis Bro. Bag Co., St. Louis, Mo.
- Best on Earth**—fertilizer—Summers Fertilizer Co., Baltimore, Md.
- "Better Printing—Bigger Sales"**—printing—A. B. Morse Co., St. Joseph, Mich.
- Bighead**—sprayers—Dobbins Mfg. Co., Elkhart, Ind.
- Biotol**—sardine oil—Atkins & Durbrow, Inc., New York, N. Y.
- Bird Neponset**—flower pots, covers and earth bands—Bird & Son, Inc., East Walpole, Mass.
- Black Arrow**—insecticide—The McCormick Sales Co., Baltimore, Md.
- Black Leaf 40**—insecticide, poultry lice killer, worm remedy and dog repellent—Tobacco By-Products & Chemical Corp., Louisville, Ky.
- Black Leaf Worm Powder and Pellets**—poultry roundworm remedy—Tobacco By-Products & Chem. Corp., Louisville, Ky.
- Bordow**—insecticide—Dow Chemical Co., Midland, Mich.
- Brite Weave Burlap**—bags—Chase Bag Co., Chicago, Ill.
- Brown**—seed packet filling machines and seed packets—Brown Bag Filling Machine Co., Fitchburg, Mass.
- Bug-Geta**—insect control—Calif. Spray Chem. Corp., Elizabeth, N. J.
- Buhler**—patented vibrationless sieve drives—S. Howes Co., Inc., Silver Creek, N. Y.
- C-A**—Wood Preserver—Carbolineum America—C-A Wood Preserver Co., St. Louis, Mo.
- Cap Brush**—roost applicator for delousing poultry—Tobacco By-Products & Chem. Corp., Louisville, Ky.
- Carbolineum America**—C-A-Wood Preserver Co., St. Louis, Mo.
- Cardinal Brand**—wild bird food and suet cake—Garden Products Co., St. Louis, Mo.
- Carter**—disc separators—Hart-Carter Co., Minneapolis, Minn.
- Cascade**—vertical seed mixers—S. Howes Co., Inc., Silver Creek, N. Y.
- Cattle Comfort**—stock spray—Hammond Paint & Chemical Co., Beacon, N. Y.
- Ceresan**—seed treatment—Bayer-Semesan Co., Inc., Wilmington, Del.
- Certified Premier**—Swedish Peat Moss—Premier Peat Moss Corp., New York, N. Y.
- Champion**—weighing and filling machines—S. Howes Co., Inc., Silver Creek, N. Y.
- Chappel's Biskits**—fresh meat biskits for dogs—Quaker Oats Co., Rockford, Illinois.
- Chase**—seed bags—Chase Bag Co., Chicago, Ill.
- Chinchola**—chinch bug exterminator—Hammond Paint & Chem. Co., Beacon, N. Y.
- Cincinnati "A"**—cotton seamless bags—J. Chas. McCullough Seed Co., Cincinnati, Ohio.
- Clipper**—seed and grain cleaning and grading equipment—A. T. Ferrell & Co., Saginaw, Mich.
- Clute**—air-lift elevators and fruit graders—Oliver Mfg. Co., St. Louis, Mo.
- Combination**—fertilizer spreader and seeder—Cyclone Seeder Co., Urbana, Ind.
- "Complete Plant Food"**—Swift & Co., Vigoro Dept., Chicago, Ill.
- "Complete Seed Testing Equipment"**—Seedburo Equipment Co., Chicago, Ill.
- Compound Lever**—tree trimming equipment—Bartlett Mfg. Co., Detroit, Mich.
- Congo**—raffia—McHutchison & Co., New York, N. Y.
- Copper-Rotene**—combined dust—Mechling Bros., Chemicals, Philadelphia, Pa.
- Copper Solution**—fungicide—Hammond Paint & Chem. Co., Beacon, N. Y.
- Crinkle**—"Plant covers give complete crop protection all season at the lowest cost"—plant protectors—Oldmill Paper Products Corp., Long Island City, N. Y.
- Cyanogas**—fumigant—American Cyanamid & Chemical Corp., New York, N. Y.
- Cyclone**—poultry supplies and broadcast seeder—Cyclone Mfg. Co., Urbana, Ind.
- Dandelion Killer**—weed killer—Hammond Paint & Chem. Co., Beacon, N. Y.
- Deltaseal**—small package bag closure—Bemis Bro. Bag Co., St. Louis, Mo.
- Detecto-Gram**—scales—Detecto-Gram Scales, Brooklyn, N. Y.
- Dickinson's**—dog food—The Albert Dickinson Co., Chicago, Ill.
- Disbrow**—seed bags, packets, envelopes, paper boxes—Disbrow Mfg. Co., Inc., Newark, N. J.
- DN**—dust—Dow Chemical Co., Midland, Mich.
- DN**—dry-mix—Dow Chemical Co., Midland, Mich.
- Dobbins**—dusters and sprayers—Dobbins Mfg. Co., Elkhart, Ind.
- Dog-Check**—repellent—Nott Mfg. Co., Mt. Vernon, N. Y.
- Dog Skat**—dog and cat repellent—Hammond Paint & Chemical Co., Beacon, N. Y.
- Dogzoff**—dog repellent—Bohlender Plant Chemicals, Inc., Tipp City, Ohio
- Dowax**—Dow Chemical Co., Midland, Mich.
- Dowfume**—Dow Chemical Co., Midland, Mich.
- Dow Chloropicrin**—Dow Chemical Co., Midland, Mich.
- Dow Dichloroethyl Ether**—Dow Chemical Co., Midland, Mich.
- Dow Methal Bromide**—fumigant—Dow Chemical Co., Midland, Mich.
- Dowspray-Dormant**—Dow Chemical Co., Midland, Mich.
- Driconure**—fertilizer—all organic fertilizer—Atkins & Durbrow, Inc., New York, N. Y.
- Dri-Tite**—waterproof tarpaulins—Bemis Bro. Bag Co., St. Louis, Mo.
- DuBay New Improved "Ceresan"**—seed disinfectant—Bayer-Semesan Co., Inc., Wilmington, Del.
- DuBay "Nu Green"**—seed disinfectant—Bayer-Semesan Co., Inc., Wilmington, Del.
- DuBay 2% "Ceresan"**—seed disinfectant—Bayer-Semesan Co., Inc., Wilmington, Del.
- DuBay "Semesan, Jr."**—seed disinfectant—Bayer-Semesan Co., Inc., Wilmington, Del.
- DuBay "Semesan Bel"**—seed disinfectant—Bayer-Semesan Co., Inc., Wilmington, Del.
- DuBay "Semesan"**—seed disinfectant—Bayer-Semesan Co., Inc., Wilmington, Del.
- DuBay Special "Semesan"**—seed disinfectant—Bayer-Semesan Co., Inc., Wilmington, Del.
- D-X**—rotenone and pyrethrum spray—B. G. Pratt Co., New York, N. Y.
- Eagle Machine Thread**—twine—Fulton Bag & Cotton Mills, Atlanta, Ga.
- Eagle Sail Twine**—twine—Fulton Bag & Cotton Mills, Atlanta, Ga.
- Easyfold**—display equipment—Easyfold Mfg., Faribault, Minn.
- Economy**—mailing bags—Bemis Bro. Bag Co., St. Louis, Mo.
- EEzy-Wear**—garden gloves—National Glove Co., Columbus, Ohio.
- Erosionet**—for preventing soil and seed washing on lawns and terraces—Bemis Bro. Bag Co., St. Louis, Mo.
- Ethocil**—Dow Chemical Co., Midland, Mich.
- Eureka**—seed cleaners, separators and graders, lawn seed mixers, scarifiers and seed processing machinery—S. Howes Co., Inc., Silver Creek, N. Y.
- Everlastic**—glazing bedding putty—Hammond Paint & Chemical Co., Beacon, N. Y.
- Eveready**—power sprayer—Dobbins Mfg. Co., Elkhart, Ind.
- "Everything for the Dog"**—pet supplies—Spratt's Patent, Ltd., Newark, N. J.
- "Every Vitamin for Every Need"**—Wm. T. Thompson Co., Los Angeles, Calif.
- Exact Weight**—scales—Exact Weight Scale Co., Columbus, Ohio
- Exadol**—cod liver oil—Atkins & Durbrow, Inc., New York, N. Y.
- Expan**—propagating pots—Paxton Products Co., Riverside, Calif.
- Expan**—tree protector—Paxton Products Co., Riverside, Calif.

- Expert Line**—grain and seed cleaners, corn sorters, hullers, scarifiers, fanning mills—Cleland Mfg. Co., Minneapolis, Minn.
- Extrax**—complete organic insecticide—Calif. Spray Chem. Corp., Elizabeth, N. J.
- Eye-Dentify**—seals—Stoffel Seals Co., Inc., Chicago, Ill.
- E-Z**—fertilizer spreader—Germain Seed & Plant Co., Los Angeles, Calif.
- Farmogerm**—inoculant—Earp-Thomas Laboratories, Bloomfield, N. J.
- Fertil-Spray**—spraying device—Hydroponic Chemical Co., Inc., New York, N. Y.
- Ferto-Pots**—planting pots—The Allen Co., Pittstown, N. J.
- Fibo**—dog food—Spratt's Patent, Ltd., Newark, N. J.
- "Field Warehousing by Douglas-Guardian"**—Douglas-Guardian Whse. Corp., Chicago, Ill.
- Filmfast**—insecticide spreader—Mechling Bros. Chemicals, Philadelphia, Pa.
- Flea-not**—repellent—Nott Mfg. Co., Mt. Vernon, N. Y.
- Flex-Beam**—garden tool handles—Union Fork & Hoe Co., Columbus, Ohio
- Flex-O-Glass**—glass substitute—Flex-O-Glass Mfg. Co., Chicago, Ill.
- Fly-Away**—spray—Hammond Paint & Chemical Co., Beacon, N. Y.
- Flyzoff**—fly repellent—Bohlender Plant Chemicals, Inc., Tipp City, Ohio.
- For-Get-Me-Not**—natural and colored raffia and peat moss—Julius Loewith, Inc., New York, N. Y.
- Formacide**—fungicide—Hammond Paint & Chem. Co., Beacon, N. Y.
- Four-In-One**—percentage scale—Seedburo Equipment Co., Chicago, Ill.
- Fruitone**—hormone to avoid fruit drop—American Chemical Paint Co., Ambler, Pa.
- Fultex**—waterproofed canvas tarpaulins and covers—Fulton Bag & Cotton Mills, Atlanta, Ga.
- Fulton "A"**—cotton seamless bags—Fulton Bag & Cotton Mills, Atlanta, Ga.
- Fulton's A-1**—insect spray—Plantabbs Co., Baltimore, Md.
- Fulton Brown**—tarpaulins—Fulton Bag & Cotton Mills, Atlanta, Ga.
- Fulton Probe Stripe**—seed bags—Fulton Bag & Cotton Mills, Atlanta, Ga.
- Fumigato**—fumigant—Douglas Chem. & Supply Co., Kansas City, Mo.
- Fun-L-Fill**—sprayers—Dobbins Mfg. Co., Elkhart, Ind.
- G & O**—resale merchandise for seed stores—Goulard & Olena, Inc., New York, N. Y.
- Galloway**—seed packets—Schmidt Lithograph Co., San Francisco, Calif.
- Garden Volk**—positive contact insecticide with Nicotine—Calif. Spray Chem. Corp., Elizabeth, N. J.
- Gardex**—garden tools—Gardex, Inc., Michigan City, Ind.
- Gard-N-Cart**—garden implement—Masters Planter Co., Benton Harbor, Mich.
- Gat Spray**—lawn sprayer—The Chas. H. Lilly Co., Seattle, Wash.
- Germaco Products**—garden specialties—Germain Seed & Plant Co., Los Angeles, Calif.
- Geha**—fish food—Schoemann and Mayer, Inc., New York, N. Y.
- Glass-O-Net**—mesh base glass substitute—Flex-O-Glass Mfg. Co., Chicago, Ill.
- Goldena**—feeds—Goldberg Seed & Feed Co., Fargo, N. Dak.
- Gold Leaf**—tobacco powder—Tobacco By-Products & Chem. Corp., Louisville, Ky.
- Go-West**—the improved insect bait—Agricultural Laboratories, Inc., Columbus, Ohio.
- Go-West**—bait—The Chas. H. Lilly Co., Seattle, Wash.
- GPM**—granulated peat moss—Atkins & Durbrow, Inc., New York, N. Y.
- Grape and Rose Dust**—fungicide—Hammond Paint & Chemical Co., Beacon, N. Y.
- Graslets**—dog vitamins—Quaker Oats Co., Rockford, Ill.
- Greenol**—copper fungicide for mildews and other diseases—Calif. Spray Chem. Corp., Elizabeth, N. J.
- Grip-Lock**—bag seal—E. J. Brooks Co., Newark, N. J.
- Guardnet**—protecting fabric for shading plants and balling roots—Bemis Bro. Bag Co., St. Louis, Mo.
- Gustafson**—seed treator—Ben Gustafson Seed Grain Machinery Co., Fargo, N. D.
- Hall**—printers—W. F. Hall Printing Co., Chicago, Ill.
- Hammond Weed Killer**—Hammond Paint & Chem. Co., Beacon, N. Y.
- Hammond's**—insecticides, fungicides, paints and putties—Hammond Paint & Chemical Co., Beacon, N. Y.
- Handy Andy**—weed cutters—Union Fork & Hoe Co., Columbus, Ohio
- Harco**—sprayer—Germain Seed & Plant Co., Los Angeles, Calif.
- Hart**—corn grader—Hart-Carter Co., Minneapolis, Minn.
- Heco**—envelopes—Heco Envelope Co., Chicago, Ill.
- Heinrich**—envelopes—Heinrich Envelope Co., Minneapolis, Minn.
- Heller**—store equipment—Heller & Co., Montpelier, Ohio
- Henure**—fertilizer—Atkins & Durbrow, Inc., New York, N. Y.
- Hi-Lo-Fosphate**—soil test for available phosphates—Urbana Laboratories, Urbana, Ill.
- Hi-Wall**—tourists tents—Bemis Bro. Bag Co., St. Louis, Mo.
- Hoffer Test**—for nitrogen and potash—Urbana Laboratories, Urbana, Ill.
- Horicum Lime**—sulphur concentrate and fungicide—Hammond Paint & Chemical Co., Beacon, N. Y.
- Hormodin**—powders—Merck & Co., Inc., Rahway, N. J.
- Hormodin No. 1, No. 2 & No. 3 Powder**—root forming chemical—Merck & Co., Inc., Rahway, N. J.
- Hotkaps**—plant protectors—Germain Seed & Plant Co., Los Angeles, Calif.
- Howes**—equipment for seed houses—S. Howes Co., Inc., Silver Creek, N. Y.
- Hudson**—garden equipment—H. D. Hudson Mfg. Co., Chicago, Ill.
- Humogerm**—inoculant—Earp-Thomas Laboratories, Inc., Bloomfield, N. J.
- H. W. K.**—weed killer—Hammond Paint & Chemical Co., Beacon, N. Y.
- Hydroxide**—insecticide—Mechling Bros. Chemicals, Philadelphia, Pa.
- "Hyponex grows Plants in Soil, Sand or Water"**—plant food—Hydroponic Chemical Co., Inc., New York, N. Y.
- Invincible**—bean polishers and bean cleaning and grading equipment—S. Howes Co., Inc., Silver Creek, N. Y.
- Iscro Spray**—insecticide—Innis, Speiden & Co., New York, N. Y.
- Instant-Weed-Cane**—Weed-Knell, Aurora, Ill.
- Jak Tung**—trucks—Thomas Truck & Caster Co., Keokuk, Iowa.
- Japto**—Japanese bean beetle destroyer—Mechling Bros. Chemicals, Philadelphia, Pa.
- JayBee**—world's standard grinder for capacity, economy and endurance—J. B. Sedberry, Inc., Franklin, Tenn.
- Ken-L-Biskit**—dog food of champions—Quaker Oats Co., Rockford, Ill.
- Ken-L-Ration**—dog food of champions—Quaker Oats Co., Rockford, Ill.
- Ken-L-Worth**—fresh meat dog biscuit—Quaker Oats Co., Rockford, Ill.
- Kerosene Emulsion**—insecticide—Hammond Paint & Chemical Co., Beacon, N. Y.
- Kilmice**—repellent—Nott Mfg. Co., Mt. Vernon, N. Y.
- Kix**—water conditioner, spreader and sticker—Hammond Paint & Chemical Co., Beacon, N. Y.
- Kleen-Ezy**—poultry equipment—H. D. Hudson Mfg. Co., Chicago, Ill.
- Krussow**—double spiral seed separator—Cleland Mfg. Co., Minneapolis, Minn.
- Kwik-Camp**—auto tents—Bemis Bro. Bag Co., St. Louis, Mo.
- Lac-Hi-Potash**—soil test for available potassium—Urbana Laboratories, Urbana, Ill.
- Larvacide**—fumigant for insect, soil and rodents—Innis, Speiden & Co., New York, N. Y.
- Legume-Aid**—inoculant—Agricultural Laboratories, Inc., Columbus, Ohio.
- Leonard**—horticultural knives, nursery spades, arboricultural supplies—A. M. Leonard & Son., Piqua, Ohio.
- Lenonet**—soil fixation material—Bemis Bro. Bag Co., St. Louis, Mo.
- Life-O-Plant**—plant food—Bohlender Plant Chemicals, Inc., Tipp City, Ohio.
- Lilly's**—calf meal and dog food—The Chas. H. Lilly Co., Seattle, Wash.
- Liqua-Vita**—liquid fertilizer—American Liquid Fertilizer Co., Marietta, Ohio.
- Liquid Slug Shot**—insecticide—Hammond Paint & Chem. Co., Beacon, N. Y.
- Little Wonder**—hedge trimmer—Detco Mfg. Co., Oaks, Pa.
- Loma**—The perfect plant food—Tennessee Corp., New York, N. Y.
- Lyric**—mixed bird seed—Philadelphia Seed Co., Philadelphia, Pa.
- McCormick's Rotenone Dust**—dust—The McCormick Sales Co., Baltimore, Md.
- McQueen's**—legume bacteria—Agricultural Laboratories, Inc., Columbus, Ohio.
- Macmillan**—garden books—The Macmillan Co., New York, N. Y.
- Mainstay**—twine for hand closing of bags—Bemis Bro. Bag Co., St. Louis, Mo.
- Maro-Meat**—dog food—Quaker Oats Co., Rockford, Ill.
- Mc Queen's**—inoculator—"The Farmer's Friend Since 1908"—Agricultural Laboratories, Inc., Columbus, Ohio.
- Magnet**—gummed tape—The Tanglefoot Co., Grand Rapids, Mich.
- Mash Nic**—Tobacco By-Prod. & Chem. Corp., Louisville, Ky.
- Masters**—garden implements—Masters Planter Co., Benton Harbor, Mich.
- Mechling's Scale Oil**—insecticide—Mechling Bros. Chemicals, Philadelphia, Pa.
- Merck**—animal dips, disinfectants, fumigants, lice killers, seed disinfectants, fungicide—Merck & Co., Inc., Rahway, N. J.
- Mike Sulfur**—Dow Chemical Co., Midland, Mich.
- Miller's Kibbles**—Battle Creek Health food for dogs—Miller's Dog Foods, Battle Creek, Mich.
- "Mice Proof Seed Cases"**—Heller & Co., Montpelier, Ohio.
- Milorganite**—fertilizer—Sewerage Commission, Milwaukee, Wis.
- Mix**—bean sorters—S. Howes Co., Inc., Silver Creek, N. Y.
- Mole-Nots**—pest control—Nott Mfg. Co., Mt. Vernon, N. Y.
- Morcrop**—fertilizer—The Chas. H. Lilly Co., Seattle, Wash.
- Mor-Les-Nitrate**—soil test for nitrates—Urbana Laboratories, Urbana, Ill.
- Mosquitozoff**—mosquito exterminator—Bohlender Plant Chemicals, Inc., Tipp City, Ohio.



- Mt. Beacon**—green shading—Hammond Paint & Chemical Co., Beacon, N. Y.
- Mouse-Nots**—pest control—Nott Mfg. Co., Mt. Vernon, N. Y.
- Myers**—sprayers—F. E. Myers & Bro. Co., Ashland, Ohio
- Napto-side**—insecticide and soil fumigant—Hammond Paint & Chem. Co., Beacon, N. Y.
- "Nation Wide Service"**—Stecher-Traung Lithograph Corp., Rochester, N. Y.
- Neponset**—flower pots, flower pot covers and earth bands—Bird & Son, Inc., East Walpole, Mass.
- New Idea**—knapsack sprayer—The F. E. Myers & Bro. Co., Ashland, Ohio.
- Nico-Fume Liquid**—greenhouse spray and fumigant—Tobacco By-Products & Chem. Corp., Louisville, Ky.
- Nico-Fume Powder**—greenhouse fumigant—Tobacco By-Products & Chem. Corp., Louisville, Ky.
- Nicotine Soap**—insecticide—Hammond Paint & Chemical Co., Beacon, N. Y.
- Nicotrol**—aphicide—Kay-Fries Chemicals, Inc., New York, N. Y.
- Nitragin**—soil and legume inoculator—Nitragin Co., Inc., Milwaukee, Wis.
- "Nitragin—the oldest and most widely used inoculator in America"**—inoculator—The Nitragin Co., Inc., Milwaukee, Wis.
- No Crow**—crow repellent—Hammond Paint & Chem. Co., Beacon, N. Y.
- Nod-O-Gen**—pretested inoculator—The Albert Dickinson Co., Chicago, Ill.
- Nursery Volck**—foliage oil spray—Calif. Spray Chem. Corp., Elizabeth, N. J.
- Nu-Vim**—Vitamin B, tablets and liquid—Garden Products Co., St. Louis, Mo.
- O.K.**—poultry litter—Atkins & Durbrow, Inc., New York, N. Y.
- Old English**—liquid putty—Hammond Paint & Chemical Co., Beacon, N. Y.
- Old English**—sheep manure—Philadelphia Seed Co., Philadelphia, Pa.
- Old English**—turf builder and plant food—Philadelphia Seed Co., Philadelphia, Pa.
- Old English Lawn Klenser**—Japanese beetle exterminator—Philadelphia Seed Co., Philadelphia, Pa.
- Oliver**—gravity separators, corn graders, aspirators, seed treaters, bag cleaners, shaking shoes and portable electric blowers—Oliver Mfg. Co., St. Louis, Mo.
- Original**—greenhouse white paint—Hammond Paint & Chem. Co., Beacon, N. Y.
- Oriole**—pigeon feeds—Wm. G. Scarlett & Co., Baltimore, Md.
- Ortho**—scientific pest control—Calif. Spray Chem. Corp., Elizabeth, N. J.
- Paradow**—Dow Chemical Co., Midland, Mich.
- Peat O'Maine**—garden and poultry peat moss (Maine)—Atkins & Durbrow, Inc., New York, N. Y.
- Peerless**—gunning asbestos asphaltum—Hammond Paint & Chemical Co., Beacon, N. Y.
- Peerless**—poultry feed—Geo. P. Sexauer & Son, Brookings, S. Dak.
- Penetrol**—spreader nicotine, lead arsenate—Kay-Fries Chemicals, Inc., New York, N. Y.
- Perfection**—dog and fox food—Perfection Foods Co., Battle Creek, Mich.
- Perfection**—sprayers and garden tools—H. D. Hudson Mfg. Co., Chicago, Ill.
- Perfection Coliverol**—powdered cod liver oil—Perfection Foods Co., Battle Creek, Mich.
- Perfecto-Sote**—C-A-Wood Preserver Co., St. Louis, Mo.
- Perfect Dispersion**—aluminum paint for greenhouse use—Hammond Paint & Chem. Co., Beacon, N. Y.
- Pest-Kit**—kit containing material to combat insects and diseases—Hammond Paint & Chemical Co., Beacon, N. Y.
- Picneer**—garden and poultry peat moss (Ontario, Canada)—Atkins & Durbrow, Inc., New York, N. Y.
- Plantabbs**—plant food and fertilizer—Plantabbs Corp., Baltimore, Md.
- Plasti Chrome**—garden tools—Union Fork & Hoe Co., Columbus, Ohio
- Post-O-Meter-Scales**—Detecto-Gram Scales, Brooklyn, N. Y.
- Pratt**—sprays—B. G. Pratt Co., New York, N. Y.
- Premier**—Vacuum Cleaned Certified Swedish Peat Moss—Premier Peat Moss Corp., New York, N. Y.
- Pree-Plant**—plant stimulant—Wm. T. Thompson Co., Los Angeles, Calif.
- "Printed Salesmakers"**—printing—A. B. Morse Co., St. Joseph, Mich.
- Purgrain**—pigeon, poultry and rabbit feeds and pigeon health grit—Philadelphia Seed Co., Philadelphia, Pa.
- Pussy-Check**—repellent—Nott Mfg. Co., Mt. Vernon, N. Y.
- Pyrote**—non-poisonous double acting insecticide—Mechling Bros. Chemicals, Philadelphia, Pa.
- "Quality Seed Bags"**—Fulton Bag & Cotton Mills, Atlanta, Ga.
- Racine**—fanning mill type seed cleaners—S. Howes Co., Inc., Silver Creek, N. Y.
- Rat Lunches**—exterminator—Rat Lunches Co., Carroll, Iowa.
- Rat-Nots**—repellent—Nott Mfg. Co., Mt. Vernon, N. Y.
- Rat-X**—rat exterminator—Douglas Chem. & Supply Co., Kansas City, Mo.
- Razor-Back Shovels**—"The only shovel with a backbone"—Union Fork & Hoe Co., Columbus, Ohio.
- Red Arrow**—insecticide—The McCormick Sales Co., Baltimore, Md.
- Red Head**—bag holder—Bemis Bro. Bag Co., St. Louis, Mo.
- Red Star Brand**—raffia—McHutchison & Co., New York, N. Y.
- Ree-Root**—root stimulant—Wm. T. Thompson Co., Los Angeles, Calif.
- "Reliability"**—McHutchison & Co., New York, N. Y.
- Rice**—seed mill—W. A. Rice Co., Jerseyville, Ill.
- Rich-or-Poor**—soil test for acidity—Urbana Laboratories, Urbana, Ill.
- Roach Flakes**—"It Get's 'Em" for roaches and waterbugs—Agricultural Laboratories, Inc., Columbus, Ohio
- Rodopell**—bulb protector against moles, rats, mice, etc.—Atkins & Durbrow, Inc., New York, N. Y.
- Rootone**—the Hormone Powder—root stimulant, seed and bulb stimulant and fungicide—American Chemical Paint Co., Ambler, Pa.
- Root Quality**—bee supplies—A. I. Root Co., Medina, Ohio
- Rose Dust**—fungicide—Hammond Paint & Chemical Co., Beacon, N. Y.
- Rotenone "400"**—insecticide—Mechling Bros. Chemicals, Philadelphia, Pa.
- Rotenone "75"**—insecticide—Mechling Bros. Chemicals, Philadelphia, Pa.
- Royal River**—seamless cotton bags—Royal River Mills, Inc., Baltimore, Md.
- Sacco**—fertilizer, plant food, fertilizer spreader and seeder—Smith Agricultural Chemical Co., Columbus, Ohio.
- Sanahide**—mange lotion—Schoemann and Mayer, Inc., New York, N. Y.
- Sanosseed**—seed disinfectant—Ansbacher-Siegle Corp., Brooklyn, N. Y.
- Scalecide**—dormant spray—B. G. Pratt Co., New York, N. Y.
- Scram**—dog repellent—Calif. Spray Chem. Corp., Elizabeth, N. J.
- Screen-Glass**—plastic covered wire cloth—Flex-O-Glass Mfg. Co., Chicago, Ill.
- Seal Brand Packet**—seed packets—The Disbrow Mfg. Co., Newark, N. J.
- "Sealed-Brooks"**—bag seals—E. J. Brooks Co., Newark, N. J.
- "Seed Worth Planting is Worth Treating"**—DuBay Products—Bayer-Semesan Co., Inc., Wilmington, Del.
- Seedburo Quality**—grain, seed and flour grading equipment—Seedburo Equipment Co., Chicago, Ill.
- Semesan, Jr.**—seed disinfectant—Bayer-Semesan Co., Inc., Wilmington, Del.
- Semesan Bel**—seed disinfectant—Bayer-Semesan Co., Inc., Wilmington, Del.
- Shadowgraph**—scale—Exact Weight Scale Co., Columbus, Ohio
- Sho-Gro**—seed germinators—Seedburo Equipment Co., Chicago, Ill.
- Shuredry**—waterproof canvas tarpaulins and covers—Fulton Bag & Cotton Mills, Atlanta, Ga.
- Silver Prince**—portable sprayer—F. E. Myers & Bro. Co., Ashland, Ohio.
- Silver Seal**—aluminum paint for greenhouse use—Hammond Paint & Chem. Co., Beacon, N. Y.
- Slug Shot**—insecticide in dust form—Hammond Paint & Chemical Co., Beacon, N. Y.
- Snarol**—snail killer—The A. S. Boyle Co., Jersey City, N. J.
- "Soil-Flow"**—garden tools—Gardex, Inc., Michigan City, Ind.
- Sorbex**—moss peat—Atkins & Durbrow, Inc., New York, N. Y.
- Spear**—envelopes—Heinrich Envelope Co., Minneapolis, Minn.
- Speedline**—garden tools—Union Fork & Hoe Co., Columbus, Ohio.
- Spergon**—treatment for seed—U. S. Rubber Co., Naugatuck Chem. Div., New York, N. Y.
- Spix**—dog food—Spratt's Patent, Ltd., Newark, N. J.
- Spor-Go**—copper mildew spray powder—Mechling Bros. Chemicals, Philadelphia, Pa.
- Spratt's**—dog food and supplies—Spratt's Patent, Ltd., Newark, N. J.
- Spraycide**—guaranteed household insecticide—Agricultural Laboratories, Inc., Columbus, Ohio
- Stabilized Rotenone Dust**—insecticide—Hammond Paint & Chemical Co., Beacon, N. Y.
- Stand-Bilt**—jar fount—Cyclone Mfg. Co., Urbana, Ind.
- Stanley's**—crow repellent—Cedar Hill Formulae Co., New Britain, Conn.
- Stauffer**—sulphur products—Stauffer Chemical Co., New York, N. Y.
- Stim-U-Plant**—"The modern Plant Food Tablet"—Agricultural Laboratories, Inc., Columbus, Ohio.
- "Stoffel Seals—they Seal and Sell"**—seals—Stoffel Seals Co., Chicago, Ill.
- Stop That Rot**—wood preserver—C-A-Wood Preserver Co., St. Louis, Mo.
- Storm King**—greenhouse white paint and white glazing compound—Hammond Paint & Chemical Co., Beacon, N. Y.
- Styron**—Dow Chemical Co., Midland, Mich.
- Sulfocide**—fungicide—B. G. Pratt Co., New York, N. Y.
- Sulrote**—dusting mixture, insecticide and fungicide—Mechling Bros. Chemicals, Philadelphia, Pa.
- Summers**—fertilizer—Summers Fertilizer Co., Baltimore, Md.
- Sunray**—plant cover—Paxton Products Co., Riverside, Calif.
- Superbilt**—sprayers and dusters—Dobbins Mfg. Co., Elkhart, Ind.
- Super-Copper**—fungicide—Hammond Paint & Chem. Co., Beacon, N. Y.

- Superior**—grain and seed cleaning machinery—Superior Separator Co., Minneapolis, Minn.
- Superior Scale Oil-spray**—Mechling Bros. Chemicals, Philadelphia, Pa.
- Sure Shot**—concentrated pyrethrum soap spray—Hammond Paint & Chemical Co., Beacon, N. Y.
- Tetrafum**—rat exterminator—Douglas Chem. & Supply Co., Kansas City, Mo.
- "The Little Man With The Big Flower"**—plant foods—Wm. T. Thompson Co., Los Angeles, Calif.
- "Their Last Meal"**—repellent—Nott Mfg. Co., Mt. Vernon, N. Y.
- "There is no substitute for Exact Weight"**—scales—Exact Weight Scale Co., Columbus, Ohio
- "They're Just Right Strong But Light"**—farm and garden tools—Union Fork & Hoe Co., Columbus, Ohio.
- Thomas**—floor trucks—Thomas Truck & Caster Co., Keokuk, Iowa.
- Thompson's**—Vitamin B<sub>1</sub> pellets—Wm. T. Thompson Co., Los Angeles, Calif.
- Thompson's Vitamizer**—sprayer—Wm. T. Thompson Co., Los Angeles, Calif.
- Thrip Juice**—insecticide—Hammond Paint & Chemical Co., Beacon, N. Y.
- Ti-o-ga**—dog food—Tioga Mills, Waverly, N. Y.
- Torsion**—laboratory scales—Torsion Balance Co., New York, N. Y.
- Train-etts**—weathered trellis netting—Germain Seed & Plant Co., Los Angeles, Calif.
- Transplantone**—root stimulant—American Chemical Paint Co., Ambler, Pa.
- Transplant Tablet**—root stimulant—Wm. T. Thompson Co., Los Angeles, Calif.
- "Treat Seed Every Year—It Pays"**—Du-  
Bay products—Bayer-Semesan Co., Inc., Wilmington, Del.
- Tree Band Paste**—tree protector—Hammond Paint & Chemical Co., Beacon, N. Y.
- Tree Tanglefoot**—insect control—The Tanglefoot Co., Grand Rapids, Mich.
- Triad**—insecticide—Hammond Paint & Chem. Co., Beacon, N. Y.
- Tri-ogen**—insecticide—Rose Mfg. Co., Beacon, N. Y.
- Troemner**—scales—Henry Troemner, Philadelphia, Pa.
- Try-Sax**—cotton seed bags with probe stripes—Bemis Bro. Bag Co., St. Louis, Mo.
- Twist-Ems**—plant ties—Germain Seed & Plant Co., Los Angeles, Calif.
- Two-In-One Envelope Bags**—sample mailing bags—Bemis Bro. Bag Co., St. Louis, Mo.
- Uni-Culture**—inoculant—Kalo Co., Quincy, Ill.
- Union**—farm and garden tools—Union Fork & Hoe Co., Columbus, Ohio
- Union Special**—bag closing machine—Union Special Machine Co., Chicago, Ill.
- Universal**—combination huller, scarifier, cleaner and grader—American Grain Separator Co., Minneapolis, Minn.
- Urbana Culture**—legume inoculator—Urbana Laboratories, Urbana, Ill.
- Urbana Humus**—legume inoculator—Urbana Laboratories, Urbana, Ill.
- Vac-a-Way**—seed and grain cleaner and grader—J. W. Hance Mfg. Co., Westerville, Ohio.
- Vacuum Cleaned Premier**—Swedish Peat Moss—Premier Peat Moss Corp., New York, N. Y.
- Veget-Aid**—plant food—Mechling Bros. Chemicals, Philadelphia, Pa.
- Vigoro**—plant food—Swift & Co., Chicago, Ill.
- Visinet**—bags for fruit and vegetables—Bemis Bro. Bag Co., St. Louis, Mo.
- Vitality**—insecticides—The Chas. H. Lilly Co., Seattle, Wash.
- Vitamist**—"Vitamize As You Sprinkle"—Burgess Seed & Plant Co., Galesburg, Mich.
- Warp's Window Fabric**—waxed cloth—Flex-O-Glass Mfg. Co., Chicago, Ill.
- Wedo**—fertilizer and plant food—Smith Agricultural Chemical Co., Columbus, Ohio
- Weed Killer**—weed exterminator—Hammond Paint & Chem. Co., Beacon, N. Y.
- Weed-Knell**—instant weed puller—Weed Knell, Aurora, Ill.
- Whale Oil Soap**—insecticide—Hammond Paint & Chem. Co., Beacon, N. Y.
- Window-Fabric**—waxed cloth—Flex-O-Glass Mfg. Co., Chicago, Ill.
- Winner Fanning Mills**—grain cleaner—American Grain Separator Co., Minneapolis, Minn.
- Wizard**—sheep and cow manure—Pulverized Manure Co., Chicago, Ill.
- Woodco**—lawn food—F. H. Woodruff & Sons, Inc., Milford, Conn.
- Wyr-O-Glass**—Wire Base Glass Substitute—Flex-O-Glass Mfg. Co., Chicago, Ill.
- XX Superior Brand**—raffia—McHutchinson & Co., New York, N. Y.
- XXX Superior Brand**—raffia—McHutchinson & Co., New York, N. Y.
- Zotox**—crab grass killer and chick weed killer—Garden Products Co., St. Louis, Mo.

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### ALSIKE CLOVER SEED PRODUCTION

Compiled by Bureau of Agricultural Economics, USDA

STATE	Acreage Harvested			Yield Per Acre			Production		
	Average 1930-39	1941	1942	Average 1930-39	1941	1942	Average 1930-39	1941	1942
		Acres			Bushels			Bushels	
New York	1,330	1,500	1,000	1.68	1.80	1.80	2,250	2,700	1,800
Ohio	43,400	21,000	14,100	1.62	1.85	2.05	66,300	39,000	29,000
Indiana	9,200	6,000	3,000	1.32	1.20	1.10	11,160	7,200	3,300
Illinois	14,450	9,000	8,000	1.46	1.40	2.00	20,380	12,600	16,000
Michigan	15,800	10,000	5,000	1.66	2.10	2.00	25,640	21,000	10,000
Wisconsin	14,590	16,000	4,000	1.81	2.50	2.50	27,440	40,000	10,000
Minnesota	29,390	23,000	22,000	2.69	2.10	2.40	80,600	48,000	53,000
Iowa	4,920	3,200	5,400	1.50	1.20	1.10	7,670	3,800	5,900
Missouri	1,400	1,800	1,400	1.36	1.30	1.20	1,920	2,300	1,700
Idaho	3,300	5,200	5,200	5.58	5.00	5.00	17,920	26,000	26,000
Oregon	13,070	20,000	18,000	3.97	5.50	5.50	53,000	110,000	99,000
United States	150,850	116,700	87,100	2.12	2.68	2.94	314,280	312,600	255,700

### VELVETBEAN PRODUCTION<sup>1</sup>

STATE	Total Acreage			Yield Per Acre			Production		
	Average 1930-39	1941	1942	Average 1930-39	1941	1942	Average 1930-39	1941	1942
		Thous. Acres			Pounds			Thous. Tons	
South Carolina	80	85	82	997	1,100	1,075	40	47	44
Georgia	1,071	1,188	1,009	823	850	810	442	505	409
Florida	189	218	197	598	600	540	56	65	53
Alabama	437	474	414	779	950	800	171	225	166
Mississippi	77	103	93	1,030	940	980	39	48	46
Louisiana	56	97	89	779	800	710	22	39	32
United States	1,910	2,165	1,884	806.0	858.2	796.2	771	929	750

<sup>1</sup> The figures refer to the yield and entire production of velvetbeans in the hull, whether grazed or harvested otherwise.

### LESPEDEZA SEED PRODUCTION

Compiled by Bureau of Agricultural Economics, USDA

STATE	Acreage Harvested			Yield Per Acre			Production		
	Average 1930-39	1941	1942	Average 1930-39	1941	1942	Average 1930-39	1941	1942
		Acres			Pounds			Thous. Pounds	
Indiana	28,000	28,000	25,000	230	230	190	6,400	6,400	4,800
Illinois	121,000	24,000	12,000	1175	190	150	13,900	4,600	1,800
Missouri	167,333	248,000	180,000	1159	230	165	111,903	57,000	29,700
Kansas		46,000	48,000		200	190		9,200	9,100
Virginia	117,889	27,000	34,000	1228	250	270	13,757	6,800	9,200
North Carolina	92,300	150,000	185,000	159	190	210	15,377	28,500	38,800
South Carolina		30,000	42,000		185	215		5,600	9,000
Georgia		27,000	40,000		200	210		5,400	8,400
Kentucky	83,100	82,000	92,000	174	215	265	16,540	17,600	24,400
Tennessee	89,200	114,000	122,000	163	230	250	16,790	26,200	30,500
Alabama		15,000	16,000		180	200		2,700	3,200
Mississippi	3,590	20,000	18,000	104	150	185	387	3,000	3,300
Arkansas		18,000	22,000		240	275		4,300	6,000
Louisiana	3,710	9,900	11,600	106	140	130	396	1,400	1,500
United States	360,620	838,900	847,600	163.8	213.0	212.0	65,786	178,700	179,700

<sup>1</sup> Short-time average.

### SWEETCLOVER SEED PRODUCTION

Compiled by Bureau of Agricultural Economics, USDA

STATE	Acreage Harvested			Yield Per Acre			Production		
	Average 1930-39	1941	1942	Average 1930-39	1941	1942	Average 1930-39	1941	1942
		Acres			Bushels			Bushels	
Ohio	9,600	8,000	9,000	2.31	2.50	2.70	20,940	20,000	24,000
Indiana	5,040	5,900	5,900	2.26	2.80	1.90	10,480	16,500	11,200
Illinois	21,500	33,000	17,000	2.17	2.00	1.90	45,800	66,000	32,000
Michigan		4,000	5,000		2.60	3.30		10,400	16,500
Wisconsin	3,230	3,300	2,600	3.14	3.30	3.20	10,230	10,900	8,300
Minnesota	124,200	147,000	88,000	3.75	2.10	3.60	413,100	309,000	317,000
Iowa	22,000	29,000	14,800	2.58	2.05	2.10	49,320	59,000	31,000
Missouri	5,600	10,600	7,000	2.24	2.40	2.50	13,170	25,000	17,500
North Dakota	35,900	15,000	15,000	2.68	2.90	2.30	95,060	44,000	34,000
South Dakota	28,220	16,900	10,000	2.36	2.20	2.80	68,480	37,000	28,000
Nebraska	19,800	20,000	21,000	2.53	1.90	2.50	50,540	38,000	52,000
Kansas	20,800	42,000	36,000	2.57	2.60	2.50	54,980	109,000	90,000
Montana	4,920	3,000	5,400	2.42	4.00	4.00	12,470	12,000	22,000
Wyoming	3,210	1,300	3,000	3.36	3.00	3.10	10,700	3,900	9,300
Colorado	5,100	6,500	9,100	4.02	4.00	3.50	20,500	26,000	32,000
United States	313,020	345,500	248,800	2.96	2.28	2.91	887,170	786,700	724,800

**SOYBEAN ACREAGE (for all purposes)**  
*Compiled by Bureau of Agricultural Economics, USDA*

STATE	Grown Alone			Interplanted			Equivalent Solid <sup>1</sup>		
	Average 1930-39	1941	1942	Average 1930-39	1941	1942	Average 1930-39	1941	1942
					<i>Thous. Acres</i>				
New York	6	17	34				6	17	34
New Jersey	11	37	60				11	37	60
Pennsylvania	33	77	108				33	77	108
Ohio	318	923	1,440				318	923	1,440
Indiana	733	1,234	1,728				733	1,234	1,728
Illinois	1,681	2,813	3,940				1,681	2,813	3,940
Michigan	43	149	274				43	149	274
Wisconsin	124	168	160				124	168	160
Minnesota	289	270	413				289	270	413
Iowa	636	1,288	2,202				636	1,288	2,202
Missouri	464	580	700	44	100	140	486	630	770
South Dakota		8	19					8	19
Nebraska	5	32	55				5	32	55
Kansas	41	83	290				41	83	290
Delaware	33	53	66				33	53	66
Maryland	42	71	100				42	71	100
Virginia	110	140	196	51	86	87	136	183	240
West Virginia	43	57	40				43	57	40
North Carolina	250	371	434	314	414	352	407	578	610
South Carolina	24	48	48	60	97	87	54	96	92
Georgia	68	131	106	70	90	60	103	176	136
Kentucky	120	198	224	14	22	28	127	209	238
Tennessee	162	175	224	142	288	292	233	319	370
Alabama	194	350	298	35	35	30	212	368	313
Mississippi	196	455	500	275	376	353	343	643	676
Arkansas	146	236	330	168	425	400	230	448	530
Louisiana	46	149	155	309	550	517	200	424	413
Oklahoma	16	16	32	3	3	3	17	18	34
Texas	227	17	46	28	4	7	231	19	50
United States	5,622	10,146	14,222	1,491	2,490	2,356	6,376	11,391	15,401

<sup>1</sup> Acres grown alone plus approximately one-half the interplanted acres.  
<sup>2</sup> Short-time average.

**SOYBEANS (for beans)**

STATE	Acreage Harvested <sup>1</sup>			Yield Per Acre			Production		
	Average 1930-39	1941	1942	Average 1930-39	1941	1942	Average 1930-39	1941	1942
		<i>Thous. Acres</i>			<i>Bushels</i>			<i>Thous. Bush.</i>	
New York	24	12	24	214.5	15.0	16.0	255	180	384
New Jersey		9	23		13.0	18.0		117	414
Pennsylvania	25	15	35	216.2	15.0	17.0	278	225	595
Ohio	139	674	1,253	18.0	19.5	23.0	2,748	13,143	28,819
Indiana	303	815	1,417	16.6	17.0	21.0	5,264	13,855	29,757
Illinois	978	2,338	3,514	19.2	21.0	21.0	19,710	49,098	73,794
Michigan	16	100	220	13.2	14.0	17.0	236	1,400	3,740
Wisconsin	4	37	83	12.5	15.0	13.0	48	555	1,079
Minnesota	211	80	273	214.5	15.0	13.0	2168	1,200	3,549
Iowa	214	942	1,872	16.8	17.0	21.0	3,804	16,014	39,312
Missouri	107	187	500	9.0	11.5	15.0	926	2,150	7,500
South Dakota		3	14		12.0	15.0		36	210
Nebraska		20	40		11.0	14.0		220	560
Kansas	8	47	212	7.4	12.0	12.0	62	564	2,544
Delaware	18	30	42	12.8	11.5	16.0	230	345	672
Maryland	8	20	43	12.7	12.0	15.5	101	240	666
Virginia	27	51	115	12.2	12.5	15.5	335	638	1,782
West Virginia	1	2	2	11.6	13.0	12.5	16	26	25
North Carolina	133	176	300	11.3	10.0	13.0	1,507	1,760	3,900
South Carolina	8	12	12	6.5	7.5	8.0	53	90	96
Georgia	11	16	12	5.6	6.8	7.2	60	109	86
Kentucky	12	42	82	10.8	13.5	13.0	128	567	1,066
Tennessee	20	20	75	7.4	9.0	12.0	147	180	900
Alabama	10	24	38	5.8	6.0	6.0	57	144	228
Mississippi	26	71	203	8.2	10.5	14.0	215	746	2,842
Arkansas	32	116	239	10.5	15.0	15.0	363	1,740	3,585
Louisiana	12	17	85	11.8	11.5	13.5	148	196	1,148
Oklahoma	3	2	9	6.8	8.0	9.0	20	16	81
Texas	22	3	25	28.0	11.0	9.0	218	33	225
United States	2,103	5,881	10,762	16.1	18.0	19.5	36,385	105,587	209,559

<sup>1</sup> Equivalent solid acreage. (Acreage grown alone, with an allowance for acreage grown with other crops.)  
<sup>2</sup> Short-time average.

**HOPS PRODUCTION**

STATE	Acreage Harvested			Yield Per Acre			Production <sup>1</sup>		
	Average 1930-39	1941	1942	Average 1930-39	1941	1942	Average 1930-39	1941	1942
		<i>Acres</i>			<i>Pounds</i>			<i>Thous Pounds</i>	
Washington	4,350	7,200	7,600	1,771	1,850	1,551	7,767	13,320	11,788
Oregon	19,540	20,000	19,300	935	840	680	18,188	16,800	13,124
California	5,830	7,600	7,800	1,505	1,350	1,280	8,701	10,260	9,984
United States	29,720	34,800	34,700	1,166	1,160	1,006	34,655	40,380	34,896

<sup>1</sup> For some States in certain years, production includes some quantities not available for marketing because of economic conditions and the marketing agreement allotments.  
<sup>2</sup> Excludes approximately 400 acres not harvested because of rain and wind damage.

**ALFALFA SEED PRODUCTION**  
Compiled by Bureau of Agricultural Economics, USDA

STATE	Acreage Harvested			Yield Per Acre			Production		
	Average 1930-39	1941	1942	Average 1930-39	1941	1942	Average 1930-39	1941	1942
	Acres			Bushels			Bushels		
Ohio	15,000	29,000	9,000	1.16	.90	.75	16,790	26,000	6,800
Indiana	6,450	16,800	2,000	.94	.85	.85	5,800	14,300	1,700
Michigan	64,400	84,000	38,000	1.28	.85	.75	69,020	71,000	28,000
Wisconsin	28,700	28,000	9,000	1.07	1.10	.80	30,820	31,000	7,200
Minnesota	68,530	72,000	48,000	1.37	.80	.90	92,680	58,000	43,000
Iowa	10,230	24,000	7,900	1.40	.90	1.00	13,470	22,000	7,900
North Dakota	16,290	15,000	9,000	.91	1.00	.80	15,120	15,000	7,200
South Dakota	29,370	16,000	18,400	1.00	1.50	1.10	30,200	24,000	20,000
Nebraska	56,900	76,000	65,000	1.38	1.20	1.25	77,740	91,000	81,000
Kansas	70,200	125,000	112,000	1.74	1.20	1.20	122,320	150,000	134,000
Oklahoma	43,200	85,000	76,000	2.20	1.40	1.75	89,150	119,000	133,000
Texas	3,920	9,000	8,000	2.78	1.80	4.00	11,170	16,200	32,000
Montana	34,200	67,000	74,000	2.00	1.75	1.30	72,580	117,000	96,000
Idaho	46,600	30,000	15,000	2.56	1.45	1.70	115,030	44,000	26,000
Wyoming	16,050	22,000	22,000	2.12	1.90	1.60	34,570	42,000	35,000
Colorado	22,700	9,500	16,200	2.41	1.40	1.60	55,400	13,300	26,000
New Mexico	4,260	5,300	8,500	3.41	1.60	3.00	13,550	8,500	26,000
Arizona	23,200	34,000	36,000	4.68	2.50	4.00	103,400	85,000	144,000
Utah	32,700	30,000	27,000	1.80	1.50	1.50	60,560	45,000	40,000
Washington		3,000	3,500		2.00	3.50		6,000	12,200
Oregon	5,470	6,000	5,000	2.63	1.50	1.50	14,200	9,000	7,500
California	16,650	17,600	15,000	3.36	2.40	4.00	56,110	42,000	60,000
United States	616,180	804,200	624,500	1.82	1.30	1.56	1,101,310	1,049,300	974,500

**TIMOTHY SEED PRODUCTION**  
Compiled by Bureau of Agricultural Economics, USDA

STATE	Acreage Harvested			Yield Per Acre			Production		
	Average 1930-39	1941	1942	Average 1930-39	1941	1942	Average 1930-39	1941	1942
	Acres			Bushels			Bushels		
Pennsylvania	4,890	4,500	5,600	2.82	2.65	2.95	13,900	11,900	16,500
Ohio	35,400	43,000	53,000	3.19	3.25	3.35	120,070	140,000	178,000
Indiana	13,460	13,800	13,800	2.98	3.00	3.00	42,850	41,000	41,000
Illinois	60,280	40,000	34,000	2.52	2.80	2.80	162,260	112,000	95,000
Wisconsin	10,240	15,000	20,000	3.19	3.40	4.00	33,900	51,000	80,000
Minnesota	35,290	28,000	39,000	3.69	3.50	4.10	131,670	98,000	160,000
Iowa	242,900	183,000	210,000	3.62	3.75	4.10	971,210	686,000	861,000
Missouri	82,400	48,000	60,000	3.03	2.80	3.20	274,030	134,000	192,000
United States	487,110	375,300	435,400	3.34	3.39	3.73	1,755,280	1,273,900	1,623,500

**RED CLOVER SEED PRODUCTION**  
Compiled by Bureau of Agricultural Economics, USDA

STATE	Acreage Harvested			Yield Per Acre			Production		
	Average 1930-39	1941	1942	Average 1930-39	1941	1942	Average 1930-39	1941	1942
	Acres			Bushels			Bushels		
New York	6,770	13,000	9,600	1.26	1.20	1.00	8,460	15,600	9,600
Pennsylvania	19,500	31,000	13,000	.98	1.00	1.10	18,720	31,000	14,300
Ohio	117,100	225,000	169,000	.96	.95	.85	111,200	214,000	144,000
Indiana	167,000	244,000	134,000	.93	.90	.70	152,500	220,000	94,000
Illinois	178,700	180,000	209,000	.97	.80	.70	177,200	144,000	146,000
Michigan	82,400	140,000	77,000	1.05	1.10	.95	87,300	154,000	73,000
Wisconsin	58,600	185,000	120,000	1.19	1.10	.90	70,600	204,000	108,000
Minnesota	31,450	50,000	56,000	1.38	.90	1.00	43,520	45,000	56,000
Iowa	102,080	104,000	185,000	.79	.80	.80	86,620	83,000	148,000
Missouri	46,600	81,000	90,000	.97	1.00	1.10	46,930	81,000	99,000
Kansas	11,200	14,000	16,800	.80	.80	1.00	8,760	11,200	16,800
Maryland	20,150	29,000	14,000	1.30	.80	.80	23,630	23,000	11,200
Virginia	9,100	19,000	5,000	11.09	1.10	.80	10,370	21,000	4,000
Kentucky	29,200	18,000	18,200	1.47	1.30	1.65	13,300	23,000	30,000
Idaho	28,700	35,000	18,200	4.56	4.40	4.60	128,500	154,000	84,000
Washington	13,200	3,000	2,000	12.95	3.50	3.50	19,520	10,500	7,000
Oregon	19,390	11,700	12,000	2.36	3.00	3.10	45,900	35,000	37,000
United States	921,900	1,382,700	1,148,800	1.17	1.06	.94	1,056,870	1,469,300	1,081,900

<sup>1</sup> Short-time average.

<sup>2</sup> Includes a small percentage of alsike clover seed.

# TIMOTHY SEED EXPORTS FROM THE UNITED STATES, BY COUNTRIES OF DESTINATION 1929-1941

*Compiled from Foreign Commerce and Navigation of the United States.*

Country to which exported	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941 <sup>1</sup>
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Belgium.....	11,000	28,600	130,026	0	0	0	48,600	77,318	132,628	138,002	40,454	0	0
Canada.....	6,342,738	12,532,960	6,324,495	8,565,213	3,191,510	3,291,045	190,483	2,342,742	411,247	1,399,462	5,307,717	6,072,062	1,237,520
Denmark.....	273,930	165,772	331,375	38,599	0	0	18,500	0	0	0	0	0	0
France.....	24,449	7,516	197,542	45,563	1,228	0	201,113	98,586	177,129	175,570	154,120	270,764	0
Germany.....	219,356	345,519	496,620	210,799	35,088	0	173,258	0	82,475	0	1,732,902	0	0
Irish Free State..	111,042	58,091	25,856	37,257	22,440	0	35,945	108,272	168,919	233,881	170,383	114,894	0
Italy.....	2,210	44,200	2,210	1,134	0	0	4,400	2,200	0	0	17,600	2,200	0
Japan.....	15,184	20,244	27,514	37,887	15,000	6,046	9,981	0	9,000	37,943	0	0	0
Netherlands.....	65,193	88,994	166,321	51,599	65,036	0	171,780	90,468	169,932	327,151	230,679	75,313	0
New Zealand.....	294,017	191,356	191,138	218,693	259,238	114,215	472,076	184,321	296,437	233,240	275,365	312,120	20,484
Newfoundland & Labrador.	31,700	44,200	47,008	34,650	48,193	42,840	19,040	25,225	55,525	48,683	54,470	84,526	36,147
Norway.....	241,648	269,917	0	0	0	0	0	0	0	0	0	0	0
Switzerland.....	0	7,500	2,646	60,500	0	11,008	94,785	59,730	0	15,676	82,971	37,775	0
United Kingdom	1,522,323	1,985,296	2,533,593	1,581,728	1,353,708	233,066	1,973,724	1,013,444	1,727,538	1,833,897	2,338,565	2,608,037	796,337
Other Countries..	40,232	238,406	0	7,040	17,806	0	11,031	300	940	48,044	1,110	6,979	2,500
<b>Total.....</b>	<b>9,195,022</b>	<b>15,828,571</b>	<b>10,476,344</b>	<b>10,890,662</b>	<b>5,009,247</b>	<b>3,698,220</b>	<b>3,424,716</b>	<b>4,002,606</b>	<b>3,231,770</b>	<b>4,491,549</b>	<b>10,406,336</b>	<b>9,584,470</b>	<b>2,092,988</b>

<sup>1</sup> Three months ended March. <sup>2</sup> 32,000 pounds to Hungary. <sup>3</sup> 15,266 pounds to Austria.

# RED CLOVER SEED EXPORTS FROM THE UNITED STATES, BY COUNTRIES OF DESTINATION, 1929-1941

*Compiled from Foreign Commerce and Navigation of the United States.*

Country to which exported	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941 <sup>1</sup>
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Australia.....	0	0	0	0	0	0	0	0	0	0	0	11,480	17,920
Belgium.....	16,309	0	0	0	234,325	172,633	0	2,200	0	0	0	0	0
Canada.....	58,051	170,688	488,656	87,333	805	121,229	6,232	9,341	79,475	0	881	10,575	789
Denmark.....	44,331	11,338	0	0	11,000	16,314	6,785	6,770	4,521	0	0	0	0
France.....	8,860	21,701	0	0	976,450	235,684	11,000	0	33,762	0	0	0	0
Germany.....	117,005	206,678	49,103	76,172	230,330	120,672	20,537	10,975	15,458	0	0	0	0
Netherlands.....	63,628	51,609	0	0	2,500	0	20,780	22,380	85,207	33,000	1,000	0	0
New Zealand.....	0	114	1,142	20,340	11,200	175,682	6,990	2,427	0	11,160	1,120	0	0
United Kingdom	203,133	55,150	116,065	100,545	1,420,162	195,514	184,293	34,986	232,088	135,967	220,488	681,079	124,426
Other Countries..	12,218	18,194	15,338	13,509	138,666	53,892	54,820	36,192	12,678	2,645	760	23,358	1,325
<b>Total.....</b>	<b>523,535</b>	<b>535,472</b>	<b>670,304</b>	<b>297,899</b>	<b>3,025,438</b>	<b>1,091,620</b>	<b>311,437</b>	<b>125,271</b>	<b>463,189</b>	<b>182,772</b>	<b>224,249</b>	<b>726,492</b>	<b>144,460</b>

<sup>1</sup> Three months ended March. <sup>2</sup> 11,000 pounds to Poland and Danzig. <sup>3</sup> 17,603 pounds to Japan. <sup>4</sup> 83,616 pounds to Japan; 22,000 pounds to Austria, and 33,000 pounds to Italy. <sup>5</sup> 51,823 pounds to Japan. <sup>6</sup> 32,050 pounds to Japan.

# WHOLESALE SELLING PRICES FOR BEST GRADES OF FIELD SEEDS AT IMPORTANT MARKETS, 1930-1942

*Compiled from office records, by the Division of Agricultural Statistics, Bureau of Agricultural Economics, U. S. Department of Agriculture.*

(Per 100 pounds, except for last 8 kinds where prices per bushel are given.)

Kind of Seed	Market	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942
		Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Alfalfa.....	Kansas City.....	24.80	22.55	13.65	13.60	13.00	19.80	15.20	29.60	34.00	24.75	22.75	19.00	33.00
Red clover.....	Chicago.....	21.35	25.05	16.35	11.40	14.75	23.65	20.90	38.25	40.00	18.00	18.70	14.00	22.50
Ailsie clover.....	Chicago.....	19.90	23.50	15.05	11.95	16.25	28.65	23.30	25.95	33.00	16.25	23.00	14.50	22.50
Sweetclover.....	Minneapolis.....	8.00	9.20	5.50	4.50	6.50	10.40	6.25	17.00	11.35	7.75	6.90	6.60	13.00
White clover.....	Chicago.....	27.50	39.05	40.50	27.85	30.50	27.50	27.10	30.10	35.00	42.50	62.50	72.00	73.00
Crimson clover.....	Baltimore.....	11.50	9.00	6.75	9.20	9.20	12.05	7.55	7.80	10.35	12.70	11.60	10.85	11.50
Lespedeza.....	Louisville.....	14.35	14.70	8.10	7.50	5.00	10.50	5.65	15.60	5.45	3.50	5.55	5.40	7.10
Timothy.....	Chicago.....	8.05	10.55	4.30	3.25	8.50	22.80	3.65	6.95	4.00	4.00	6.35	5.25	9.00
Redtop.....	Chicago.....	16.50	24.20	8.70	5.30	8.40	13.95	9.35	21.50	11.50	11.15	11.35	10.25	11.50
Kentucky bluegrass.....	Kansas City.....	20.00	35.35	13.45	8.35	13.40	23.20	12.30	18.35	10.65	10.50	19.50	18.50	18.50
Orchard grass.....	Louisville.....	17.15	16.05	7.35	7.30	9.70	16.20	12.50	18.30	16.15	17.50	16.90	26.00	32.50
Meadow fescue.....	Kansas City.....	10.00	10.75	5.50	4.15	7.05	18.00	7.00	10.50	8.85	12.00	14.00	16.00	.....
Chewings fescue.....	Baltimore.....	27.00	36.00	22.65	11.75	19.35	55.45	41.90	31.80	39.75	60.00	51.00	32.90	35.00
Sheep's fescue.....	Baltimore.....	22.00	27.50	14.90	10.95	14.85	52.45	30.25	29.00	26.10	35.00	45.00	45.00	.....
German mixed bent.....	Baltimore.....	55.00	85.00	71.60	62.00	72.15	85.90	52.70	45.00	58.10	55.00	59.00	.....	.....
Bermuda grass.....	Baltimore.....	33.80	31.35	16.25	12.10	10.55	20.40	23.45	26.75	22.90	24.60	23.70	19.70	38.00
Bromus inermis.....	Minneapolis.....	18.50	20.00	14.00	8.00	16.20	26.00	13.45	26.00	19.45	17.05	16.60	19.00	19.00
Italian ryegrass.....	Baltimore.....	9.25	9.50	8.85	7.10	.....	.....	.....	7.10	7.50	7.80	.....	.....	.....
Perennial ryegrass.....	Baltimore.....	8.75	10.00	8.85	7.10	.....	.....	.....	11.30	9.00	11.00	11.00	12.40	14.50
Common ryegrass.....	Baltimore.....	.....	5.00	3.45	3.70	6.70	5.20	4.50	7.10	7.55	6.25	6.00	5.00	7.75
German millet.....	Kansas City.....	3.45	3.70	1.80	1.55	3.35	7.00	2.70	4.90	3.25	1.85	2.60	3.25	3.25
Siberian millet.....	Minneapolis.....	3.10	3.40	2.60	2.40	3.65	6.10	2.75	3.40	2.35	2.50	3.75	4.25	4.00
Hungarian millet.....	Chicago.....	4.10	3.50	2.25	1.95	2.90	6.05	3.00	5.00	3.50	3.15	4.50	3.50	4.50
Japanese millet.....	Chicago.....	4.20	3.70	3.20	2.90	3.00	6.00	2.50	3.25	3.00	3.00	5.45	5.00	4.00
Broomcorn millet.....	Minneapolis.....	3.00	2.40	1.95	1.80	2.20	4.30	2.25	2.75	2.30	2.50	2.15	1.65	2.15
Amber sorgo.....	Kansas City.....	3.45	2.80	1.20	1.15	1.60	5.65	2.70	4.00	1.85	1.70	2.75	2.65	2.25
Orange sorgo.....	Kansas City.....	3.30	2.80	1.25	1.20	2.10	5.40	2.70	3.95	1.80	1.60	2.75	2.70	2.40
Sudan grass.....	Kansas City.....	5.40	7.40	1.75	2.05	5.50	12.30	3.15	4.60	3.25	3.55	3.50	3.85	3.00
Rape.....	Baltimore.....	5.70	4.30	4.15	3.75	4.30	3.60	4.00	5.95	6.55	6.35	7.30	16.50	16.00
Hairy vetch.....	Baltimore.....	9.00	8.45	7.50	7.00	8.75	11.50	9.75	8.85	8.50	8.20	10.80	10.00	10.75
Common vetch.....	Baltimore.....	4.80	4.50	4.00	3.50	5.00	3.50	3.75	5.00	4.65	5.00	6.75	6.00	7.50
Canada field peas.....	Minneapolis.....	5.25	3.85	4.80	4.50	3.85	3.85	4.00	5.15	5.35	4.85	5.85	5.20	5.50
Kafir.....	Kansas City.....	2.05	1.75	1.15	1.10	1.40	3.20	2.00	3.15	1.75	1.55	2.30	2.30	2.75
Cowpeas.....	Bu. Baltimore.....	3.30	2.70	1.05	.95	2.50	2.50	2.30	3.00	2.20	2.40	1.90	2.25	2.85
Soybeans.....	Louisville.....	2.25	2.15	.75	.95	1.45	1.60	1.35	2.25	1.35	1.15	1.50	1.50	2.70
Seed corn.....	Chicago.....	1.75	1.65	1.20	.85	1.00	1.75	2.95	2.50	1.50	1.25	1.40	1.35	1.60
Seed wheat.....	Minneapolis.....	1.65	1.15	1.00	.90	1.25	1.50	1.65	2.00	1.35	1.25	1.40	1.30	1.70
Seed oats.....	Minneapolis.....	.80	.65	.55	.45	.65	.90	.70	.90	.75	.65	.75	.75	.90
Seed barley.....	Minneapolis.....	.80	.75	.75	.65	.95	1.45	1.00	1.70	1.15	.90	.90	.90	1.25
Seed rye.....	Minneapolis.....	1.50	1.05	.90	.80	1.35	1.50	1.25	1.45	1.30	1.10	1.25	1.25	1.40
Seed buckwheat.....	Minneapolis.....	1.50	1.30	1.20	.95	1.20	1.15	1.85	1.75	1.35	1.10	1.10	1.00	1.20

# RETAIL SEED PRICES, SPRING OF 1942, BY STATES

(In Dollars per 100 Pounds)

State or States	Com- mon Alfalfa	Clover			Kor. Lespe- deza	Timothy	Redtop	Ky. Blue- grass	Orchard Grass	Com- mon Rye- grass	Smooth Brome- grass	Sudan Grass	Amber Sorgo ("Cane")	Ger- man Millet
		Red	Alsike	Sweet										
New England	\$40.55	\$28.30	\$28.10	\$15.60	\$95.45	\$11.60	\$16.95	\$28.75	\$39.65	\$12.40	\$23.50	\$6.55	.....	\$6.75
New York	39.05	26.45	25.90	14.55	98.60	10.70	16.90	27.20	36.65	10.40	25.60	6.20	\$5.40	6.10
Pennsylvania	38.80	26.10	25.45	14.05	96.60	10.75	16.50	25.85	36.45	10.65	24.50	5.85	5.55	5.95
New Jersey	40.05	27.10	26.15	14.55	93.20	11.00	16.10	25.85	35.20	10.15	.....	5.75	4.80	5.40
Maryland	39.20	26.25	25.70	13.95	89.20	10.60	14.75	24.00	34.40	12.15	.....	5.10	5.05	5.40
Virginia	37.00	25.75	24.80	14.35	88.05	10.50	13.90	23.50	32.45	10.05	.....	5.15	4.70	6.40
West Virginia	39.00	26.10	26.00	14.55	.....	10.80	15.55	26.05	34.45	.....	.....	5.65	.....	6.20
Southeastern	31.45	24.40	24.20	12.95	76.55	11.20	15.10	25.75	31.65	9.15	.....	5.95	3.90	8.10
Tennessee	34.40	24.85	24.80	12.80	85.60	10.80	12.95	24.20	35.00	9.75	.....	4.45	3.05	5.90
Kentucky	35.00	24.80	25.10	13.75	84.80	10.30	12.50	22.35	33.70	9.30	.....	5.00	4.70	7.00
Ohio	34.40	23.40	23.45	12.60	88.05	10.05	16.80	26.20	36.65	11.80	22.90	5.50	5.40	6.30
Indiana	37.20	23.60	24.60	13.95	91.90	10.45	15.40	26.10	36.20	10.50	21.70	5.10	5.40	5.15
Illinois	37.15	23.50	24.30	13.70	85.00	9.90	13.60	25.70	36.60	10.65	21.65	4.95	4.95	4.75
Iowa	36.50	24.95	25.10	14.00	86.25	9.15	15.15	25.80	34.25	10.70	21.50	4.80	4.50	4.65
Missouri	33.50	21.50	23.60	12.20	80.60	9.10	12.00	22.95	32.80	9.80	19.70	4.20	3.70	4.05
Michigan	38.80	23.80	24.40	14.40	89.05	11.05	17.40	27.10	38.55	12.40	23.30	5.35	5.55	5.40
Wisconsin	38.10	23.15	24.45	14.30	78.60	10.10	15.95	24.85	38.90	10.80	22.90	4.75	5.10	4.90
Minnesota	37.80	25.10	25.70	13.10	88.00	10.25	17.10	26.30	35.50	11.95	22.10	5.00	4.65	4.90
North Dakota	33.00	25.80	25.75	12.35	79.00	9.95	15.75	25.15	.....	14.40	19.00	4.60	4.00	4.55
South Dakota	35.70	25.80	26.05	11.95	86.50	10.15	15.90	26.00	.....	11.10	19.95	4.05	3.70	4.20
Nebraska	32.40	25.05	25.50	12.35	90.40	9.80	15.05	28.40	35.95	11.80	20.30	3.80	2.95	3.85
Kansas	30.00	22.15	24.80	10.70	81.95	9.40	14.35	25.50	34.50	10.60	18.95	3.60	2.75	3.60
Oklahoma	28.95	23.30	25.15	12.35	86.25	10.55	13.05	28.50	33.15	9.30	.....	2.85	2.15	3.05
Arkansas	31.40	27.40	28.60	15.20	82.10	11.40	13.95	28.40	34.30	10.05	.....	4.15	3.55	4.80
Texas	29.50	.....	.....	14.05	.....	10.45	.....	.....	.....	8.20	.....	2.85	2.20	2.90
New Mexico	30.10	.....	.....	14.60	.....	.....	.....	.....	32.50	.....	.....	3.70	2.95	3.55
Montana	32.60	24.30	25.90	12.90	87.20	11.40	15.90	28.30	37.50	11.50	21.15	5.50	4.20	4.50
Colorado	34.20	24.05	27.20	12.95	98.05	12.10	17.15	30.20	35.15	12.60	21.55	3.65	2.75	3.90
Idaho	37.70	23.95	25.20	16.40	92.10	12.20	20.25	31.30	40.60	13.70	22.35	8.90	.....	.....
Washington	39.50	25.30	25.60	17.60	95.70	12.10	20.00	34.45	39.70	9.60	23.25	6.90	.....	.....
Oregon	36.80	22.80	22.95	17.00	85.95	11.95	19.70	34.60	40.10	8.15	22.10	5.85	.....	.....
California	32.30	28.50	28.80	17.15	95.50	14.65	20.30	33.90	44.00	10.40	25.85	6.15	5.20	5.75
U. S. Average	36.10	24.45	24.90	13.45	88.35	10.20	14.80	26.20	35.60	9.90	21.75	4.25	3.15	4.50
Av. year ago	21.85	15.85	17.40	7.45	82.50	6.50	13.90	25.10	28.40	7.50	.....	4.50	3.00	3.95
5-year (1936-40) Av.	28.25	29.20	26.85	10.95	47.25	6.30	15.75	20.90	19.55	8.85	.....	4.60	3.25	4.05

(1) Prices based on reports of retail seed dealers to the Division of Agricultural Statistics, Bureau of Agricultural Economics.

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**“Black Leaf 40”**

# BLACK LEAF 40

## Has So Many Uses!

**For Flowers** Aphis (plant lice), leafhoppers, leaf miners, young sucking bugs, mealy bugs, lace bugs, most thrips . . . All these and similar insects can be controlled with Black Leaf 40. Full directions on the label. Spray early and keep the pests down.

**In the Orchard** Aphis, which can almost destroy an orchard crop, are readily controlled with Black Leaf 40. Likewise, leafhoppers and bud-moth. Black Leaf 40 is also useful in the codling moth program. Does not burn foliage and can be used readily with standard spray combinations.

**In the Poultry House** Black Leaf 40 is a great time-saver when delousing fowls. No handling necessary. Just spread a thin film on the roost with the “Cap-Brush” and the lice are killed as the fowls perch. Note: Directions on package describe special treatment needed for feather mite control.

**In the Vegetable Garden** Black Leaf 40 can be used either as a spray or in dusting vegetables. Kills both by contact and by fumes. Leaflets regarding dusting and garden spraying furnished upon request. Economical—“A little goes a long way.”

**For Live Stock** Black Leaf 40 is permitted by the U. S. Government in official dippings of sheep and cattle for scabies. Also an effective dip for lice and ticks on sheep and for lice on cattle. As a treatment for sheep stomach worms, it is effective when combined with copper sulphate in proper doses. Complete instructions furnished upon request, or see Black Leaf 40 labels and leaflets.

**To Keep Dogs Away** Dogs are a pest where evergreens, box planting and other hedges are available. Dogs do not like the odor of Black Leaf 40 and will avoid it. Spray where dogs are a nuisance.

Wherever you see an orchard, a flower garden, a vegetable garden, a flock of poultry or a flock of sheep, there is need for Black Leaf 40—the versatile product! Keep a supply of Black Leaf 40 on hand.

## Good Profits from BLACK LEAF 40

Black Leaf 40 is a profit-making line, primarily because it has a year-round sale. This insecticide never goes to the basement, to be set aside until springtime comes again. Displayed on the shelf, it sells for poultry use, to keep dogs away and the like. Most dealers handle Black Leaf 40 because of its unusual profit-making possibilities.

**TOBACCO BY-PRODUCTS & CHEMICAL CORPORATION, INCORPORATED · · LOUISVILLE, KENTUCKY**

### OTHER PROFIT-MAKING PRODUCTS

#### Black Leaf Worm Powder

Roundworm (Ascaridia Lineata) in chickens is controlled by feeding a little Black Leaf Worm Powder mixed with the mash. The product is inert until it reaches the intestine of the chicken, where a chemical reaction takes place. The nicotine is then released and acts upon the worms. Chickens are not upset by this “shockless” treatment.

#### Black Leaf Worm Pellets

Made of the same material as the Worm Powder, and used for individual treatment.

#### Nico-Fume Pressure Fumigator

For greenhouse work, the Pressure Fumigator is outstanding in effectiveness as a fumigating agent. Write for full details if you are not familiar with Nico-Fume.

#### Black Leaf 155

A special product, effective against the codling moth and certain other pests. Black Leaf 155 provides “non-wash” protection for the orchard.

#### Mash-Nic

Mash-Nic is a standardized product, designed to take the place of the old feeding tobacco used for the control of roundworm (Ascaridia Lineata) in chickens. When mixed with the feed, it gives outstanding results. Full information will be furnished upon request.

### WE ADVERTISE IT — YOU DISPLAY IT!

In over 4,000 publications, ads tell the story of Black Leaf 40. Many of these publications are running the year around. Included in the advertising campaign are practically every farm paper in the United States, most of the metropolitan dailies, garden publications, many trade papers and over 3,000 country weeklies. If you display Black Leaf 40, you tie in with this big national advertising effort.



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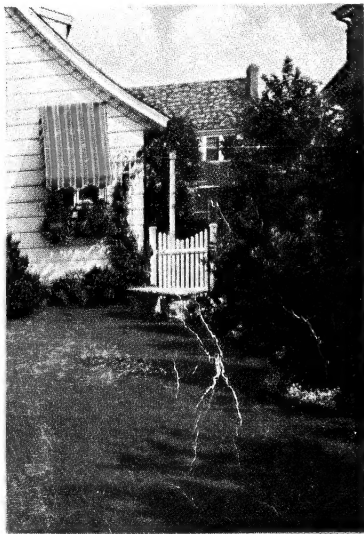
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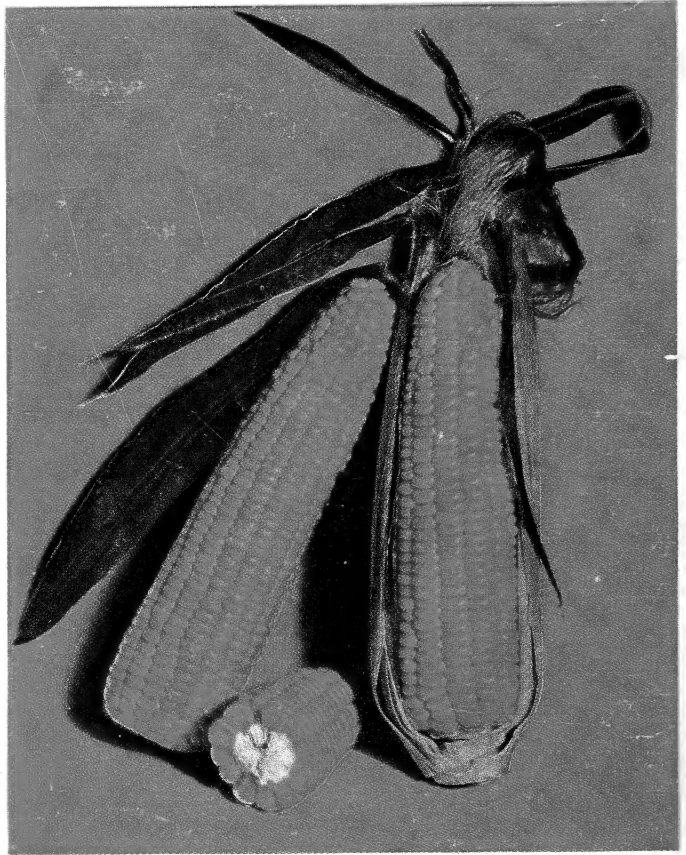


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