



SOYBEAN

Minnesota Agricultural Experiment Station scientists annually conduct performance tests of adapted public and private soybean varieties. Companies are charged a fee for each variety they enter and these fees are used to partially cover the costs of testing. A stipulation of the testing program is that the company is marketing the variety or intends to begin marketing it in the next growing season.

Tables on pages 72-76 present data from the regular public and private variety tests conducted annually at various locations within the northern, central and southern production zones. The map on page 71 shows zone boundaries. All of these tests were planted between May 1 and May 25 at planting rates of 160,000 plants/acre. Preplant and postemergence herbicides were used as necessary for good weed control. Row spacings were 30 inches at Becker and Fairmont and 10 inches at all other locations. Plot combines were used to harvest the yield from all plots.

Tables on pages 77-82 show results from specific tests of available Roundup Ready® varieties adapted to the northern, central and southern production zones. Planting was accomplished as described above, except that the only herbicide used was two applications of the labeled rates of Roundup®.

The table on pages 83-84 provides results from the special performance tests of soybean cyst nematode resistant varieties in "infested" field sites near Lambertson, Waseca and St. James and "non-

infested" field sites near Fairmont, Lambertson, and Waseca. Planting techniques were the same as the regular performance tests.

The tables on pages 84-87 provide results from the special variety tests conducted in white mold infested field sites. Tables on page 77 provide results of the very early (northern

Minnesota) and special southeastern Minnesota Public Variety tests. These locations were added to the program to provide data for environments not represented by the other location tests.

The table on pages 87-88 provides results from the special-use soybean variety tests conducted at several locations. These tests were added to provide reliable data for growers interested in producing these types of soybeans, which are typically grown under contract.

To better understand and use the data provided in these tables, please read the following additional information very carefully.

Relative Maturity and Calendar Dates of Maturity:

Soybeans respond to changing day length, so the actual calendar date of maturity is affected by latitude. Each soybean variety has a narrow range of north-south adaptation. Soybean yield and quality are assured if a variety arrives at physiological maturity before a season-ending freeze occurs. This date is determined visually by noting the actual date when 95 percent of the pods show their genetically programmed mature color. These dates for 1999 are provided in the tables. Maturity dates in 1999 after September 25 in the southern zone and after October 1 in the central and northern zones are estimates because frost occurred. Harvest dates are typically 7 to 14 days later, depending upon drying conditions.

Relative maturity ratings are also provided for each variety in the tables. These ratings consist of a number for the maturity group designation (000, 00, 0, 1, 2) followed by a decimal and another num-

ber, ranging from 0 to 9, which indicates a ranking within each maturity group. For example the variety Agassiz indicated as 0.0, making it the earliest group 0 variety, while Hendricks, with a 0.9 rating, is the latest. These values for public varieties are developed after observing them for several years in many locations. Relative maturity ratings for private varieties in these tables were provided by their owners, and were developed in a similar manner.

Yield

Because maturity is a very important attribute, varieties are arranged in the tables in order of their actual 1999 calendar date of maturity and not yield performance.

Later maturing varieties can usually be expected to have higher yields than earlier maturing types. If you wish to correctly compare yields, do so only between varieties with similar calendar dates of maturity, usually within 3 to 5 days. More reliable comparisons can be made using variety yields from several consecutive years. All yield determinations were made from replicated tests harvested with a plot combine.

LSD values associated with the data in these tables are measures of variability within the trials. If a yield difference between two varieties within a single column exceeds this LSD value you can assume that the higher yielding variety was truly better yielding. A 20-percent level of significance is used in all these tables. This means that yield differences exceeding the stated LSD value are real 80 percent of the time.

Chlorosis

Chlorosis ratings are based on how much of the leaf area was yellowing in tests conducted on high-lime (high pH) soils in southwest Minnesota in 1999. Comparing chlorosis scores of varieties permits you to estimate how well they perform relative to each other at this site. Actual chlorosis ratings can vary depending on the specific site and year of test.

Some universities and companies use numerical scores rather than word descriptors to describe chlorosis tolerance. A comparison of these systems follows:

Numerical Score		
1-5 scale	1-9 scale	Rating
1 to 2	1 to 2.5	Tolerant (T)
2.1 to 3	2.6 to 5	Moderately Tolerant (MT)
3.1 to 4	5.1 to 7.5	Moderately Susceptible (MS)
4.1 to 5	7.5 to 9	Susceptible (S)

Protein and Oil

Protein and oil values were determined on mature seed using near infrared reflectance analysis equipment. The table values are for the 1999 season only, absolute values of protein and oil can vary from year to year. Protein and oil values are expressed on a 13% moisture basis. This formula converts the protein and oil values to another moisture basis:

$\frac{100 - \text{desired moisture}}{87} \times \frac{\text{protein or oil value given in the table}}{\text{protein or oil value given in the table}}$ <p>The value of a bushel of soybeans (APV) based on its oil and protein content can be calculated by:</p> $\text{APV} = 60 [\text{Po} (X) + \frac{\text{Pm}}{.44} (Y)]$ <p>Where:</p> <p>APV = Approximate value of a bushel of soybeans</p> <p>Po = soybean oil price (in \$ per pound)</p> <p>Pm = price of 44% meal (in \$ per pound)*</p> <p>X = oil content at 13% moisture (in decimals)</p> <p>Y = protein content at 13% moisture (in decimals)</p> <p>And:</p> $\frac{\text{* price of meal } \$/\text{ton}}{2,000} = \$/\text{pound}$

Phytophthora

Phytophthora root rot can cause significant yield reductions if susceptible varieties are planted in poorly drained, in-

festated fields. There are several known races of this fungus, so it is important to know which are present in your field. Genes can be incorporated into varieties to provide resistance to specific races of this disease.

Some published information refers to Phytophthora "tolerance" or "field resistance," which is not race-specific and should not be confused with race-specific resistance. Reliable tests for tolerance have not yet been developed.

The data tables in this report indicate the Phytophthora gene or genes present in each variety. The resistance chart below, left, will tell you which genes provide resistance to the various races.

Soybean Cyst Nematode:

Soybean Cyst Nematode (SCN) was first identified in Minnesota in 1978 and is now known to occur in many Minnesota counties where the soybean is grown. Both the area of infestation and numbers of nematodes per unit of soil appear to be increasing. Several races of this pest are known to occur in Minnesota. When SCN numbers are high, significant yield losses can occur. Rotations to non-host crops and planting of resistant varieties can assist in reducing nematode populations as well as reducing its impact on yield.

Yield performance results of susceptible, moderately resistant, and resistant varieties planted in infested and non-infested fields in southern Minnesota are provided on pages 83 and 84.

Additional information on procedures for testing your fields for SCN can be obtained from your county extension office or the Soybean Nematology Lab at the Southern Experiment Station, Waseca, MN 56093.

Genes for resistance to various races of Phytophthora root rot

Gene	Races																											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
<i>Rps1</i>	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
<i>Rps1b</i>	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
<i>Rps1c</i>	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
<i>Rps1k</i>	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
<i>Rps3</i>	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
<i>Rps4</i>	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
<i>Rps6</i>	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Management information is available from your county extension office or from the Minnesota Soybean Research and Promotion Council, 360 Pierce Avenue, Suite 110, North Mankato, MN 56003, 1-888-896-9678, www.mnsoybean.org

White Mold

This disease is also known as Sclerotinia stem rot. Accurate ratings for resistance to this disease are difficult to obtain because the infection process is very dependent on environmental conditions during flowering. Because of this variability, a variety can appear to be resistant one year or in one location and be devastated if conditions are more conducive to spread of the disease. Growers should plant varieties that consistently show less disease over several years of testing.

In 1999 some varieties were evaluated under field conditions in locations in the three soybean production regions of Minnesota. These tests were conducted by J.E. Kurl, Department of Plant Pathology, University of Minnesota. Data collected consisted of ratings of percentages of infected plants present in the various plots during the growing season. Data are presented on pages 84-87.

Additional white mold management information is available from Minnesota Soybean Research and Promotion Council, 360 Pierce Avenue, Suite 110, North Mankato, MN 56003, 1-888-896-9678, www.mnsoybean.org

Brown Stem Rot

Brown stem rot (BSR) is a fungal disease that can cause yield losses in certain situations. The disease occurs most frequently when soybeans follow soybeans but can occur where soybeans are planted every other year. Resistant varieties, or longer rotations, assist in the management of this disease. IA 1006, Freeborn, Granite, Faribault, Archer, and IA2008R are available public varieties with resistance to BSR. 2063RR, LO292, 1174WM, and L1309CN are the privately developed varieties reported to be resistant to BSR.

Some information refers to "tolerance" or "field resistance." Reliable tests for



Soybean Maturity Zones

tolerance or field resistance have not yet been developed.

Special-Use Varieties

Recently there has been increased interest in producing soybeans with special characteristics important to specialty food product manufacturers. Soybean scientists previously developed some of these special-use varieties, which were general releases, but more recently have been releasing some of them under exclusive contracts to specific companies who will then contract with growers for their production. The table on pages 87-88 presents the most recent data available on the performance and characteristics of several of these special-use varieties. Contact the owner/developer or exclusive marketing company, if you are interested in further information about these varieties.

Publicly Developed Varieties

Information about the publicly developed varieties entered in 1999 tests is presented in tables on pages 88-89.

Soybean Planting Rate and Date

Bushel Weight, Pounds	60
Seeds/Pound.....	2,800
Planting Rate, Pounds/Acre	56
Planting Rate, Seeds Ft. of Row	
7-inch rows	2
10-inch rows	3
20-inch rows	6
22-inch rows	7
30-inch rows	9
Planting Date.....	May 1 to May 10

Privately Developed Varieties

Contact addresses and brand names for privately developed varieties entered in these 1999 tests are:

- Agri-Tel Grain**, Robert Small, Box 808, Beause Jour, MB, Roe OCO
- AgriPro Seeds (AP)**, 824 2nd Street South, P.O. Box 250, Brookings, SD 57006-0250
- Albert Lea Seed House (Viking)**, P.O. Box, 127, 1414 W. Main, Albert Lea, MN 56007
- Anderson Seeds (Anderson)**, RR 3 Box 94, St. Peter, MN 56082
- Asgrow (Asgrow)**, P.O. Box 7570, Des Moines, IA

- Cenex/Land O'Lakes**, 2827 8th Ave. South, Fort Dodge, IA 50501
- CroPlan Genetics (CroPlan)**, Dr. Jack Carlson, 5600 Cenex Dr., Inver Grove Hts, MN 55077
- Dahlco Seeds (Dahlco)**, 14730 15th St. S.W., Cokato, MN 55321
- Dahlman Seeds (Dahlman)**, 73504 200th St., Dassel, MN 55325
- Dairyland Seed Co., Inc. (Dairyland)**, 3570 Highway H, P.O. Box 958 West Bend, WI 53095
- Dekalb Genetics Corp.**, 3100 Sycamore Rd., DeKalb, IL 60115
- Dennis Ewing Farm Seed (Yield King)**, 6131 North Fork Road, Ames, IA 50010
- Domestic Seed & Supply, Inc. (Mustang)**, 306 South Washington, Madison, SD 57042
- Cargill Hybrid Seed, (Cargill)**, P.O.Box 5645, Minneapolis, MN 55440
- Garst Seed Co. (Garst)**, 2369 330th Street, Box 500, Slater, IA 50244

- Gold Country Seed, Inc. (GCS)**, 16506 Hwy. 15 N, P.O. Box 604, Hutchinson, MN 55350
- Golden Harvest Seeds (Golden Harvest)**, 100 J.C. Robinson Blvd., P.O. Box A, Waterloo, NE 68069
- Great Lakes Hybrids, Inc. (Great Lakes)**, 9915 W. M-21, Ovid, MI 48866
- Hyland Seeds, Div. of W.G. Thompson & Sons, Ltd.**, P.O. Box 130, 145 Marlborough Street, Blenheim, Ontario, NOP 1A0, Canada

- Interstate Payco Seed Company (Payco)**, Box 338, West Fargo, ND 58078
- Jung Seed Genetics (Jung)**, 341 S. High St., Randolph, WI 53956
- Kaltenberg Seeds (Kaltenberg)**, P.O. Box 278, Waunakee, WI 53597
- Kruger Seed Company (Kruger)**, Highway 20 East, Box A, Dike, IA 50624
- KSC/Challenger, Box A, Dike, IA 50624**

- Latham Brothers Farm (Latham)**, 131 180th St., Alexander, IA 50420
- Latham Seed Company (Latham)**, 131 180th St., Alexander, IA 50420
- LG Seeds (LG)**, 905 Dexter St., P.O. Box 216, Prescott, WI 54021
- Mallard Seed Co., (Mallard)** P.O. Box 637, Plainview, Mn 55964
- Midwest Seed Genetics (MW Genetics)**, P.O. Box 518, Carroll, IA 51401

- Monsanto Global Seed Group, (Dekalb)**, 3100 Sycamore Road, Dekalb, IL 60115
- Mycogen Seeds**, 1340 Corporate Center, St. Paul, MN 55121
- NorthStar Genetics (NS)**, Box 40, Wanamingo, MN 55983
- Novartis Seeds (NK)**, 7500 Olson Memorial Hwy, Golden Valley, MN
- Peterson Farms Seed Inc. (Peterson Farms)**, 3104 164th Avenue SE, Harwood, ND 58042

- Pioneer Hi-Bred Int'l, Inc. (Pioneer)**, 130 SE Willmar Ave., Willmar, MN 56201
- Prairie Brand Research (PBR)**, 15 X Ave., Story City, IA 50248
- Prairie Brand Seed Company (Prairie Brand)**, 15 X Ave., Story City, IA 50248
- Profiseed, Inc. (Profiseed)**, 1691 Highway 65, Hampton, IA 50441
- Prograin, (Peterson)**, 145 Bas Riviere Nord, St-Cesaire Quebec Jolito

- Proseed Inc. (Proseed)**, 705 E Brewster, Harvey ND 58341
- Ramy International, Ltd. (Ramy)**, 1329 N. Riverfront Drive, P.O. Box 3722, Mankato, MN
- Renk Seed Co., (Renk)** 6800 Wilburn Rd., Sun Prairie, WI 53590
- Renze Hybrids, Inc. (Renze)**, 27410 Kittyhawk Avenue, Carroll, Iowa 51401
- Sand Seed Service, Inc. (Sands)**, 4765 Highway 143, Marcus, IA 51035

- Sansgaard Seed Farms, Inc. (Sansgaard)**, 15 X Avenue, Story City, IA 50248
- Stine Seed Co., 2225 Laredo Trail, Adel, IA 50003**
- Stine Seed Farm, 2225 Laredo Trail (Stine), Adel, IA 50003**
- Terra Industries, Inc. (Terra)**, P.O. Box 6000, Sioux City, IA 51102-6000
- Thunder Seed Inc, RR2 Box 239, Hawley MN 56549**

- Thompson Agronomics, Inc., 40321 130th Avenue (Thompson), Leland, IA 50453**
- Thompson Seeds, Inc., 40321 130th Ave. (Thompson), Leland, IA 50453**
- Top Farm Hybrids (Top Farm)**, 17177 60th Street SW, Cokato, MN 55321
- Trelay Seeds (High Cycle)**, 11623 State Road 80, Livingston, WI 53544
- UAP Seeds/Dyna Gro (UAP)**, Box 55, Kasota, MN 56050

- United Suppliers Inc, (U.S. Seeds)** 30473 260th St., P.O. Box 538, Eldora, IA 50627
- Wensman Seed Company (Wensman)**, P.O. Box 190, 102 Aldrich Avenue, Wadena, MN 56482
- Wilfarm LLC, (Wilfarm)**, 5401 N. Oak Traffilway, Gladstone MO 64118
- Ziller Seed Co., Inc. (Ziller)**, R.R. 1, Box 122, Bird Island, MN 55310

**Performance and characteristics of public and private soybean varieties, northern zone;
Crookston, Moorhead and Shelly, 1997-1999.**

Variety	Brand or Originator	Mature Date	Yield, Bushels/Acre			Percent		Maturity Rating	Phytophthora Gene	Chlorosis Score
			1997-99	1998-99	1999	Protein	Oil			
OAC Vision	Peterson	9-13	–	27	30	37	16	00.0	S	5
Corona	Hyland	9-14	–	–	42	34	17	00.2	S	2
Daksoy	N.D. AES	9-16	36	35	37	34	17	00.7	S	4
R0725	Ramy	9-18	–	–	50	32	18	00.7	S	3
Jim	N.D. AES	9-18	40	43	46	34	17	00.8	S	3
McCall	Minn. AES	9-18	34	33	35	34	17	00.7	S	3
L0083	Croplan	9-19	–	35	46	34	17	0.0	S	3
013	Mycogen	9-19	36	34	44	33	17	0.1	S	2
9007	Pioneer	9-19	35	36	44	34	17	0.07	Rps1	3
Glacier	Minn. AES	9-24	38	39	53	37	16	00.8	Rps6	3
Agassiz	Minn. AES	9-24	33	32	44	35	17	0.0	Rps1	3
5007	Mycogen	9-26	–	–	49	34	17	00.7	S	3
Trail	N.D. AES	9-27	40	43	55	36	16	0.0	S	3
MN0301	Minn. AES	9-27	40	38	48	32	18	0.3	Rps1	3
CX007	Dekalb	9-27	–	–	46	34	17	0.0	S	4
R0925	Ramy	9-27	–	–	45	34	17	00.9	S	3
DS9030	Dahlco	9-28	38	38	55	35	16	0.3	Rps1	3
90B43	Pioneer	9-29	–	42	55	33	17	0.4	Rps1c	2
R300	Ramy	9-29	–	–	53	35	16	0.3	S	3
9038	Proseed	9-30	–	–	54	35	17	0.3	S	3
0523	Northstar	9-30	–	35	48	35	16	0.3	S	3
S00-66	NK Brand	9-30	–	–	37	34	17	0.6	S	4
L0292	Croplan	10-1	–	–	57	33	17	0.2	Rps1k	4
Council	N.D. AES	10-1	39	39	54	34	17	0.5	Rps1	3
0398	Thunder	10-2	–	–	50	35	17	0.3	S	3
S05-D5	Novartis	10-2	–	–	48	33	17	0.4	Rps1k	3
5072	Mycogen	10-2	–	–	47	34	17	0.7	Rps1	4
Korada	Peterson	10-2	37	35	43	34	17	0.1	Rps1c	3
90B21	Pioneer	10-2	–	35	40	33	17	0.2	Rps1k	4
Ozzie	Minn. AES	10-2	32	29	38	36	16	0.3	Rps1	4
Lambert	Minn. AES	10-3	40	40	51	35	17	0.8	Rps1	3
TS036	Terra	10-3	–	36	46	35	16	0.3	S	4
Evans	Minn. AES	10-3	38	38	45	34	17	0.6	Rps1	4
TF 6038	Topfarm	10-3	–	32	45	34	17	0.3	S	3
W3036	Wensman	10-3	33	30	40	34	17	0.3	Rps1c	4
PR9712	Peterson	10-4	–	–	47	35	16	0.1	S	4
M-0700	Mustang	10-4	–	38	46	34	17	0.7	S	4
M-0970	Mustang	10-4	–	38	44	34	17	0.9	S	3
0480	Stine	10-4	38	37	41	34	17	0.3	S	3
D085	Garst	10-5	–	39	49	35	16	0.8	Rps1k	2
MN0901	Minn. AES	10-5	–	–	46	33	18	0.9	Rps1	4
0001	Northstar	10-5	–	–	40	35	16	0.0	S	4
DSR-065	Dairyland	10-6	38	36	46	32	17	0.7	Rps1c	2
9809	Payco	10-6	–	39	46	35	16	0.9	S	4
E-069	Mustang	10-6	–	–	40	34	17	0.0	S	3
PB-117	Prairie Brand	10-6	–	–	36	35	16	0.9	S	2
0790-0	Stine	10-7	–	–	44	35	16	0.7	S	4
PB-087	Prairie Brand	10-7	–	–	33	34	17	0.9	S	3
PB-098	Prairie Brand	10-8	37	35	39	35	16	0.9	S	2
M-0958	Mustang	10-8	–	34	37	35	17	0.9	S	3
1090-6	Stine	10-9	–	39	43	34	17	1.0	S	3
PB-097	Prairie Brand	10-9	38	35	37	34	17	0.9	Rps1c	4
LSD 20%			1	1	3					

**Performance and characteristics of public and private soybean varieties, central zone;
Becker, Morris and Rosemount, 1997-1999.**

Variety	Brand or Originator	Mature Date	Yield, Bushels/Acre			Percent		Maturity Rating	Phytophthora Gene	Chlorosis Score
			1997-99	1998-99	1999	Protein	Oil			
MN0301	Minn. AES	9-11	51	52	50	35	18	0.3	Rps1	3
90B43	Pioneer	9-12	-	-	63	34	18	0.4	Rps1c	2
Korada	Peterson	9-12	-	-	52	35	18	0.1	Rps1c	3
6038	Topfarm	9-13	-	-	64	34	18	0.3	S	4
Ozzie	Minn. AES	9-13	47	49	46	36	16	0.3	Rps1	3
5072	Mycogen	9-14	-	61	59	35	17	0.7	Rps1	4
8069	Proseed	9-14	-	-	59	34	18	0.6	S	5
DS-9071	Dahlco	9-15	-	-	58	35	17	0.7	Rps1k	3
D085	Garst	9-15	-	58	57	35	17	0.8	Rps1k	2
Council	N.D. AES	9-15	52	55	57	35	17	0.5	Rps1	3
9071	Pioneer	9-16	59	62	61	34	17	0.7	Rps1c	2
EXP21175	Ziller	9-16	-	64	61	35	17	1.3	S	3
S08-80	Novartis	9-16	-	-	60	36	16	0.8	Rps1c	4
X-905	Dahlco	9-16	-	-	59	35	16	0.5	S	2
Enterprise	Hyland	9-16	-	-	58	35	16	0.7	S	3
Evans	Minn. AES	9-16	53	56	55	35	18	0.6	Rps1	4
5093	Mycogen	9-17	-	-	63	35	17	0.9	S	4
91B01	Pioneer	9-17	60	62	62	35	17	1.0	Rps1k	3
R600	Ramy	9-17	-	-	61	36	16	0.6	S	3
6077	Topfarm	9-17	-	-	61	34	18	0.7	Rps1c	2
MN0901	Minn. AES	9-17	-	61	61	34	17	0.9	Rps1	4
RS099S	Renk	9-17	-	-	60	35	17	0.9	S	3
Lambert	Minn. AES	9-17	55	59	59	35	17	0.8	Rps1	3
8119	Proseed	9-18	-	-	65	35	18	1.1	Rps1c	3
A0868	Asgrow	9-18	-	65	64	34	18	0.8	Rps1k	3
SOI-118	Sands	9-18	-	-	61	36	17	1.1	S	4
Hendricks	Minn. AES	9-18	57	60	60	35	17	0.9	Rps1	3
095	Trelay	9-18	-	60	58	34	18	0.9	S	4
KB090	Kaltenberg	9-19	-	-	68	36	16	0.9	S	3
R1100	Ramy	9-19	-	-	68	33	17	1.1	Rps1c	2
W3107	Wensman	9-19	61	64	67	35	17	1.0	Rps1c	3
K-0999+	KSC/Challenger	9-19	-	68	66	35	17	0.8	Rps1c	4
EX8137	Thompson	9-19	-	-	65	35	17	1.5	S	2
910	Mallard	9-19	-	-	64	35	17	1.0	S	3
997	Thunder	9-19	-	-	64	35	17	0.9	S	2
MN1401	Minn. AES	9-19	-	58	58	36	16	1.4	Rps1	3
Kato	Minn. AES	9-19	54	57	55	37	17	1.3	Rps1	4
930	Mallard	9-20	-	-	67	35	17	1.2	Rps1c	4
EXP23195	Ziller	9-20	-	-	66	35	17	1.3	S	3
Sentry	Hyland	9-20	-	-	63	35	17	1.2	S	4
0933	Northstar	9-20	-	-	63	35	17	0.9	S	3
Surge	Minn. AES	9-20	59	64	63	37	16	1.3	Rps1	3
M-1160	Mustang	9-20	62	66	61	35	17	1.6	S	4
8089	Proseed	9-20	-	-	61	34	17	0.8	Rps1c	4
MN1301	Minn. AES	9-20	58	62	61	36	16	1.3	Rps1c	3
M-1128	Mustang	9-21	-	65	63	35	17	1.3	S	3
5121	Mycogen	9-22	-	66	65	35	17	1.2	Rps1k	2
8149	Proseed	9-22	-	-	64	35	17	1.4	Rps1c	2
K-1415	Kruger	9-22	-	-	63	35	17	1.2	S	3
KB120	Kaltenberg	9-22	-	-	61	35	17	1.2	Rps1k	2
X9814	Novartis	9-23	-	-	67	35	17	1.4	Rps1c	5

Variety	Brand or Originator	Mature Date	Yield, Bushels/Acre			Percent		Maturity Rating	Phytophthora Gene	Chlorosis Score
			1997-99	1998-99	1999	Protein	Oil			
DS-9140	Dahlco	9-23	-	-	63	37	16	1.4	Rps1k	4
K-1444+	Yield King	9-23	63	65	62	35	17	1.2	S	3
L1309CN	Croplan	9-23	-	-	61	34	17	1.3	S	3
PBR-138	PBR	9-24	-	-	70	35	17	1.3	S	3
PB-141	Prairie Brand	9-24	-	-	68	36	17	1.4	S	3
R1500CN	Ramy	9-24	-	-	58	35	17	1.5	S	2
RS1498	Renk	9-25	-	-	73	35	17	1.4	S	3
140 Brand	Latham	9-25	-	70	70	35	17	1.4	S	4
1443	Northstar	9-25	-	70	70	36	17	1.4	S	2
X-915	Dahlco	9-25	-	-	69	35	17	1.5	S	2
W3148	Wensman	9-25	-	73	69	35	17	1.4	S	3
6148	LG Seeds	9-25	-	-	68	35	17	1.4	S	4
1142	Jung	9-25	-	-	67	35	17	1.4	S	2
K-1414	KSC/Challenger	9-25	-	68	67	36	16	1.2	S	3
G1410	Midwest Seed	9-25	-	-	67	35	17	1.4	S	4
Parker	Minn. AES	9-25	60	64	67	35	17	1.5	Rps1	3
EX7103	Thompson	9-25	-	-	66	34	18	1.5	S	4
SOI-144	Sands	9-26	-	71	73	36	17	1.4	Rps1	3
K-1333	Kruger	9-26	68	70	71	36	17	1.2	S	3
91B53	Pioneer	9-26	-	-	70	36	17	1.5	S	3
X1700	Stine	9-26	-	-	70	34	17	1.5	Rps1	4
DSR-158	Dairyland	9-26	63	67	67	36	16	1.5	S	2
KB148	Kaltenberg	9-26	-	-	65	36	17	1.4	S	2
Freeborn	Minn. AES	9-26	-	61	60	36	16	1.6	Rps1	3
CX072	Dekalb	9-26	-	-	59	36	16	0.7	Rps1k	2
1386-6	Stine	9-27	67	72	70	36	17	1.3	S	3
PB-146	Prairie Brand	9-27	68	71	69	35	17	1.4	S	3
K-1666	Kruger	9-28	-	-	68	35	16	1.4	S	2
DSR-180/STS	Dairyland	9-28	64	68	66	35	17	1.9	S	4
IA1006	Iowa AES	9-28	-	-	62	35	17	1.9	S	3
Granite	Minn. AES	9-28	-	60	59	35	16	1.8	Rps1	3
K-1666+	Yield King	9-29	-	-	73	36	16	1.4	S	2
PB-163	Prairie Brand	9-29	-	-	72	36	16	1.5	Rps1	4
2500	Stine	9-29	67	70	70	35	17	1.5	S	3
K-2125	KSC/Challenger	9-30	-	71	70	34	17	1.7	S	3
M-1138	Mustang	9-30	-	70	68	35	17	1.3	S	3
250 Brand	Latham	9-30	-	67	65	35	17	1.7	S	3
K-1777	KSC/Challenger	10-1	69	73	73	35	17	1.5	S	4
PB-162-2	Prairie Brand	10-1	-	-	69	35	17	1.5	S	4
K-1943+	Yield King	10-1	-	72	69	35	16	1.7	S	3
KB208	Kaltenberg	10-1	-	-	68	36	16	2.0	S	3
K-2040	Kruger	10-2	-	-	65	36	16	1.7	S	2
K-2131+	Yield King	10-2	-	-	64	35	16	1.7	S	2
LSD 20%			1	1	2					

**Performance and characteristics of public and private soybean varieties, southern zone;
Weseca, Lambertson and Fairmont, 1997-1999.**

Variety	Brand or Originator	Mature Date	Yield, Bushels/Acre			Percent		Maturity Rating	Phytophthora Gene	Chlorosis Score
			1997-99	1998-99	1999	Protein	Oil			
MN1301	Minn. AES	9-17	49	51	48	35	17	1.3	Rps1c	3
Kato	Minn. AES	9-17	48	48	42	37	16	1.3	Rps1	3
MN1401	Minn. AES	9-19	—	51	45	34	17	1.4	Rps1	3
R1500CN	Ramy	9-20	—	—	47	33	18	1.5	S	2
9163	Pioneer	9-22	52	52	48	33	18	1.6	Rps1c	3
91B53	Pioneer	9-24	—	58	58	35	18	1.5	S	3
W3148	Wensman	9-24	—	60	56	35	18	1.4	S	3
TS158	Terra	9-24	—	59	54	35	17	1.5	S	4
MN1801	Minn. AES	9-24	—	55	51	35	17	1.8	Rps1	4
AP1755	Agripro	9-24	—	54	50	34	18	1.7	Rps1c	4
1630	Viking	9-24	—	—	50	34	18	1.6	Rps1c	4
Parker	Minn. AES	9-24	50	51	48	33	18	1.5	Rps1	3
US S159	US Seeds	9-25	—	—	54	35	18	1.5	S	2
R1725	Ramy	9-25	—	—	49	34	17	1.7	S	3
IA1006	Iowa AES	9-25	54	54	49	34	17	1.6	S	3
Freeborn	Minn. AES	9-25	51	52	49	35	17	1.6	Rps1	3
Bert	Minn. AES	9-25	50	51	47	33	18	1.8	Rps1	3
Sturdy	Minn. AES	9-25	53	53	46	34	17	2.0	Rps1	3
CX166	Dekalb	9-26	—	—	55	34	17	1.6	S	3
A2104	Asgrow	9-26	—	—	54	34	17	2.1	S	4
TF6188	Topfarm	9-26	—	57	54	33	18	1.9	Rps1c	3
BT 6190	Ziller	9-26	—	59	54	34	17	1.9	S	3
T-3182	Thompson	9-26	—	—	51	32	18	1.8	S	4
Granite	Minn. AES	9-26	51	51	46	35	17	1.8	Rps1	3
EXP23498	Ziller	9-27	—	—	55	32	18	1.8	S	4
KB214	Kaltenberg	9-27	—	—	53	34	17	2.1	S	4
TS194	Terra	9-27	59	60	53	34	18	1.9	S	4
S21-A1	NK Brand	9-27	—	—	52	34	18	2.1	Rps1k	4
1198	Jung	9-27	—	—	52	32	18	1.9	Rps1	2
207	Trelay	9-27	—	58	52	35	17	2.0	S	4
Hardin 91	Iowa AES	9-27	54	55	52	34	17	2.0	Rps1k	4
RS2098	Renk	9-27	—	—	52	34	17	2.0	S	3
T-3193	Thompson	9-27	—	59	51	32	18	1.9	S	3
DS 9210	Dahlco	9-27	—	—	51	34	17	2.0	Rps1c	2
1060	Mallard	9-27	—	—	50	31	18	1.9	Rps1c	2
200	Mycogen	9-27	57	56	50	33	18	2.1	S	5
TF6197	Topfarm	9-27	—	54	49	34	17	1.8	S	4
PBR-218	PBR	9-28	58	59	56	32	18	2.2	S	4
2199	Viking	9-28	—	—	55	35	17	2.1	S	3
DS 9190	Dahlco	9-28	—	—	54	33	17	1.9	S	3
6200	LG Seeds	9-28	—	—	53	33	18	2.0	Rps1c	4
GL1872	Great Lakes	9-28	58	59	52	34	17	1.8	S	3
PB-194	Prairie Brand	9-28	58	57	52	34	17	1.9	S	3
X181	Kaltenberg	9-28	—	—	51	34	17	1.8	S	3
IA2021	Iowa AES	9-28	56	56	51	32	18	2.2	Rps1k	3
X98-19	NK Brand	9-28	—	—	51	33	18	2.0	Rps1	4
92B23	Pioneer	9-28	—	57	51	33	17	2.2	Rps1k	4
2030	Viking	9-28	—	—	49	34	18	2.0	S	4
IA1008	Iowa AES	9-28	—	—	47	33	17	2.1	S	4
W3207	Wensman	9-29	—	64	57	34	17	2.0	S	3
X97-21	NK Brand	9-29	—	—	56	34	17	2.1	S	3

Variety	Brand or Originator	Mature Date	Yield, Bushels/Acre			Percent		Maturity Rating	Phytophthora Gene	Chlorosis Score
			1997-99	1998-99	1999	Protein	Oil			
PS2209	Profiseed	9-29	–	–	56	33	18	2.2	S	4
T-3222	Thompson	9-29	61	62	55	34	17	2.2	S	3
PBR-202	PBR	9-29	61	62	55	34	17	2.0	S	4
K-2404	Kruger	9-29	–	–	55	34	17	2.1	S	4
9233	Pioneer	9-29	59	60	55	34	17	2.3	S	4
K-2125	KSC/Challenger	9-29	–	61	53	33	18	1.7	S	3
K-2404+	KSC/Challenger	9-29	–	–	53	33	18	2.1	S	4
S-229-1	Sansgaard	9-29	–	–	53	34	17	2.2	S	4
392 BRAND	Latham	9-29	61	62	53	34	17	1.9	S	3
S220-2	Sansgaard	9-29	–	–	53	34	17	2.3	S	3
2002	Northstar	9-29	61	61	53	35	17	2.0	S	3
SOI 245	Sands	9-29	–	–	52	33	18	2.4	S	5
M-2238	Mustang	9-29	–	59	52	33	17	2.3	S	4
1070	Mallard	9-29	–	–	51	34	17	1.9	S	4
DSR-218	Dairyland	9-29	–	57	51	34	17	2.2	S	3
K-2232	KSC/Challenger	9-29	–	–	50	34	17	2.0	S	2
1050	Mallard	9-29	–	–	50	34	17	1.9	S	5
X98-18	NK Brand	9-29	–	–	49	32	17	1.9	Rps1c	3
S-203	Sansgaard	9-29	–	–	49	35	17	2.0	Rps1	3
A2247	Asgrow	9-29	–	57	48	35	17	2.2	Rps1k	4
R2198	Ramy	9-30	–	–	56	34	17	2.1	S	5
PB-217	Prairie Brand	9-30	–	–	56	33	18	2.1	S	4
K-2343	KSC/Challenger	9-30	61	62	55	35	17	1.9	S	3
SOI 169	Sands	9-30	61	61	55	34	17	2.0	S	3
E-206	Mustang	9-30	–	–	55	33	18	2.0	S	3
K-2425	Yield King	9-30	62	62	55	33	17	2.2	S	4
PB-197	Prairie Brand	9-30	60	59	53	34	17	1.9	S	4
M-2218	Mustang	9-30	–	59	52	34	17	2.1	S	5
PBR-214-2	PBR	9-30	–	–	52	35	17	2.2	S	3
KB220	Kaltenberg	9-30	–	–	52	33	17	2.2	S	3
NK2525A	Yield King	9-30	–	61	52	34	17	2.3	S	4
K-2625+	Kruger	9-30	61	61	52	34	17	2.3	S	4
2180	Stine	9-30	61	61	52	34	17	2.2	S	4
2490-1	Stine	9-30	–	61	52	32	18	2.4	S	4
K-2555	Yield King	9-30	–	–	51	33	17	2.3	S	3
PBR-216	PBR	9-30	60	61	51	34	17	2.1	S	5
IA2008R	Iowa AES	9-30	56	57	50	34	17	2.2	Rps1k	3
L2495	Croplan	9-30	–	–	50	32	18	2.4	Rps1	5
EX-530	Latham	9-30	–	–	48	34	17	2.2	S	4
S-237	Sansgaard	9-30	–	59	47	33	18	2.4	S	4
K-2525+	Kruger	10-1	–	61	53	33	18	2.3	S	4
EXP221	Sands	10-1	–	–	52	33	18	2.2	S	4
640 BRAND	Latham	10-1	59	58	49	35	17	2.3	S	4
K-2545+	Yield King	10-1	–	–	48	35	17	2.3	Rps1k	4
PB-235	Prairie Brand	10-2	59	59	51	36	17	2.4	S	3
K-2535	Kruger	10-2	–	58	51	36	16	2.4	S	3
G2380	Midwest Seed	10-2	–	–	50	35	17	2.3	S	4
SOI 243	Sands	10-2	–	60	48	35	17	2.4	S	3
RS2498	Renk	10-3	–	–	53	35	17	2.4	S	3
5249	Mycogen	10-3	–	–	46	35	17	2.4	S	5
IA2038	Iowa AES	10-3	–	53	44	34	17	2.4	S	5
LS20%			1	1	2					

Performance and characteristics of very early maturing public soybean varieties, 1995-1999.

Variety	Maturity Rating	Yield, Bushels/Acre				Percent		Phytophthora Gene	Chlorosis Score
		Grand Rapids	Roseau	Kennedy	Average	Protein	Oil		
Daksoy	00.6	25	25	47	27	38	17	S	4
McCall	00.7	21	23	39	24	37	17	S	3
Jim	00.7	25	26	45	27	38	18	S	4
Glacier	00.8	21	23	40	23	38	17	Rps6	3
Agassiz	0.0	24	25	43	26	38	17	Rps1	3
Traill	0.0	20	24	42	24	38	17	S	3
LSD 20%		1	1	3	2				

Performance and characteristics of public soybean varieties, southeastern Minn., 1995-1999.

Variety	Maturity Rating	Yield, Bushels/Acre	Percent		Phytophthora Gene	Chlorosis Score
			Protein	Oil		
Lambert	0.8	41	38	18	Rps1	3
Kato	1.3	42	40	16	Rps1	3
Parker	1.5	45	36	18	Rps1	4
Freeborn	1.6	43	37	17	Rps1	4
Bert	1.8	43	36	17	Rps1	4
Granite	1.8	43	37	17	Rps1	4
Hardin 91	1.9	45	38	17	Rps1k	4
Sturdy	2.0	46	38	16	Rps1	3
IA2021	2.1	46	36	18	Rps1k	4
IA2008R	2.2	42	36	18	Rps1k	3
LSD 20%		1				

Performance and characteristics of Roundup Ready soybean varieties, northern zone, Moorhead and Shelly, 1999.

Variety	Brand or Originator	Mature Date	Yield, Bushels/Acre	Percent		Maturity Rating	Phytophthora Gene	Chlorosis Score
				Protein	Oil			
90B31	Pioneer	9-18	39	34	17	0.3	S	3
X99007	NK Brand	9-28	47	36	16	0.7	S	4
203RR	Thunder	9-30	50	33	17	0.3	S	4
PBR-0303RR	PBR	9-30	49	34	17	0.3	S	5
W2039RR	Wensman	9-30	49	33	17	0.3	S	5
X9904	NK Brand	9-30	43	32	17	0.3	Rps1c	4
RR Rugged	Hyland	10-1	49	34	18	0.3	S	4
DS 9051RR	Dahlco	10-1	46	33	17	-	S	5
903RR	Dahlman	10-1	46	34	17	0.3	S	5
0414RR	Northstar	10-1	46	35	17	0.3	S	4
S-0707RR	Sansgaard	10-2	51	33	18	0.7	Rps1c	4
W2058RR	Wensman	10-2	47	34	17	0.5	S	5
PBR-0717RR	PBR	10-2	44	33	18	0.7	S	3
DS 9090RR	Dahlco	10-2	42	35	17	-	S	5
PB-1030RR	Prairie Brand	10-2	39	35	17	0.9	Rps1c	4
S-0505RR	Sansgaard	10-3	49	33	17	0.5	S	5
6059RR	Top Farm	10-3	49	33	18	0.3	S	4
0503RR	Northstar	10-3	45	34	17	0.3	S	5
X90537RR	Golden Harvest	10-3	44	35	17	0.5	S	4
DSR091/RR	Dairyland	10-3	43	33	18	0.9	S	4
W2079RR	Wensman	10-4	47	35	17	0.7	S	4
9909RR	Interstate	10-4	45	35	17	0.9	S	5
M-091RR	Mustang	10-4	45	35	17	0.9	S	5
PB-0730RR	Prairie Brand	10-4	42	34	17	0.6	Rps1k	4

Variety	Brand or Originator	Mature Date	Yield, Bushels/Acre	Percent		Maturity Rating	Phytophthora Gene	Chlorosis Score
				Protein	Oil			
PB-0910RR	Prairie Brand	10-5	46	35	17	0.6	Rps1k	5
PBR-1093RR	PBR	10-5	43	36	17	0.9	Rps1k	2
M-079RR	Mustang	10-5	40	34	17	0.7	Rps1k	4
EX9112RR	Interstate	10-5	37	36	17	1.1	Rps1k	3
S-0740RR	Sansgaard	10-5	35	35	16	0.7	S	4
PBR-0920RR	PBR	10-6	42	35	17	0.8	S	3
PB-0909RR	Prairie Brand	10-6	40	33	18	0.8	Rps1k	3
0990-4	Stine	10-6	38	35	17	0.9	S	5
LSD 20%			3					

Performance and characteristics of Roundup Ready soybean varieties, central zone, Rosemount and Morris 1998, 1999.

Variety	Brand or Originator	Mature Date	Yield, Bushels/Acre		Percent		Maturity Rating	Phytophthora Gene	Chlorosis Score
			98-99	1999	Protein	Oil			
6070RR	Topfarm	9-18	–	40	33	18	0.7	S	4
207RR	Thunder	9-19	–	51	34	19	0.7	Rps1c	5
90B93	Pioneer	9-20	55	52	36	17	0.9	Rps1c	4
AG0801	Asgrow	9-20	–	51	34	17	0.8	S	3
808RR	Dahlman	9-20	–	51	33	18	0.8	S	5
91B02	Pioneer	9-20	54	50	35	17	1.0	Rps1c	4
RR Rattler	Hyland	9-20	–	46	35	17	0.8	S	3
RR0059	Proseed	9-20	–	46	35	17	0.5	S	4
6059RR	Topfarm	9-20	–	40	34	18	0.3	S	4
AG0901	Asgrow	9-21	56	58	35	17	0.9	S	3
90B72	Pioneer	9-21	51	49	34	17	0.7	Rps1	2
R580RR	Ramy	9-21	–	41	34	18	0.5	S	4
AG1301	Asgrow	9-22	–	59	34	18	1.3	S	4
W 2098RR	Wensman	9-22	57	56	35	17	0.9	S	4
8097	Jung	9-22	–	55	35	17	0.9	S	4
1096-4	Stine	9-22	–	55	36	17	1.1	S	5
H-0979RR	Golden Harvest	9-22	–	50	35	17	0.9	S	4
KB119RR	Kaltenberg	9-22	49	48	36	16	1.1	Rps1k	3
2101RR	High Cycle	9-23	–	56	35	17	1.0	S	5
9909RR	Payco	9-23	–	55	36	17	0.9	S	5
R1080RR	Ramy	9-23	–	55	36	16	1.0	S	3
K-099+RR	Kruger	9-23	–	54	35	17	0.7	S	5
M-091RR	Mustang	9-23	–	54	35	17	0.9	S	4
R980RR	Ramy	9-23	–	54	36	17	0.9	S	5
RS099RR	Renk	9-23	–	53	34	17	0.9	Rps1k	3
3115RR	Dyna-Gro	9-23	–	53	35	17	1.1	S	4
1103RR	Northstar	9-23	–	53	36	17	1.1	S	4
AP1080	Agripro	9-23	–	49	35	17	1.0	S	4
9909RR	Garst	9-23	–	49	36	17	0.9	S	5
RR0099	Proseed	9-23	–	48	34	18	0.9	S	4
0923RR	Northstar	9-23	–	47	35	17	0.9	S	5
CX085RR	Dekalb	9-23	–	45	36	17	0.8	S	4
8094RR	Jung	9-23	–	45	35	17	0.9	S	5
RR 1211	Mallard	9-23	–	45	35	17	1.2	S	4
DS X-914	Dahlco	9-24	–	58	35	17	–	S	3
PB-1190RR	Prairie Brand	9-24	58	56	36	17	1.1	S	4
K-099A	KSC/Challenger	9-24	–	55	36	17	0.7	S	5

Variety	Brand or Originator	Mature Date	Yield, Bushels/Acre		Percent		Maturity Rating	Phytophthora Gene	Chlorosis Score
			98-99	1999	Protein	Oil			
K-101+	KSC/Challenger	9-24	–	52	34	17	0.8	Rps1k	5
K-144RR	Kruger	9-24	–	50	35	17	1.2	S	4
6090RR	Topfarm	9-24	–	50	36	17	0.9	S	4
BT7109RR	Ziller	9-24	52	48	35	17	1.0	S	5
M-119RR	Mustang	9-24	–	47	36	16	1.1	Rps1k	2
M-144RR	Mustang	9-25	58	53	35	17	1.4	S	4
909RR	Dahlman	9-25	–	52	32	18	0.9	Rps1k	5
WF090RR	US Seeds	9-25	–	50	35	17	0.9	S	5
PB-1340RR	Prairie Brand	9-25	–	48	35	17	1.3	S	2
KB099RR	Kaltenberg	9-25	55	46	35	17	0.9	S	5
PBR-0920RR	PBR	9-26	–	57	35	17	0.8	S	4
S14-M7RR	NK Brand	9-26	54	50	35	16	1.4	Rps1c	2
H-1173RR	Golden Harvest	9-26	–	46	35	17	1.1	S	4
W 2139RR	Wensman	9-26	–	46	35	17	1.3	S	3
M-151RR	Mustang	9-27	–	58	33	17	1.5	Rps1c	3
5141RR	Atlas	9-27	–	58	36	16	1.4	S	4–
EXP 1414RR	Sands	9-27	–	56	36	16	1.4	S	3
PBR-1620RR	PBR	9-27	–	55	33	17	1.5	Rps1c	4
H-1411RR	Golden Harvest	9-27	58	55	36	16	1.4	S	3
6150RR	Topfarm	9-27	–	54	33	17	1.5	Rps1c	3
RR0159	Proseed	9-27	–	54	36	16	1.4	S	4
EXP 1519RR	Sands	9-27	–	54	36	17	1.5	S	3
BT7150RR	Ziller	9-28	–	65	33	17	1.3	S	S
EX9160RR	Garst	9-28	–	61	33	17	1.5	Rps1c	3
W 2159RR	Wensman	9-28	–	61	34	17	1.5	S	3
RS159RR	Renk	9-28	–	59	34	17	1.5	Rps1c	3
DS 9143	Dahlco	9-28	–	58	36	17	–	S	3
KB161RR	Kaltenberg	9-28	–	57	33	17	1.3	Rps1c	4
PBR-1909RR	PBR	9-28	–	56	36	17	1.7	S	4
RT0934	Croplan	9-28	–	55	35	17	0.9	S	5
PB-1490RR	Prairie Brand	9-28	58	53	36	16	1.4	S	3
X9712RR	NK Brand	9-28	53	52	35	17	1.3	Rps1c	3
AP1702	Agripro	9-29	–	62	33	17	1.7	Rps1c	3
PBR-1404RR	PBR	9-29	–	56	35	17	1.4	Rps1k	3
CX150RR	Dekalb	9-29	–	56	36	16	1.5	S	4
KB139RR	Kaltenberg	9-29	–	54	36	16	1.3	S	5
K-155	KSC/Challenger	9-29	–	51	36	16	1.3	Rps1c	4
PB-1530RR	Prairie Brand	9-29	–	50	36	16	1.5	S	3
W 2148RR	Wensman	9-29	56	50	36	16	1.4	S	4
6146RR	LG Seeds	9-29	–	49	34	17	1.4	Rps1k	3
EX9130RR	Garst	9-29	–	48	34	17	1.3	Rps1k	3
1400-4	Stine	9-29	–	46	37	16	1.6	S	3
K-141	KSC/Challenger	9-30	–	57	34	17	1.2	S	5
AG1601	Asgrow	9-30	–	55	35	17	1.5	S	3
D145RR	Garst	9-30	–	54	35	17	1.4	Rps1k	2
211RR	Thunder	9-30	–	53	34	17	1.1	S	4
EX-157RR	Latham	9-30	–	46	35	16	1.5	Rps1c	4
S-2002RR	Sansgaard	10-2	–	56	33	18	1.8	Rps1k	4
5173RR	Atlas	10-2	–	56	36	17	1.7	S	5
K-202+RR	Yield King	10-2	–	56	36	16	1.8	S	5
K-198RR	Yield King	10-2	–	56	33	18	1.6	S	5
S-1923RR	Sansgaard	10-2	–	49	35	17	1.7	Rps1k	5

Variety	Brand or Originator	Mature Date	Yield, Bushels/Acre		Percent		Maturity Rating	Phytophthora Gene	Chlorosis Score
			98-99	1999	Protein	Oil			
S-1810RR	Sansgaard	10-3	–	62	36	16	1.6	S	4
K-199RR	Kruger	10-4	61	55	35	17	1.7	S	4
K-191+RR	Yield King	10-4	–	53	36	16	1.6	S	5
S-1897RR	Sansgaard	10-4	–	50	36	16	1.7	S	5
K-202RR	Kruger	10-5	65	62	36	16	1.8	S	4
K-200RR	Yield King	10-5	–	57	35	16	1.8	S	3
LSD 20%			2	3					

Performance and characteristics of Roundup Ready soybean varieties, southern zone; Lambertton and Waseca, 1998,1999.

Variety	Brand or Originator	Mature Date	Yield, Bushels/Acre		Percent		Maturity Rating	Phytophthora Gene	Chlorosis Score
			98-99	1999	Protein	Oil			
S14-M7	NK Brand	9-21	–	49	34	18	1.4	Rps1c	2
91B91	Pioneer	9-22	54	46	33	18	1.7	S	3
H-1565RR	Golden Harvest	9-22	57	46	31	18	1.2	Rps1c	3
AP2102	Agripro	9-22	–	40	36	18	2.1	Rps1k	3
91B64	Pioneer	9-23	58	53	33	18	1.6	Rps1c	4
CX150RR	Dekalb	9-23	–	47	35	17	1.5	S	4
8152RR	Jung	9-24	–	55	32	18	1.5	Rps1c	3
R1685RR	Ramy	9-24	–	55	32	18	1.6	Rps1c	2
DS-9182	Dahlco	9-24	–	54	35	17	1.8	S	3
AP1702	Agripro	9-24	–	52	32	18	1.7	Rps1c	3
92B05	Pioneer	9-24	59	52	33	18	1.9	Rps1k	3
5173RR	Atlas	9-24	–	52	34	18	1.7	S	5
W2159RR	Wensman	9-24	–	51	32	18	1.5	S	3
6150RR	Topfarm	9-24	–	50	32	18	1.5	Rps1c	3
GL1501RR	Great Lakes	9-24	–	49	34	18	1.5	Rps1c	3
AG2001	Asgrow	9-24	–	49	34	18	2.0	S	4
2172RR	High Cycle	9-25	57	51	35	18	1.7	S	5
6199RR	LG Seeds	9-25	–	50	35	17	1.9	S	3
K-222+RR	Kruger	9-25	–	49	33	18	2.0	Rps1k	4
GL1902RR	Great Lakes	9-25	–	45	33	18	1.9	S	5
EX-347RR	Latham	9-25	–	45	34	17	1.9	S	5
DSR-215/RR	Dairyland	9-26	57	50	35	17	2.0	S	4
819ARR	Dahlman	9-26	–	50	35	17	1.9	S	4
PBR-2130XRR	PBR	9-26	–	49	34	17	2.1	Rps1k	3
919RR	Dahlman	9-26	–	47	33	18	1.9	S	4
2211RR	High Cycle	9-26	–	47	35	17	2.1	S	4
821RR	Dahlman	9-26	55	46	33	18	2.1	Rps1k	3
6218RR	Topfarm	9-26	–	45	33	18	2.1	Rps1k	4
3206RR	Dyna-Gro	9-26	–	45	34	17	2.0	S	4
6179RR	Topfarm	9-26	–	45	37	16	1.7	Rps1k	4
W2179RR	Wensman	9-26	–	45	34	18	1.7	S	4
AG2101	Asgrow	9-26	53	44	34	17	2.1	S	2
917RR	Dahlman	9-27	–	53	33	18	1.7	S	5
8221RR	Jung	9-27	–	52	35	17	2.1	S	4
EX-337RR	Latham	9-27	–	52	34	18	1.9	S	3
EXP 26024R	Ziller	9-27	–	51	35	17	1.9	S	4
DSR-197/RR	Dairyland	9-27	–	51	35	17	1.9	S	4
KB230RR	Kaltenberg	9-27	–	47	33	17	2.3	S	4

Variety	Brand or Originator	Mature Date	Yield, Bushels/Acre		Percent		Maturity Rating	Phytophthora Gene	Chlorosis Score
			98-99	1999	Protein	Oil			
BT7190R	Ziller	9-27	–	47	34	18	1.9	S	4
CX194RR	Dekalb	9-27	–	45	33	18	1.9	S	5
6180RR	Topfarm	9-27	–	44	34	17	1.8	S	5
S-1999RR	Sansgaard	9-27	–	44	35	17	1.9	S	4
EX9001RR	Thompson	9-27	–	44	34	17	2.3	S	3
EX-207RR	Latham	9-28	–	54	35	17	1.8	S	4
M-199RR	Mustang	9-28	–	54	33	17	1.9	S	3
8192RR	Jung	9-28	–	54	33	17	2.0	S	3
2000RR	Viking	9-28	–	53	33	17	2.0	S	4
92B21	Pioneer	9-28	58	52	33	18	2.2	S	3
EX-447RR	Latham	9-28	–	50	34	17	2.1	Rps1k	4
2192RR	High Cycle	9-28	–	50	34	18	1.9	S	4
US S1809RR	US Seeds	9-28	–	50	33	18	1.8	S	4
PS4195	Profiseed	9-28	–	50	34	17	1.9	S	3
B195RR	Cargill	9-28	–	49	33	18	1.9	S	4
TS216RR	Terra	9-28	–	49	35	17	2.1	S	4
EX9701RR	Thompson	9-28	–	48	33	17	2.0	S	4
B225RR	Cargill	9-28	–	46	34	17	2.2	Rps1c	4
SOI 197RR	Sands	9-28	57	46	32	18	1.9	Rps1c	3
W2198RR	Wensman	9-29	61	58	35	17	1.9	S	4
EX3759RR	Thompson	9-29	–	53	34	17	1.9	S	3
S22-N2	NK Brand	9-29	–	52	35	17	2.2	S	4
2004RR	Northstar	9-29	–	52	33	18	2.0	S	4
RR2211	Mallard	9-29	–	52	34	17	2.2	S	4
R1980RR	Ramy	9-29	–	51	34	17	1.9	S	4
2063RR	Anderson Seeds	9-29	–	50	35	17	2.0	S	3
S-2102RR	Sansgaard	9-29	–	50	34	17	2.1	S	5
3214RR	Dyna-Gro	9-29	–	49	30	18	2.1	Rps1c	4
PBR-2220XRR	PBR	9-29	–	49	34	18	2.2	Rps1	4
H-1207RR	Golden Harvest	9-29	54	48	30	18	2.0	Rps1c	3
US S2009RR	US Seeds	9-29	–	48	33	17	2.0	S	4
AG2301	Asgrow	9-29	53	46	35	17	2.3	S	3
PBR-2520RR	PBR	9-29	–	46	34	17	2.5	Rps1	3
AP2002	Agripro	9-29	–	45	31	18	2.0	Rps1c	3
2234CNRR	Northstar	9-29	–	44	35	17	2.2	S	3
EX9221RR	Garst	9-29	–	44	34	17	2.1	Rps1k	4
DSR-241/RR	Dairyland	9-30	59	54	34	17	2.3	Rps1k	4
K-221	KSC/Challenger	9-30	–	54	33	18	2.0	S	5
X-920	Dahlco	9-30	–	53	33	18	2.0	S	5
X-8191RR	Golden Harvest	9-30	–	53	35	17	1.9	S	4
CX198RR	Dekalb	9-30	–	52	34	17	1.9	S	4
RT1999	Croplan	9-30	–	52	34	17	1.9	S	4
K-202+RR	Yield King	9-30	–	51	35	17	1.8	S	5
1991-4	Stine	9-30	59	51	33	17	2.1	S	4
TS1980RR	Terra	9-30	59	51	35	17	1.9	S	4
K-220RR	Yield King	9-30	–	51	35	17	2.0	Rps1	4
KB215RR	Kaltenberg	9-30	–	51	34	18	2.1	S	5
M-202RR	Mustang	9-30	57	51	35	17	2.0	S	4
EX-467RR	Latham	9-30	–	49	34	17	2.2	S	5
2101-4	Stine	9-30	–	49	34	17	2.2	S	5
T-3215RR	Thompson	9-30	57	48	32	18	2.0	S	3
T-3228RR	Thompson	9-30	57	48	34	17	2.1	S	5

Variety	Brand or Originator	Mature Date	Yield, Bushels/Acre		Percent		Maturity Rating	Phytophthora Gene	Chlorosis Score
			98-99	1999	Protein	Oil			
5251RR	Atlas	9-30	-	48	34	17	2.4	S	4
PB-2097RR	Prairie Brand	9-30	-	48	35	17	2.0	S	4
PB-2397RR	Prairie Brand	9-30	-	48	34	17	2.3	S	4
H-1238RR	Golden Harvest	9-30	55	47	35	17	2.3	Rps1k	5
K-199RR	Yield King	9-30	58	47	34	17	1.7	S	4
2224RR	Northstar	9-30	-	47	35	17	2.2	S	4
PBR-1920RR	PBR	9-30	57	47	31	18	2.0	Rps1c	2
656RRBrand	Latham	9-30	55	47	34	18	2.3	Rps1k	5
X99-23	NK Brand	9-30	-	47	36	17	2.3	S	4
RS249RR	Renk	9-30	-	47	32	18	2.4	S	3
KB209RR	Kaltenberg	9-30	55	46	35	17	2.0	S	5
PB-2210RR	Prairie Brand	10-1	-	54	34	17	2.2	S	4
EX-437RR	Latham	10-1	-	51	34	17	2.1	S	5
EX-457RR	Latham	10-1	-	51	34	17	2.3	S	5
G2445RR	Midwest Seed	10-1	-	51	34	18	2.4	S	4
M-239RR	Mustang	10-1	-	50	34	17	2.3	Rps1k	4
R2200R	Renze	10-1	-	50	33	17	2.2	S	5
K-250	KSC/Challenger	10-1	-	49	35	17	2.2	S	4
WF230RR	Wilfarm	10-1	-	49	35	17	2.3	Rps1k	4
KB242RR	Kaltenberg	10-1	-	49	34	17	2.4	Rps1k	4
K-242RR	Kruger	10-1	57	49	33	18	2.2	Rps1k	5
RS208RR	Renk	10-1	-	49	34	17	2.0	S	4
R2509R	Renze	10-1	-	49	34	17	2.4	Rps1k	4
2506-4	Stine	10-1	-	49	34	17	2.4	Rps1k	4
EX9711RR	Thompson	10-1	-	49	36	17	2.3	S	4
GL2300RR	Great Lakes	10-1	-	48	34	17	2.3	Rps1k	3
S-2297RR	Sansgaard	10-1	-	48	33	18	2.2	S	4
W2219RR	Wensman	10-1	-	48	34	17	2.1	S	5
R2085RR	Ramy	10-1	-	48	34	17	2.0	S	3
PB-2430RR	Prairie Brand	10-1	-	48	34	17	2.4	Rps1k	3
CX242RR	Dekalb	10-1	-	46	34	17	2.4	S	4
R2400R	Renze	10-1	-	46	34	17	2.4	Rps1k	4
RR1911	Mallard	10-1	-	45	32	17	1.9	Rps1c	4
K-262RR	Kruger	10-1	56	45	34	18	2.4	S	5
S-2620RR	Sansgaard	10-2	-	57	35	17	2.4	Rps1	5
2300-4	Stine	10-2	-	55	33	18	2.3	S	4
K-240	KSC/Challenger	10-2	-	52	36	16	2.2	S	5
K-252	KSC/Challenger	10-2	-	51	34	17	2.3	S	3
K-222ARR	Yield King	10-2	-	51	34	17	2.0	S	5
EXP 2424RR	Sands	10-2	-	50	34	17	2.4	Rps1k	4
R2009R	Renze	10-2	57	50	34	17	2.0	S	4
3238RR	Dyna-Gro	10-2	-	49	34	17	2.3	Rps1k	5
3196RR	Dyna-Gro	10-2	-	49	34	17	1.9	S	4
K-266RR	Kruger	10-2	-	49	34	17	2.4	Rps1k	3
EX9196RR	Garst	10-2	-	46	32	18	1.9	Rps1c	3
M-229RR	Mustang	10-2	-	45	32	17	2.2	S	3
5242RR	Atlas	10-2	-	44	35	17	2.4	S	4
EXP 2392RR	Sands	10-2	-	42	33	18	2.3	S	3
SOI 248RR	Sands	10-3	-	48	35	17	2.4	S	5
TS2481RR	Terra	10-3	-	43	34	17	2.4	S	5
TS2481RR	Terra	10-3	-	43	34	17	2.4	S	5
LSD 20%			2	3					

Performance and characteristics of soybeans in soybean-cyst-nematode-infested (Lamberton, St. James and Waseca) and non-infested (Fairmont, Lamberton and Waseca) sites, 1997-1999.

Variety	Brand or Originator	Mature Date	Yield, Bushels/Acre						Percent		Maturity Rating	Phytophthora Gene	Chlorosis Score	SCN Rating
			Infested Sites			Non-Infested Sites			Protein	Oil				
			97-99	99-98	1999	97-99	98-99	1999						
R1300CN	Ramy	9-12	-	-	42	-	-	49	34	17	1.3	S	4	S
R1500CN	Ramy	9-12	-	-	32	-	-	47	33	18	1.5	S	3	R
W 3139N	Wensman	9-13	-	-	36	-	-	50	34	17	1.3	S	3	MR
EX-232CN	Latham	9-14	-	-	28	-	-	48	33	18	1.6	Rps1	4	R
Parker	Minn. AES	9-15	42	42	39	48	51	53	34	18	1.5	Rps1	3	S
DSR-150	Dairyland	9-15	-	-	39	-	-	50	35	17	1.5	Rps1	3	MR
CX160C	Dekalb	9-15	49	49	39	49	51	48	33	19	1.6	S	4	MR
A2069	Asgrow	9-16	-	47	37	-	55	50	34	17	2.0	Rps1k	4	S
Freeborn	Minn. AES	9-16	48	50	43	48	50	49	35	17	1.6	Rps1	3	R
S18-11	NK Brand	9-16	-	45	38	-	51	48	36	16	1.8	S	3	R
K-2444SCN	Yield King	9-17	-	-	38	-	-	54	35	17	2.2	Rps1k	4	S
IA1009	Iowa AES	9-17	-	-	42	-	-	53	33	18	2.1	S	3	MR
M-1179CN	Mustang	9-17	-	-	40	-	-	52	34	17	1.7	S	5	MR
K-2222SCN	Yield King	9-17	-	-	42	-	-	52	36	16	2.0	S	5	S
SOI 201N	Sands	9-17	-	-	37	-	-	51	33	18	2.1	S	4	MR
SOI 188N	Sands	9-17	-	-	43	-	-	51	34	17	1.8	S	4	MR
5212N	Mycogen	9-17	-	-	42	-	-	49	33	18	2.1	S	4	MR
IA1008	Iowa AES	9-17	-	-	41	-	-	49	34	17	2.1	S	4	MR
1804CN	Northstar	9-17	-	-	39	-	-	48	33	18	1.8	S	3	MR
AP2121	Agripro	9-17	-	-	42	-	-	45	34	17	2.1	S	3	MR
K-2220SCN	Kruger	9-18	46	45	31	55	57	53	34	17	2.0	Rps1k	4	MR
1802CN	Northstar	9-18	-	49	41	-	55	53	34	17	1.8	S	3	MR
1882-1	Stine	9-18	51	50	41	55	57	53	34	17	1.9	S	3	MR
219SCN	Trelay	9-18	-	-	37	-	-	53	36	16	2.2	S	4	S
PB-188CN	Prairie Brand	9-18	51	50	41	-	-	52	34	17	1.8	S	4	S
M-2209CN	Mustang	9-18	-	-	38	-	-	51	33	17	2.0	S	5	MR
US S229	US Seeds	9-18	-	-	37	-	-	51	33	18	2.2	S	3	MR
X181	Kaltenberg	9-18	-	-	38	-	-	50	35	17	1.8	S	3	MR
K-1919SCN	Kruger	9-18	-	-	39	-	-	50	34	17	1.7	S	3	MR
92B35	Pioneer	9-18	-	-	42	-	-	50	33	18	2.3	Rps1	3	MR
US S189	US Seeds	9-18	-	-	42	-	-	50	35	17	1.8	S	3	MR
K-2121SCN	Yield King	9-18	-	-	33	-	-	50	34	17	1.9	S	4	MR
K-232SCN	Yield King	9-18	-	-	37	-	-	50	33	18	2.1	S	2	S
AG2201	Asgrow	9-18	-	48	39	-	53	49	33	18	2.2	Rps1k	3	MR
CX207C	Dekalb	9-18	-	-	33	-	-	49	35	17	2.0	S	2	R
9234	Pioneer	9-18	48	47	38	51	52	49	34	17	2.2	Rps1	3	R
R2340RRCN	Ramy	9-18	-	-	35	-	-	49	34	17	2.3	S	2	MR
EX9181N	Garst	9-18	-	-	40	-	-	48	35	17	1.8	S	-	MR
H-2272	Golden Harvest	9-18	-	-	42	-	-	48	34	17	2.2	S	3	MR
352CN BRAND	Latham	9-18	-	49	43	-	54	48	33	17	1.9	S	5	MR
W3189N	Wensman	9-18	-	-	41	-	-	48	34	17	1.8	S	3	MR
CX235C	Dekalb	9-18	51	51	43	51	52	47	33	17	2.3	S	3	MR
K-2020SCN	Kruger	9-19	-	-	42	-	-	55	34	17	1.8	S	4	MR
PBR-234CN	PBR	9-19	-	-	48	-	-	54	34	18	2.3	S	5	MR
PB-222CN	Prairie Brand	9-19	-	-	42	-	-	54	36	16	2.2	S	4	MR
K-2520SCN	Kruger	9-19	-	-	37	-	-	53	34	17	2.3	S	3	-
RS239RR	Renk	9-19	-	-	30	-	-	51	34	17	2.3	S	3	S
IA2021	Iowa AES	9-19	47	46	39	53	55	51	33	18	2.1	Rps1k	3	S
PB-2309NRR	Renk	9-19	-	-	35	-	-	49	34	17	2.3	S	3	MR
T-3236CN	Thompson	9-19	-	54	48	-	54	49	33	17	2.2	S	4	MR

Variety	Brand or Originator	Mature Date	Yield, Bushels/Acre						Percent		Maturity Rating	Phytophthora Gene	Chlorosis Score	SCN Rating
			Infested Sites			Non-Infested Sites			Protein	Oil				
			97-99	99-98	1999	97-99	98-99	1999						
3231NRR	Dyna-Gro	9-19	–	–	39	–	–	48	34	17	2.3	S	3	S
X 92348RR	Golden Harvest	9-19	–	–	35	–	–	45	34	17	2.3	S	3	MR
KB230RR	Kaltenberg	9-19	–	–	35	–	–	45	34	17	2.3	S	4	MR
IA2036	Iowa AES	9-19	47	46	39	49	50	45	34	17	2.2	Rps1k	3	MR
EX-527RRN	Latham	9-20	–	–	35	–	–	47	34	17	2.3	S	4	MR
D259N	Garst	9-20	–	–	34	–	–	46	33	17	2.4	S	3	MR
6222CRR	LG Seeds	9-20	–	–	40	–	–	46	34	17	2.2	S	3	MR
2402-2	Stine	9-21	–	–	34	–	–	45	33	18	2.4	S	5	MR
LSD 20%			1	1	2	1	1	2						

Performance of public and private soybean varieties in order of susceptibility to white mold infection, Shelly, 1999.

Brand or Originator	Variety	White Mold Incidence (%)			Yield, Bu/Acre
		Average	Minimum	Maximum	
N. D. AES	Daksoy	1.6	0.0	4.4	53.4
Minn. AES	Glacier	1.6	0.0	2.5	51.5
Minn. AES	McCall	2.9	1.0	7.0	37.8
N. D. AES	Traill	5.3	1.0	15.0	43.4
Minn. AES	Agassiz	7.1	2.5	16.0	51.4
Prairie Brand Research	PBR030RR	7.4	2.2	12.0	47.5
Dekalb	CX046	7.8	2.0	17.6	36.9
Croplan Genetics	L0292	25.1	10.0	50.0	57.2
Prairie Brand	PB098	32.1	4.2	50.0	35.4
Minn. AES	MN0301	35.4	10.5	60.0	36.9
LSD 20%		10.5			6.9

Performance of public and private soybean varieties in order of susceptibility to white mold infection, Rosemount, 1999.

Brand or Originator	Variety	White Mold Incidence (%)			Yield, Bu/Acre
		Average	Minimum	Maximum	
Pioneer	9163	4.2	0.0	7.5	46.0
Minn. AES	MN0301	4.7	0.0	8.8	44.4
Minn. AES	Toyopro	5.7	0.0	11.3	44.5
Minn. AES	Evans	7.1	0.0	15.0	40.7
Novartis	S14-M7	9.5	6.5	13.8	50.4
Golden Harvest	H1103	9.6	5.7	15.0	45.6
Prairie Brand	PB-146	9.6	7.1	11.3	58.8
Minn. AES	Parker	9.7	7.5	11.1	40.4
Minn. AES	Lambert	9.7	2.5	22.5	49.6
Minn. AES	Minnatto	9.8	7.8	11.3	34.9
Novartis	X9818	11.4	8.6	15.4	47.2
Stine	1296-4	11.7	7.7	14.5	53.5
Pioneer	91B53	11.8	7.5	16.3	50.6
Novartis	X9814	11.8	0.0	30.0	46.3
Asgrow	AG1934	12.0	2.7	15.8	43.6
Prairie Brand Research	PBR1404	12.3	1.4	21.3	49.4
Latham	EX157RR	13.2	6.5	17.6	45.5
Pioneer	91B64RR	13.9	8.6	20.5	48.1
Minn. AES	Kato	14.1	11.5	17.1	42.1

Brand or Originator	Variety	White Mold Incidence (%)			Yield, Bu/Acre
		Average	Minimum	Maximum	
Minn. AES	MN1301	15.8	2.5	30.8	45.4
Sands	SOI 098	15.9	9.9	20.0	58.6
Latham	140 Brand	18.2	13.8	23.8	48.4
Pioneer	91B52RR	20.0	6.3	36.1	44.9
UAP Midwest(Dynagrow)	3149RR	22.1	11.3	38.8	35.8
Prairie Brand	PB-1709RR	43.7	27.5	75.0	36.6
LSD 20%		7.1			6.7

Performance of public and private soybean varieties in order of susceptibility to white mold infection, Byron, 1999.

Brand or Originator	Variety	White Mold Incidence (%)			Yield, Bu/Acre
		Average	Minimum	Maximum	
Pioneer	9163	2.2	0.0	3.8	24.3
Agripro	AP394	2.8	0.0	5.0	40.1
Asgrow	AG2001	3.8	1.3	5.0	44.0
Dekalb	CX195	4.4	3.8	5.0	48.1
Stine	2500	6.6	1.3	10.0	48.7
Thompson	T-3203	6.6	0.0	12.5	59.1
Asgrow	AG2501	8.1	2.5	17.5	43.1
Pioneer	91B53	8.8	0.0	25.0	44.4
Thompson	T-3184	8.8	0.0	17.5	59.9
Northstar	1903	11.0	1.3	25.0	54.4
Great Lakes Hybrids	GL1715	11.0	1.3	21.3	49.5
Novartis	X9818	11.3	5.0	22.5	48.9
Dairyland	DSR218	11.9	7.5	20.0	38.2
Asgrow	AG1901	11.9	0.0	40.0	34.9
United Suppliers	US S199	12.2	6.3	20.0	52.8
Sand	SOI 144	13.5	0.0	35.0	59.0
Iowa AES	IA1006	14.1	3.8	22.5	34.8
Pioneer	91B52RR	14.7	2.5	25.0	41.7
Domestic Seed	M-1190	14.7	2.5	30.0	50.4
Pioneer	91B64RR	15.0	5.0	30.0	42.2
Latham	H-1184	16.0	10.0	20.0	45.1
Sand	SOI 260	16.0	10.0	20.0	58.9
Prairie Brand	PB-227	16.3	5.0	30.0	46.4
UAP Midwest(Dynagrow)	3206RR	16.9	6.3	30.0	31.6
Latham	EX-447RR	17.2	10.0	25.0	38.1
Minn. AES	Granite	17.2	10.0	30.0	36.9
UAP Midwest(Dynagrow)	3231RR	18.8	2.5	30.0	33.0
Dekalb	CX166	18.8	5.0	30.0	51.1
Prairie Brand	PB-194	18.8	2.5	50.0	54.6
Dairyland	DSR215RR	21.0	11.3	30.0	25.2
Novartis	S22-N2	21.0	15.0	30.0	40.8
Iowa AES	IA2021	21.3	10.0	30.0	41.6
Latham	EX-347RR	22.5	20.0	27.5	36.5
Thompson	EX8146	22.5	12.5	40.0	51.5
Northstar	1904RR	23.8	15.0	30.0	40.5
Jung	1174 WM	24.1	0.0	43.8	42.1
Minn. AES	MN1801	24.7	10.0	35.0	42.8
Latham	406RR	26.6	10.0	40.0	37.4
Novartis	X9923	26.9	15.0	37.5	38.1

Brand or Originator	Variety	White Mold Incidence (%)			Yield, Bu/Acre
		Average	Minimum	Maximum	
Dairyland	DSR173	27.2	2.5	62.5	40.6
UAP Midwest(Dynagrow)	3238RR	34.1	10.0	50.0	34.5
Minn. AES	Sturdy	35.6	15.0	65.0	38.5
Dekalb	CX198RR	52.5	0.0	93.8	40.3
Prairie Brand Research	PBR1909RR	63.5	50.0	78.8	24.9
Golden Harvest	X8191RR	68.2	38.8	93.8	31.0
LSD 20%		12.2			12.3

Performance of public and private soybean varieties in order of susceptibility to white mold infection, Danube, 1999.

Brand or Originator	Variety	White Mold Incidence (%)			Yield, Bu/Acre
		Average	Minimum	Maximum	
Sand	SOI 260	0.0	0.0	0.0	25.7
Thompson	T-3203	0.8	0.0	2.5	44.5
Jung	1174 WM	1.9	0.0	7.5	41.7
Sand	SOI 144	2.5	0.0	10.0	47.7
Latham	H-1184	3.8	0.0	7.5	37.6
Thompson	T-3184	3.8	0.0	10.0	38.8
United Suppliers	US S199	3.8	0.0	7.5	36.9
Pioneer	9163	4.4	0.0	10.0	47.6
Iowa AES	IA2021	4.4	0.0	10.0	35.9
Asgrow	AG2501	5.6	0.0	17.5	36.6
Dairyland	DSR-173	5.6	0.0	17.5	40.2
Northstar	1903	6.3	0.0	15.0	49.8
Great Lakes Hybrids	GL1715	6.3	0.0	15.0	45.9
Minn. AES	MN1801	6.3	0.0	17.5	39.0
Prairie Brand	PB-227	6.3	0.0	12.5	32.3
Prairie Brand	PB-194	6.9	0.0	10.0	39.7
Agripro	AP1394	8.1	0.0	25.0	45.3
Domestic Seed	M-1190	8.1	0.0	15.0	41.0
Minn. AES	Granite	8.8	0.0	15.0	26.6
Latham	406RR	9.4	0.0	25.0	43.2
Asgrow	AG2001	9.4	5.0	17.5	49.4
Pioneer	91B53	10.0	0.0	20.0	52.3
Pioneer	91B64RR	10.0	0.0	15.0	49.8
Novartis	X9818	10.0	0.0	22.5	37.8
Stine	2500	10.6	0.0	27.5	44.5
Thompson	EX8146	10.6	0.0	25.0	42.1
Iowa AES	IA1006	10.6	5.0	20.0	46.3
Dekalb	CX-166	11.3	0.0	37.5	50.2
Dekalb	CX-195	11.3	0.0	22.5	46.6
Novartis	S22-N2	11.9	0.0	40.0	41.3
Asgrow	AG1901	12.5	0.0	30.0	38.2
Latham	EX-447RR	12.5	0.0	35.0	44.2
UAP Midwest(Dynagrow)	3238RR	15.6	5.0	37.5	39.7
Dairyland	DSR-218	16.9	0.0	45.0	50.1
Novartis	X9923	16.9	0.0	30.0	33.5
Minn. AES	Sturdy	18.1	7.5	25.0	35.5
UAP Midwest(Dynagrow)	3206RR	18.8	0.0	40.0	40.9
Prairie Brand Research	PBR1909RR	20.6	0.0	45.0	32.7
Dairyland	DSR-215	22.5	5.0	40.0	41.8

Brand or Originator	Variety	White Mold Incidence (%)			Yield, Bu/Acre
		Average	Minimum	Maximum	
Latham	EX-347RR	23.1	0.0	37.5	38.2
Pioneer	91B52RR	28.1	10.0	50.0	37.8
UAP Midwest(Dynagrow)	3231NRR	31.3	10.0	60.0	39.5
Dekalb	CX-198R	35.6	20.0	62.5	42.0
Golden Harvest	X8191RR	37.5	30.0	57.5	28.3
Northstar	1904RR	40.6	17.5	52.5	35.0
LSD 20%		9.4			8.3

Performance of special-use soybean varieties, 1997-1999.

Variety	Releasing Institution	Mature Date	Yield, Bushels/Acre			Percent	
			1997-99	1998-99	1999	Protein	Oil
Northern Zone, 1997,1998 Morris and Rosemount; 1999 Crookston, Moorhead and Shelly							
Jim	N.D. AES	9-20	–	–	31	34	17
Agassiz	Minn. AES	9-24	37	40	34	34	17
UM3	Minn. AES	9-24	34	39	37	34	17
Norpro	N.D. AES	9-26	–	–	35	36	15
Danatto	N.D. AES	10-1	36	39	31	32	17
Minnatto	Minn. AES	10-4	32	34	29	36	14
Southern Zone, Lamberton and Waseca							
Parker	Minn. AES	9-22	–	48	46	34	17
IA1006	Iowa AES	9-25	50	51	50	33	17
IA1007	Iowa AES	9-28	–	47	41	35	17
IA1005	Iowa AES	9-30	–	52	49	34	17
IA2012	Iowa AES	9-30	–	47	40	35	17
HP204	Iowa AES	9-30	–	43	38	36	17
IA2041	Iowa AES	10-1	–	–	43	37	16
IA2016	Iowa AES	10-1	44	44	41	36	17
IA2042	Iowa AES	10-1	–	–	41	37	16
Vinton 81	Iowa AES	10-1	–	42	40	36	17
IA2023	Iowa AES	10-1	–	38	35	37	15
IA2035	Iowa AES	10-1	–	37	32	36	16
IA2019	Iowa AES	10-2	–	50	44	34	18
IA2040	Iowa AES	10-2	–	–	43	35	17
IA2011	Iowa AES	10-2	–	48	36	34	18
IA2025	Iowa AES	10-2	–	42	36	37	16
IA2017	Iowa AES	10-2	42	42	34	36	17
IA2034	Iowa AES	10-3	50	51	44	36	16
IA2033	Iowa AES	10-3	–	43	40	36	17
IA2029	Iowa AES	10-3	–	41	38	36	17
IA2032	Iowa AES	10-3	–	44	38	36	17
IA2027	Iowa AES	10-3	–	41	35	36	17
IA2024	Iowa AES	10-3	–	34	32	36	16
IA2028	Iowa AES	10-4	–	46	39	35	17
IA2030	Iowa AES	10-4	–	44	38	36	16
IA2020	Iowa AES	10-4	43	44	36	35	17
LSD 20%			2	3	4		

Performance of special-use soybean varieties, 1999.

Variety	Releasing Institution	Maturity Rating	Special Characteristics	Hilum Color	Phytophthora Gene	Chlorosis Score	Seeds/Pound
Northern Zone, 1997,98 Morris and Rosemount, 1999 Crookston, Moorhead and Shelly							
Jim	N.D. AES	00.0	General Purpose	Yellow	S	3	2,671
Agassiz	Minn. AES	0.0	General Purpose	Buff	Rps1	3	3,027
UM3	Minn. AES	0.3	Small Seed	Yellow	Rps1	3	5,675
Norpro	N.D. AES	0.4	High Protein	Yellow	S	3	2,671
Danatto	N.D. AES	0.4	Small Seed	Yellow	S	3	5,044
Minnatto	Minn. AES	0.7	Small Seed	Yellow	Rps1	3	5,044
Southern Zone, Lamberton and Waseca							
Parker	Minn. AES	1.6	General Purpose	Buff	Rps1	4	2,522
IA1006	Iowa AES	1.6	General Purpose	Black	S	3	2,838
IA1007	Iowa AES	1.9	Large Seed	Yellow	-	3	1,681
IA1005	Iowa AES	1.9	Large Seed,High Protein	Yellow	-	2	2,389
IA2012	Iowa AES	2.2	Large Seed	Yellow	-	4	1,746
HP204	Iowa AES	2.0	Large Seed,High Protein	Yellow	-	3	2,162
IA2041	Iowa AES	2.1	Large Seed,High Protein	Yellow	-	4	2,389
IA2016	Iowa AES	2.2	Large Seed,High Protein	Yellow	-	3	2,162
IA2042	Iowa AES	2.1	Large Seed,High Protein	Yellow	-	4	2,064
Vinton 81	Iowa AES	2.0	Large Seed,High Protein	Yellow	Rps1c	3	2,064
IA2023	Iowa AES	2.4	Small Seed	Yellow	-	4	6,486
IA2035	Iowa AES	2.4	Small Seed	Yellow	-	3	6,486
IA2019	Iowa AES	2.2	Large Seed	Yellow	-	4	1,892
IA2040	Iowa AES	2.4	Large Seed,High Protein	Yellow	-	4	1,681
IA2011	Iowa AES	2.2	Lacks Lipoxygenase 2	Yellow	-	3	2,522
IA2025	Iowa AES	2.4	Lipoxygenase Free	Yellow	-	3	2,162
IA2017	Iowa AES	2.2	Large Seed,High Protein	Yellow	-	5	2,389
IA2034	Iowa AES	2.5	Large Seed,High Protein	Yellow	-	4	2,270
IA2033	Iowa AES	2.4	Lipoxygenase Free	Yellow	-	4	2,162
IA2029	Iowa AES	2.4	Lipoxygenase Free	Yellow	-	5	2,270
IA2032	Iowa AES	2.5	Lipoxygenase Free	Yellow	-	3	2,064
IA2027	Iowa AES	2.4	Lipoxygenase Free	Yellow	-	4	2,162
IA2024	Iowa AES	2.5	Small Seed	Yellow	-	2	6,486
IA2028	Iowa AES	2.4	Lipoxygenase Free	Yellow	-	4	2,162
IA2030	Iowa AES	2.3	Lipoxygenase Free	Yellow	-	4	2,162
IA2020	Iowa AES	2.3	Large Seed,High Protein	Yellow	-	4	2,064

Public developed soybean varieties entered in 1999 tests.

Variety	Releasing Institution	Maturity Rating	Phytophthora Gene	BSR Reaction	SCN Reaction	Chlorosis Score
Daksoy	N.D. AES	00.6	S	S	S	4
McCall	Minn. AES	00.7	S	S	S	3
Jim	N.D. AES	00.7	S	S	S	4
Glacier	Minn. AES	00.8	Rps6	S	S	4
Agassiz	Minn. AES	0.0	Rps1	S	S	3
Traill	N.D. AES	0.0	S	S	S	4
Ozzie	Minn. AES	0.3	Rps1	S	S	3
MNO301	Minn. AES	0.3	Rps1	S	S	3
Council	N.D. AES	0.5	Rps1	S	S	3
Evans	Minn. AES	0.6	Rps1	S	S	4
Lambert	Minn. AES	0.8	Rps1	S	S	3
Hendricks	Minn. + S.D. AES	0.9	Rps1	S	S	4
Surge	S.D. + Minn. AES	0.9	Rps1	S	S	4
MNO901	Minn. AES	0.9	Rps1	S	S	4

Variety	Releasing Institution	Maturity Rating	Phytophthora Gene	BSR Reaction	SCN Reaction	Chlorosis Score
Kato	Minn. AES	1.3	Rps1	S	S	3
MN1301	Minn. AES	1.3	Rps1c	S	S	3
MN1401	Minn. AES	1.4	Rps1	S	S	3
Parker	Minn. AES	1.5	Rps1	S	S	4
IA1006	Iowa AES	1.6	S	R	S	4
Freeborn	Minn. AES	1.6	Rps1	R	R	4
Bert	Minn. AES	1.8	Rps1	S	S	4
Granite	Minn. AES	1.8	Rps1	R	S	4
MN1801	Minn. AES	1.8	Rps1	S	S	4
Faribault	Minn. AES	1.9	Rps1	R	R	4
Archer	Iowa AES	1.9	Rps1k+Rps6	R	S	2
IA1008	Iowa AES	1.9	S	S	R	4
Hardin 91	Iowa AES	2.0	Rps1k	S	S	4
Sturdy	Minn. AES	2.0	Rps1	S	S	3
IA2021	Iowa AES	2.1	Rps1k	S	S	4
IA2008R	Iowa AES	2.1	Rps1k	R	S	3
IA1009	Iowa AES	2.1	S	S	R	3
IA2036	Iowa AES	2.1	S	S	R	3
IA2038	Iowa AES	2.3	S	S	S	4

Sources of Registered and Certified Seed

Following are sources of Registered and Certified seed of crop varieties grown for certification in Minnesota in 1999. Fields of these seed growers were inspected by Minnesota Crop Improvement Association (MCIA).

To be eligible for final certification the seed produced on these fields must be sampled, tested and inspected by MCIA after conditioning. The term "certified" is broadly applied to three classes of seed, Foundation, Registered and Certified. Registered seed is grown from Foundation seed and Certified seed is usually grown from Registered seed, though Certified seed of some varieties is grown directly from the Foundation seed class.

Certified seed transported across state lines must comply with the stipulations of the Federal Seed Act and with seed laws and regulations of the state into which it is transported. Seed tagged with MCIA certification tags or for which an MCIA bulk

certification certificate has been issued has been grown, conditioned, sampled and tested according to MCIA regulations and meets applicable requirements of the Minnesota Department of Agriculture.

Should you ever suspect misrepresentation, mislabeling or violation of regulations under which certified seed classes are produced and marketed, contact Minnesota Crop Improvement Association, 1900 Hendon Avenue, St. Paul, MN 55108.

Prospective buyers of seed from growers in the list that follows should contact growers directly for information about seed quantity and price.

This listing is provided as a service to prospective seed buyers. It is not to be construed as an offer for sale by the grower and is not to be considered as public advertising or as the posting of public notice in any manner. Growers who wish to promote and sell seed in Minnesota must com-

ply with all current state regulations governing the sale of seed.

Notice to Seed Buyers

While MCIA cannot assume financial responsibility for the performance of seed listed in this directory or for disagreements over sales that may arise from this list any complaint about certified seed addressed to MCIA will be investigated. Should a claim over seed performance involving MCIA arise, it must be addressed as provided in Minnesota Department of Agriculture Rules for Arbitration of Seed Performance Disputes. It is the responsibility of the seller of certified seed to supply seed representative of the samples submitted and approved for certification by MCIA. Purchasers of seed should insist on certification being complete, with certified seed tags attached to bags or a bulk sale certificate issued for bulk seed lots.

Listing lines show county, grower, town, phone number and class of seed, R for Registered, C for Certified.

Listing lines show county, grower, town, phone number and class of seed, R for Registered, C for Certified.

Wilkin	Haugrud Seed Plant, Rothsay	218-493-4275	C R	Le Sueur	Haas Seed Farm, Le Sueur	507-665-3683	C R
Wilkin	Torkelson, Dennis & Brent, Foxhome	218-736-4607	C	Le Sueur	Stangler Farm Seed, Dick, Kilkenny	507-595-2883	C
Daksoy				Lincoln	Jerzak, John, Ivanhoe	507-694-1834	C
Douglas	Sward Seed Farm, Nelson	320-762-0143	R	Lincoln	Oerter, Donald, Tyler	507-247-3839	C
Marshall	Efta, Joe, Argyle	218-437-6457	C	Meeker	Anderson Seeds, Dassel	320-286-2700	C
Marshall	Kowalski, James, Stephen	218-478-3899	R	Meeker	Miller Seed Farm, Dassel	320-275-2463	C R
Marshall	Riopelle, Jack L., Argyle	218-437-8147	R	Meeker	Wigen Seed Farm, Litchfield	320-693-8182	C
Marshall	Robertson Brothers, Argyle	218-437-6411	C	Mower	Zimmerman Seeds, Racine	507-378-2077	C R
Norman	Chisholm, Keith P., Gary	218-356-8674	R	Nicollet	Anderson & Sons, St. Peter	507-246-5032	C
Norman	Chisholm, Mark M., Gary	218-356-8507	C	Pipestone	Spronk, Art & Sons Seed Farm, Edgerton	507-442-5334	C R
Norman	Krogstad, Jimmie, Fertile	218-945-6242	C	Redwood	Lange, Robert A., Windom	507-831-4065	R
Norman	Krogstad, Steve, Fertile	218-945-6336	C	Redwood	Sawvell, Ronald, Clements	507-692-2240	R
Norman	Sirjord, Avery, Gary	218-356-8631	R	Renville	Enestvedt Bros., Sacred Heart	320-765-2728	C R
Otter Tail	Helmrichs, Larry, Deer Creek	218-462-2634	C	Rice	Salaba, Larry, Faribault	507-334-2603	C
Red Lake	Swenson Seed Farm, Brooks	218-796-5285	R	Rice	Werner Farm Seeds, Dundas	507-645-7995	C R
Danatto				Scott	Hauer Farms, Inc., Shakopee	612-445-7554	C
Clay	Heartland Seeds, Moorhead	218-585-4621	C	Waseca	Byron Farm Store, Inc., Waseca	507-835-1120	C
Evans				Watsonwan	Nelson Seed Farm, Gregg, St. James	507-375-5317	C
Becker	Hein Farms, Inc., Audubon	218-439-6621	C	IA1007			
Brown	Rosbach Lakeside Seeds, Inc., Hanska	507-794-7698	C	Dodge	Frontier Commodities, Byron	507-634-6060	R
Clay	Johnson, Brian M., Hawley	218-962-3316	C	Freeborn	Albert Lea Seed House, Inc., Albert Lea	507-373-3161	R
Douglas	Sward Seed Farm, Nelson	320-762-0143	C	IA1008			
Meeker	Johnson Seeds of Dassel, Inc., Dassel	320-275-2430	C	Waseca	Galler Seeds, Elysian	507-267-4328	R
Ramsey	Northland Seed Corporation, St. Paul	651-221-0855	C	IA1009			
Wright	Dahlco Seeds, Inc., Cokato	320-286-5982	C	Waseca	Galler Seeds, Elysian	507-267-4328	R
Freeborn				IA2008			
Faribault	Ehrich Seed Farm, Elmore	507-943-3762	C	Brown	Rosbach Lakeside Seeds, Inc., Hanska	507-794-7698	C
Faribault	Willette Seed Farm, Inc., Delavan	507-854-3595	C R	Freeborn	Albert Lea Seed House, Inc., Albert Lea	507-373-3161	C
Freeborn	Albert Lea Seed House, Inc., Albert Lea	507-373-3161	C R	Le Sueur	Birr Brothers, Mark & Gene, Kasota	507-931-2218	C
Glacier				Mower	Zimmerman Seeds, Racine	507-378-2077	C
Marshall	Sczepanski, Thomas, Stephen	218-478-2462	R	Nicollet	Anderson & Sons, St. Peter	507-246-5032	C
Granite				IA2008R			
Lincoln	Deutz, Daniel, Lake Benton	507-368-9234	C R	Faribault	Watsonwan Farm Service, Kiester	507-294-3697	C
Lincoln	Popowski, John, Ivanhoe	507-694-1593	C	Lincoln	Deutz, Daniel, Lake Benton	507-368-9234	C
Scott	Hauer Farms, Inc., Shakopee	612-445-7554	C	Renville	Enestvedt Bros., Sacred Heart	320-765-2728	R
HP204				Scott	Hauer Farms, Inc., Shakopee	612-445-7554	C
Dodge	Frontier Commodities, Byron	507-634-6060	R	IA2012			
Freeborn	Albert Lea Seed House, Inc., Albert Lea	507-373-3161	C R	Freeborn	Albert Lea Seed House, Inc., Albert Lea	507-373-3161	C R
McLeod	Michaletz, Larry, Lester Prairie	320-395-2629	C	IA2016			
Waseca	Galler Seeds, Elysian	507-267-4328	C	Freeborn	Albert Lea Seed House, Inc., Albert Lea	507-373-3161	C R
Wright	Dahlco Seeds, Inc., Cokato	320-286-5982	C	IA2020			
Hardin 91				Dodge	Frontier Commodities, Byron	507-634-6060	R
Dakota	May, Jr., William, Farmington	612-463-8541	C	Freeborn	Albert Lea Seed House, Inc., Albert Lea	507-373-3161	R
Freeborn	Albert Lea Seed House, Inc., Albert Lea	507-373-3161	C R	IA2021			
Le Sueur	Goettl Farms c/o R & J Goettl, Le Center	507-357-6509	C	Brown	Rosbach Lakeside Seeds, Inc., Hanska	507-794-7698	C
Le Sueur	Haas Seed Farm, Le Sueur	507-665-3683	C	Dakota	May, Jr., William, Farmington	612-463-8541	C
Meeker	Anderson Seeds, Dassel	320-286-2700	C	Dodge	Koss, William, Dodge Center	507-374-6786	R
Meeker	Miller Seed Farm, Dassel	320-275-2463	C R	Dodge	Wright Seed Service, West Concord	507-527-2737	C
Meeker	Smith, Steven, Darwin	320-693-6769	C	Freeborn	Albert Lea Seed House, Inc., Albert Lea	507-373-3161	C R
Meeker	Wigen Seed Farm, Litchfield	320-693-8182	C	Freeborn	Kuiters, Keith S., Clarks Grove	507-256-4300	C
Nobles	Ocheda Seed Farm, Worthington	507-376-9033	C R	Jackson	Pietz Farms, Inc., Lakefield	507-662-6309	C R
Renville	Kiecker Seed Company, Hector	507-426-8167	R	Le Sueur	Goettl Farms c/o R & J Goettl, Le Center	507-357-6509	C
Scott	Hauer Farms, Inc., Shakopee	612-445-7554	C	Le Sueur	Haas Seed Farm, Le Sueur	507-665-3683	C R
Wright	Dahlco Seeds, Inc., Cokato	320-286-5982	C	Le Sueur	Stangler Farm Seed, Dick, Kilkenny	507-595-2883	R
IA1006				Lyon	Olson, Jonathan, Cottonwood	507-423-6340	C R
Dakota	Hoffman, Paul D., Hampton	612-463-4394	C	Nicollet	Anderson & Sons, St. Peter	507-246-5032	C
Dakota	May, Jr., William, Farmington	612-463-8541	C	Nobles	Ocheda Seed Farm, Worthington	507-376-9033	C R
Dodge	Koss, William, Dodge Center	507-374-6786	R	Redwood	Sawvell, Ronald, Clements	507-692-2240	R
Dodge	Wright Seed Service, West Concord	507-527-2737	C	Renville	Kiecker Seed, Lanny, Fairfax	507-426-7534	C
Freeborn	Albert Lea Seed House, Inc., Albert Lea	507-373-3161	C R	Rice	Werner Farm Seeds, Dundas	507-645-7995	C R
Freeborn	Kuiters, Keith S., Clarks Grove	507-256-4300	C	Wabasha	Zabel Seeds, Plainview	507-534-2487	C
Jackson	Brunk Bros., Gene or William, Brewster	507-842-5471	C	Waseca	Byron Farm Store, Inc., Waseca	507-835-1120	C
Jackson	Pietz Farms, Inc., Lakefield	507-662-6309	R	IA2034			
Kandiyohi	Loge, Alan, Willmar	320-235-4178	C	Faribault	Willette Seed Farm, Inc., Delavan	507-854-3595	C

Listing lines show county, grower, town, phone number and class of seed, R for Registered, C for Certified.

Freeborn	Albert Lea Seed House, Inc., Albert Lea	507-373-3161	C R	MN0301			
IA2035				Clay	Fuglie, Duane, Ulen	218-596-8528	C
Waseca	Galler Seeds, Elysian	507-267-4328	C R	Clay	Hastings Farms LLP, Felton	218-494-3935	C
IA2036				Clay	Krabbenhoft & Sons, Inc., Sabin	218-789-7206	C
Faribault	Willette Seed Farm, Inc., Delavan	507-854-3595	C	Clay	Tande, Harmen, Moorhead	218-233-0250	C
Jackson	Brunk Bros., Gene or William, Brewster	507-842-5471	C	Clay	Thunder Seed, Inc., Hawley	218-483-4637	C
Jackson	Pietz Farms, Inc., Lakefield	507-662-6309	C R	Clay	Tobolt Seed, Moorhead	218-287-2904	C
Jim				Clay	Tri-County Co-op Assn., Ulen	218-596-8821	C
Becker	Jirava, James, Ogema	218-983-3448	C	Clay	Zimmerman, Wayne, Ulen	218-596-8628	C
Carlton	Korhonen, Art, Kettle River	218-273-4931	R	Marshall	Riopelle, Earl & Brent, Argyle	218-437-8291	C
Clay	Heartland Seeds, Moorhead	218-585-4621	C	Marshall	Sczepanski, Thomas, Stephen	218-478-2462	C
Clay	Krabbenhoft & Sons, Inc., Sabin	218-789-7206	C	Norman	Chisholm, Keith P., Gary	218-356-8674	C
Clay	Ness, James, Moorhead	218-585-4306	C	Norman	Ellingson Farms, Borup	218-861-6605	C
Douglas	Sward Seed Farm, Nelson	320-762-0143	R	Norman	Brenden, Bruce L., Rothsay	218-867-2410	C
Kittson	Petersen, Ronald L., Lake Bronson	218-754-4631	C R	Out of state	Anderson, Gerald D, Grand Forks, N.D.	701-775-8766	C
Marshall	Anderson, Brian C., Stephen	218-455-3495	C	Polk	Ostena, Sidney & DeWayne, Mc Intosh	218-563-7395	C
Marshall	Kowalski, James, Stephen	218-478-3899	R	Todd	Faust, Kevin, Long Prairie	320-732-3361	C
Marshall	Peterson, Maynard, Stephen	218-478-3859	R	Wilkin	Haugrud Seed Plant, Rothsay	218-493-4275	C
Marshall	Robertson Brothers, Argyle	218-437-6411	R	MN0901			
Marshall	Sczepanski, Thomas, Stephen	218-478-2462	C R	Big Stone	Clinton Ag Service, Inc., Clinton	320-325-5203	R
Norman	Brandt, Wayne G. & John, Ada	218-784-4774	R	Clay	Anderson, Lynn, Moorhead	218-287-1765	R
Norman	Chisholm, Keith P., Gary	218-356-8674	R	Clay	Tobolt Seed, Moorhead	218-287-2904	R
Norman	Chisholm, Mark M., Gary	218-356-8507	C	Kandiyohi	Behm Seed Company, Atwater	320-974-3003	C R
Norman	Ellingson Farms, Borup	218-861-6605	R	Kandiyohi	Bredeson Seed Farm, Willmar	320-235-7315	R
Norman	Sirjord, Avery, Gary	218-356-8631	R	Le Sueur	Haas Seed Farm, Le Sueur	507-665-3683	R
Out of state	Anderson, Gerald D, Grand Forks, N.D.	701-775-8766	R	Otter Tail	Brenden, Bruce L., Rothsay	218-867-2410	C
Pennington	Scholin Farms, Thief River Falls	218-964-5268	R	Otter Tail	Brenden, Selvin C., Rothsay	218-867-2134	R
Polk	Balstad, Scott, Fosston	218-435-6311	R	Renville	JSE Inc., Sacred Heart	320-765-2225	R
Polk	Fosston Co-op Seed House, Fosston	218-435-6222	C R	Renville	Kiecker Seed Company, Hector	507-426-8167	C R
Polk	Gullekson, Ray, Brent & Brian, Beltrami	218-926-5642	R	Stearns	Schulzetenberg, John, Melrose	320-987-3638	R
Polk	Mat - Co., Inc., Fosston	218-435-6667	C R	Swift	Lee's Seed Farm, Benson	320-843-2857	R
Polk	Ostena, Sidney & DeWayne, Mc Intosh	218-563-7395	R	Traverse	Rinke, David, Wheaton	320-563-4864	C R
Polk	Peterson, D.W., Inc., Warren	218-745-4507	R	Wabasha	Zabel Seeds, Plainview	507-534-2487	C
Polk	Vig Farms Inc., Fosston	218-435-1316	C R	Wilkin	Nelson, Bradley, Wolverton	218-995-2299	R
Red Lake	Swenson Seed Farm, Brooks	218-796-5285	C R	MN1301			
Todd	Faust, Kevin, Long Prairie	320-732-3361	C	Big Stone	Clinton Ag Service, Inc., Clinton	320-325-5203	C
Kato				Kandiyohi	Behm Seed Company, Atwater	320-974-3003	C
Kandiyohi	Behm Seed Company, Atwater	320-974-3003	R	Kandiyohi	Bredeson Seed Farm, Willmar	320-235-7315	C
Lyon	Olson, Jonathan, Cottonwood	507-423-6340	C	Lyon	Olson, Jonathan, Cottonwood	507-423-6340	C
Meeker	Wigen Seed Farm, Litchfield	320-693-8182	C	Meeker	Wigen Seed Farm, Litchfield	320-693-8182	C
Scott	Hauer Farms, Inc., Shakopee	612-445-7554	C	Renville	Kiecker Seed Company, Hector	507-426-8167	C
Swift	Falk Seed Farm, Murdock	320-875-4341	C R	Swift	Falk Seed Farm, Murdock	320-875-4341	C
Wright	Dahlco Seeds, Inc., Cokato	320-286-5982	C	MN1401			
Lambert				Big Stone	Clinton Ag Service, Inc., Clinton	320-325-5203	C
Clay	Arneson Farms, Hawley	218-483-4165	C	Dakota	Hoffman, Paul D., Hampton	612-463-4394	C
Clay	Fischer, Wilbert & Dale, Glyndon	218-498-2741	C	Kandiyohi	Behm Seed Company, Atwater	320-974-3003	C R
Clay	Oberg Farms, Moorhead	218-236-9856	C	Kandiyohi	Loge, Alan, Willmar	320-235-4178	C
Dakota	May, Jr., William, Farmington	612-463-8541	C	Lac qui Parle	Hermanson Seed Plant, Boyd	320-855-2527	C
Douglas	Sward Seed Farm, Nelson	320-762-0143	C	Lac qui Parle	Kemen, Robert & Sons, Madison	320-769-4413	R
Douglas	Thompson Farms, Kensington	320-965-2486	C	Le Sueur	Haas Seed Farm, Le Sueur	507-665-3683	C
Freeborn	Albert Lea Seed House, Inc., Albert Lea	507-373-3161	C R	Lincoln	Anderson, Merv, Porter	507-223-7981	C
Grant	Adams Seed, Wendell	218-458-2151	C R	Meeker	Anderson Seeds, Dassel	320-286-2700	C
Grant	Backman Seeds, Herman	320-677-2231	C	Meeker	Miller Seed Farm, Dassel	320-275-2463	C
Hennepin	Coleman, Craig, Edina	612-924-9161	C	Meeker	Smith, Steven, Darwin	320-693-6769	C
Kandiyohi	Behm Seed Company, Atwater	320-974-3003	C R	Meeker	Wigen Seed Farm, Litchfield	320-693-8182	C
Le Sueur	Haas Seed Farm, Le Sueur	507-665-3683	C	Nicollet	Anderson & Sons, St. Peter	507-246-5032	C
Meeker	Johnson Seeds of Dassel, Inc., Dassel	320-275-2430	C	Pipestone	Spronk, Art & Sons Seed Farm, Edgerton	507-442-5334	R
Meeker	Wigen Seed Farm, Litchfield	320-693-8182	C	Renville	Enestvedt Bros., Sacred Heart	320-765-2728	C R
Renville	Kiecker Seed Company, Hector	507-426-8167	C R	Renville	Kiecker Seed Company, Hector	507-426-8167	C R
Scott	Hauer Farms, Inc., Shakopee	612-445-7554	C	Swift	Nelson Seed Company, Benson	320-843-3610	C
Stevens	Haberer Seed Farm, Morris	320-795-2468	C	Wright	Borg, Loren Seed Farms, Cokato	320-286-2222	C
Swift	Falk Seed Farm, Murdock	320-875-4341	C	MN1801			
Wilkin	Nordick, J & R, Rothsay	218-867-2605	C	Dodge	Wright Seed Service, West Concord	507-527-2737	C
Wilkin	Steenblock Farms, Dale, Campbell	218-630-5500	C	Freeborn	Albert Lea Seed House, Inc., Albert Lea	507-373-3161	C R
Wright	Dahlco Seeds, Inc., Cokato	320-286-5982	C	Jackson	Brunk Bros., Gene or William, Brewster	507-842-5471	C
				Kandiyohi	Behm Seed Company, Atwater	320-974-3003	C R

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Kandiyohi	Bredeson Seed Farm, Willmar	320-235-7315	R	Yellow Medicine	Kuehn, Daryl, Echo	507-925-4236	C
Kandiyohi	Loge, Alan, Willmar	320-235-4178	R	Trail			
Lac qui Parle	Buer, Reid, Canby	507-223-7946	R	Clay	Olsgaard, Inc., Harold, Moorhead	218-585-4535	C
Lac qui Parle	Hermanson Seed Plant, Boyd	320-855-2527	R	Clay	Peterson Farm, Sherwood E., Baker	218-789-7378	C R
Lac qui Parle	Kemen, Robert & Sons, Madison	320-769-4413	R	Clay	Thunder Seed, Inc., Hawley	218-483-4637	C
Le Sueur	Haas Seed Farm, Le Sueur	507-665-3683	R	Clay	Wetterlin, Jerry & Aaron, Glyndon	218-494-3339	C
Le Sueur	Stangler Farm Seed, Dick, Kilkenny	507-595-2883	R	Clay	Zimmerman, Wayne, Ulen	218-596-8628	C R
Lincoln	Oerter, Donald, Tyler	507-247-3839	C	Mahnomen	Haugo, David, Waubun	218-473-2254	C
Lincoln	Syltie, Harvey A., Porter	507-296-4649	R	Marshall	Sczepanski, Thomas, Stephen	218-478-2462	C
Meeker	Smith, Steven, Darwin	320-693-6769	R	Norman	Krogstad, Steve, Fertile	218-945-6336	C
Meeker	Wigen Seed Farm, Litchfield	320-693-8182	C R	Otter Tail	Brenden, Bruce L., Rothsay	218-867-2410	C
Mower	Zimmerman Seeds, Racine	507-378-2077	R	Out of state	Anderson, Gerald D, Grand Forks, N.D.	701-775-8766	C R
Nicollet	Anderson & Sons, St. Peter	507-246-5032	R	Pennington	Swanson, Curtis W., Thief River Falls	218-964-5619	C
Redwood	Lange, Robert A., Windom	507-831-4065	R	Polk	Bauer Farms, Erskine	218-687-5356	C
Redwood	Sawvell, Ronald, Clements	507-692-2240	R	Polk	Kovar, Frank & Duane, East Grand Forks	218-773-9238	C
Renville	Kiecker Seed Company, Hector	507-426-8167	R	Polk	Mid-Valley Grain Cooperative, Crookston	218-281-2881	C
Rice	Werner Farm Seeds, Dundas	507-645-7995	C R	Polk	Wentzel, Walton Farms, Inc., Fisher	218-281-2207	C
Wabasha	Zabel Seeds, Plainview	507-534-2487	C	Red Lake	Swenson Seed Farm, Brooks	218-796-5285	C
McCall				Turner			
Clay	Wetterlin, Jerry & Aaron, Glyndon	218-494-3339	C	Brown	Cunningham Seed Farms, Sleepy Eye	507-794-7323	R
Wilkin	Nordick, J & R, Rothsay	218-867-2605	C	Brown	Gluth, William, Morgan	507-249-3970	R
Minnatto				Brown	Rosbach Lakeside Seeds, Inc., Hanska	507-794-7698	R
Wilkin	Friederichs Farm, Foxhome	218-643-2363	C	Freeborn	Albert Lea Seed House, Inc., Albert Lea	507-373-3161	R
OAC Millennium				Jackson	Brunk Bros., Gene or William, Brewster	507-842-5471	R
Marshall	Stinar, Merle, Warren	218-745-5279	C	Jackson	Farmers Co-operative Assn., Jackson	507-847-4160	R
Polk	Ritoch, Thomas, Alvarado	218-965-4666	C	Jackson	Rubis, Craig, Lakefield	507-662-6494	R
Parker				Redwood	Lange, Robert A., Windom	507-831-4065	R
Freeborn	Albert Lea Seed House, Inc., Albert Lea	507-373-3161	C	Vinton 81			
Lincoln	Jerzak, John, Ivanhoe	507-694-1834	C	Blue Earth	Ramy Seed Co., Michael Ramy, Mankato	507-387-4091	R
Lincoln	Popowski, John, Ivanhoe	507-694-1593	C	Dodge	Frontier Commodities, Byron	507-634-6060	R
Redwood	Tauer, Dennis, Springfield	507-723-5866	R	Faribault	Willette Seed Farm, Inc., Delavan	507-854-3595	C
Sentry				Fillmore	Moeller, Virgil, Spring Valley	507-346-2057	C
Grant	Westrom, Chad B., Elbow Lake	218-685-4232	C	Freeborn	Albert Lea Seed House, Inc., Albert Lea	507-373-3161	C R
Sturdy				Lyon	Olson, Jonathan, Cottonwood	507-423-6340	C
Brown	Rosbach Lakeside Seeds, Inc., Hanska	507-794-7698	C	Mower	Grass & Sons Seed Service, Le Roy	507-324-5820	C
Cottonwood	Imker, Brent, Lamberton	507-752-7697	C				
Freeborn	Albert Lea Seed House, Inc., Albert Lea	507-373-3161	C R				
Lac qui Parle	Buer, Reid, Canby	507-223-7946	C				
Lac qui Parle	Hermanson Seed Plant, Boyd	320-855-2527	C				
Lac qui Parle	Kemen, Robert & Sons, Madison	320-769-4413	C R				
Le Sueur	Birr Brothers, Mark & Gene, Kasota	507-931-2218	C				
Le Sueur	Haas Seed Farm, Le Sueur	507-665-3683	C				
Redwood	Tauer, Dennis, Springfield	507-723-5866	R				
Renville	Kiecker Seed Company, Hector	507-426-8167	C R				
Watonwan	Nelson Seed Farm, Gregg, St. James	507-375-5317	C				
Yellow Medicine	Rosetter, Richard D., Granite Falls	320-564-3620	C				
Surge							
Chippewa	Caspers, Bryan, Raymond	320-847-3539	C				
Dakota	Hoffman, Paul D., Hampton	612-463-4394	C				
Freeborn	Albert Lea Seed House, Inc., Albert Lea	507-373-3161	C				
Grant	Adams Seed, Wendell	218-458-2151	C R				
Grant	Dvorak, Adolph, Herman	320-677-2395	C				
Kandiyohi	Loge, Alan, Willmar	320-235-4178	C				
Lac qui Parle	Buer, Reid, Canby	507-223-7946	R				
Lac qui Parle	Hermanson Seed Plant, Boyd	320-855-2527	C				
Lac qui Parle	Kemen, Robert & Sons, Madison	320-769-4413	C R				
Lincoln	Deutz, Daniel, Lake Benton	507-368-9234	C R				
Lincoln	Popowski, John, Ivanhoe	507-694-1593	C				
Lyon	Huso, Elroy & Howard, Minneota	507-872-6821	R				
Lyon	Olson, Jonathan, Cottonwood	507-423-6340	C				
Meeker	Wigen Seed Farm, Litchfield	320-693-8182	C				
Renville	Enestvedt Bros., Sacred Heart	320-765-2728	C R				
Rice	Werner Farm Seeds, Dundas	507-645-7995	C				
Swift	Busse Seeds, Appleton	320-394-2315	C R				
Swift	Nelson Seed Company, Benson	320-843-3610	C				