

Soybean

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Each year Minnesota Agricultural Experiment Station scientists conduct performance tests of appropriately adapted public and private soybean varieties. Companies are charged a fee for each variety they enter to partially cover the costs of conducting these tests. A stipulation of the testing program is that the company is marketing or intends to begin marketing the variety in the next growing season. This information is also available electronically at the website www.soybeans.umn.edu or www.mnsoybean.org.

The 2011 growing season was wetter than normal until mid-August when it turned dry. Frost occurred in most places across the state on September 14 or September 15. Harvest was accomplished with little delay.

Tables 1 to 4 provide results from specific tests of available conventional and transgenic varieties adapted to the far northern, northern, central, and southern production zones. The map shows test locations and zone boundaries. All tests were planted between May 3 and June 8 at planting rates of 160,000 seeds/acre. Herbicides were used as necessary for good weed control. Row spacings were 12 inches at Crookston, 10 inches at Roseau, Thief River Falls, Moorhead and Shelly, and 30 inches at all other locations. Plot combines were used to harvest the plots.

Tables 5 to 10 provide performance and characteristics data from special-use soybean variety tests. These tests were conducted to provide reliable data for growers who are interested in producing special-use soybeans, which are typically grown under contract.

Table 11 provides important variety characteristics of publicly developed varieties entered in the 2011 tests.

Tables 12 to 14 provide results from the performance tests of cyst-nematode-resistant soybean varieties in infested field sites near Lamberton, Rosemount, Westbrook, Gaylord, and Waseca.

Tables 15 to 17 present SCN information from greenhouse tests conducted by the Nematology laboratory at the University of Minnesota Southern Research and Outreach Center at Waseca and soil analysis for SCN counts conducted by MVTL Laboratories, Inc. at New Ulm. The data are from evaluations of varieties from both the central and southern zone trials in soil with an HG type 0 (race 3) population of soybean cyst nematode. The level of SCN reproduction at the trial sites from each variety is shown as a field reproductive index as well as a resistance rating. Comparisons are best made relative to the susceptible check variety within a column. *HG types for the fields were not available at time of publication. Please check the electronic version for updates.*

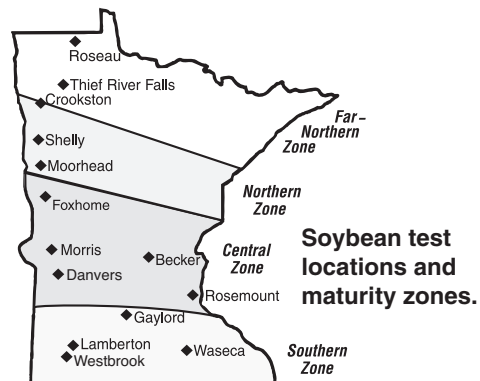
To better understand and use the data provided in these tables, please read the following additional information very carefully.

Relative Maturity and Calendar Dates of Maturity

Soybeans are photoperiod sensitive; that is, they respond to changing day length, so the actual calendar date of maturity achievement is affected by

latitude. Each variety has a narrow range (about 100 miles) of north-south adaptation. Soybean yield and quality are best achieved if a variety arrives at physiological maturity before a season ending freeze occurs. Maturity is determined visually by noting the actual date when 95 percent of the pods show their genetically programmed mature color. These dates for 2011 are provided in the tables. Harvest dates are typically 7 to 14 days later, depending upon drying conditions. **As noted earlier, a frost occurred on September 14 and September 15. Dates listed after that are estimates of when maturity would have been reached under normal weather conditions.**

Relative maturity ratings are also provided for each variety. These ratings consist of a number for the maturity group designation (000, 00, 0, 1, 2) followed by a decimal and another number, ranging from 0-9, which indicates a ranking within each maturity group. For example, the variety MN0101 indicates 0.1, making it an early group 0 variety, while MN0901, with a 0.9 rating, is the latest Group 0. 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 or estimated 2011 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.

The yield information is presented as a percent of the mean of the test. The actual mean value is given at the bottom of each table. Values over 100 indicate the variety had a yield greater than the mean while those less than 100 have a yield less than the mean.

LSD values associated with data in these tables are measures of variability within the trials. The LSD values are given on the percent of mean data not the actual yields. 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% level of significance is used in all these tables, which means that yield differences exceeding the stated LSD value are real 80% of the time.

Chlorosis

Chlorosis is a yield-limiting condition in soybeans grown in alkaline soils with high calcium carbonate or calcium sulfate ions present, making iron unavailable and causing the soybean plants to turn yellow. This yellowing is visually scored on a 1 to 5 scale, where 1 shows no yellowing and 5 has severe yellowing that may even include death of the plant. Research has shown that for every unit increase in chlorosis, for example going from a 2 to a 3, a 20% reduction in yield may occur.

Iron deficiency chlorosis (IDC) ratings in the tables are the results from tests conducted on high-lime (high pH) soils near Danvers and

Foxhome in 2011. By comparing chlorosis scores of varieties you can estimate how well they perform relative to each other. Actual chlorosis ratings can vary, depending on the specific site and year of test. Because of this high level of variability it is usually very difficult to identify the best-performing varieties. Producers with a known history of IDC problems may find it more useful to avoid varieties with the most severe (4 or 5) IDC ratings.

Different organizations may use different scales or descriptions. A comparison of three different chlorosis rating systems follows.

Numerical Score		Word Description
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 from mature seed using near infrared reflectance analysis equipment. **The table values are for the 2011 season only!** The protein and oil information is presented on a percent of the mean for each test. The actual mean values, expressed on a 13% moisture basis, are given at the bottom of each table. Values greater than 100 indicate the protein and/or oil contents of the variety are greater than the mean value while those less than 100 have protein and/or oil contents less than the mean. Absolute values of protein and oil can vary from year to year. The following formula is used to adjust the protein and oil values to another moisture basis.

$$\frac{100 - \text{desired moisture}}{87} \times \begin{matrix} \text{protein or oil value} \\ \text{given in the table} \end{matrix}$$

The value of a bushel of soybeans (APV) based on its oil and protein content can be calculated by:

$$APV = 60 [Po (X) + \frac{Pm}{.44}(Y)]$$

Where:
 APV = approximate value of a bushel of soybeans
 Po = soybean oil price (in \$ per pound)
 Pm = price of 44% meal (in \$ per pound)*
 X = oil content at 13% moisture (in decimals)
 Y = protein content at 13% moisture (in decimals)

And:
 * price of meal \$/ton = \$/pound

2,000

The value of an acre of soybeans can be calculated by multiplying the APV by the yield in bushels per acre.

Phytophthora

Phytophthora root rot is a soil-borne disease that occurs in heavy wet soils. Infection generally occurs during germination. Phytophthora root rot can cause significant yield reductions if susceptible varieties are planted in poorly drained, infested fields. Variety selection is the best defense against this yield reducing pathogen. There are several known races of this fungus, so it is important to know which are present in a particular 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 as indicated in the table below. Reliable tests for tolerance have not yet been developed.

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
Rps1,1a																											
Rps1b																											
Rps1c																											
Rps1k																											
Rps3																											
Rps4																											
Rps6																											

The data tables in this report indicate which Phytophthora gene or genes is/are present in each variety. An * is used where the claimed resistance was not verified by greenhouse evaluation. A # following the gene indicates greenhouse bioassay did not agree with originator's designation.

Soybean Cyst Nematode

Soybean Cyst Nematode (SCN) is a microscopic round worm that infects and reproduces in soybean roots. It was first identified in Minnesota in 1978 and is now known to occur in many Minnesota counties where soybeans are grown. Both the area of infestation and number of nematodes per unit of soil appear to be increasing. Several HG types (or races) of this pest are known to occur in Minnesota. Significant yield losses can occur when SCN numbers are high. Rotations to non-host crops and planting of resistant varieties can assist in reducing nematode populations as well as reducing their impact on yield.

Yield performance results of susceptible (S), low resistant (LR), moderately resistant (MR) and resistant (R) varieties planted in infested fields in central and southern Minnesota are provided in Tables 12 to 14. The ratings for SCN resistance in these tables were determined using results from greenhouse bioassays. In tables 15-17, the reproductive index is calculated as the number of nematodes at the end of the season (Pf) divided by the number of nematodes at the beginning of the season (Pi) in

soil samples collected from the field plots. The field egg count index (Ei) is the number of SCN eggs expressed as a percent of the average of the susceptible check varieties (Pf). Both the reproductive index and the field egg count index are useful indicators of a variety's ability to suppress SCN reproduction.

For proper management of fields with SCN, it is recommended that varieties with an R rating be planted. If the SCN population numbers are relatively low (less than 3,000) a variety with an MR rating might be considered. LR and S rated varieties should not be considered for planting in fields where SCN is present.

Management information is available from the web site www.soybeans.umn.edu 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

White mold, also known as Sclerotinia stem rot, develops in infested fields when high relative humidity and moderate temperatures occur during soybean flowering. Planting less-susceptible varieties in wider row spacings or at lower populations is the most effective method of reducing the severity of white mold.

Accurate ratings for soybean variety resistance to white mold are difficult to obtain because both infection and disease development are

dependent on weather conditions. Because of this variability, a variety's performance can change significantly among locations and years depending on the interaction of plant development, precipitation, relative humidity and temperature. White mold severity also tends to be greater if lodging occurs. Growers concerned about variety performance in the presence of white mold should select varieties that show consistently less white mold during several years of testing. MN0091 and MN0701 are public varieties with better-than-average resistance to white mold.

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.

MN0304, MN0902CN, MN1302, Freeborn and IA2008R are available public varieties with resistance to BSR.

Private varieties claiming BSR resistance, but not verified by University of Minnesota lab or field tests are: **Prairie Brand PB-1942 PB-1812x, PB-2419R2 and PB-1591R2, and NuTech 7208, 7192, 7258 and 6142.**

Some information refers to "tolerance" or "field resistance." Reliable tests for tolerance or field resistance have not yet been developed.

Special-Use Varieties

There continues to be increased interest in producing soybeans with special characteristics important to specialty food product manufacturers, such as tofu, natto, miso and soy milk. Soybean scientists previously developed some of these special-use varieties, which were general releases, but more recently varieties have been released under exclusive or nonexclusive licenses to specific companies who then contract with growers for production. For further information contact Minnesota Crop Improvement Association at web site www.mncia@tc.umn.edu or telephone number 612-625-7766.

Addresses for companies participating in the 2011 soybean trials.

Albert Lea Seed	jake@alseed.com
Anderson Seeds	njandrsn@myclearwave.net
Dairyland Seed Co.	MHayes2@dow.com
Hefty Seed Co.	byounggren@polarcomm.com
Hyland Seeds	rsnobelen@hylandseeds.com
Meridian Seeds	s.tsai@canterra.com
Monsanto	david.heimkes@monsanto.com
Mustang Seeds	dalenelson@mustangseeds.com
Northstar Genetics	psibobjax@gmail.com
NuTech Seed	Tom.Thompson@nutechseed.com
Peterson Farms Seed	ron@petersonfarmsseed.com
Pioneer Hi-Bred International	mike.johnston@pioneer.com
Prairie Brand	ben@prairiebrandseed.com
Proseed	proseed@ndak.net
Richland Organics, Inc.	matt@richlandorganics.com
SK Food International	ronschlecht@skfood.com
Sodak Genetics	jack.ingemansen@sdsstate.edu
SunOpta Grains and Foods Group	gene.leach@sunopta.com
Thunder Seed Inc.	jmb6987@hotmail.com
Titan Pro	jeffmeints@titanprosci.com
Unity Seed Company	sfox@unityseed.com

**Brand Names
Versus Variety Names**

Please refer to pages 6-7, and note that entries reported in the soybean tests are listed by the name under which they are submitted for testing, which may be either variety or brand.

Seed Treatments

In 2011 entrants were allowed to enter treated seed. The type of seed treatment, as provided by the originator, is designated as follows:

- AM = ApronMax
- CM = Cruiser Maxx
- CR = Cruiser
- CMG = Cruiser Maxx+Gaucho
- GAT = Gaucho+Apron+Trilex
- SCE = SmartCote Extra.

Research indicates that under some conditions seed treatments can affect the final yield. The exact situations are not always clear, but when comparing varieties note if a seed treatment was used on the seed for being tested.

In some tables the variety type is indicated in a separate column. The designations are as follows:

- CV = Conventional variety (non-transgenic)
- LL = LibertyLink (glufosinate resistant)
- R 1= Roundup Ready (glyphosate resistant)
- R2 = Roundup Ready 2 Yield (glyphosate resistant)

Test Plot Research

Bob Bouvette, Ron Faber, Dave Grafstrom, Mark Hanson, Gerald Holz, Tom Hoverstad, George Nelson and Steve Quiring supervised test plot establishment and management.

**Soybean Planting
Rate and Date**

Bushel Weight (Pounds).....	60
Seeds/Pound.....	2,800
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

Table 1. Performance and characteristics of conventional and transgenic public and private soybean varieties, far northern zone; Crookston, Roseau and Thief River Falls, 2009-2011.

Variety or Brand	Originator	Maturity Date	Yield, Percent of Mean			Percent of Mean		Maturity Rating	Phytophthora Gene	Chlorosis Score	Seed Treat	Trans Trait
			2009-2011	2010-2011	2011	Protein	Oil					
32005R2Y	Thunder Seed Inc.	9-13	—	—	98	98	102	0.05	Rps1c	3.0	—	R2
P2 11-05	Proseed	9-13	—	—	95	100	99	0.05	—	2.0	CR	R2
H004Y12	Hefty Seed Co.	9-13	—	—	89	99	103	0.04	Rps1c ¹	2.0	AM	R2
NS0011R	Northstar Genetics	9-14	—	—	108	99	103	0.01	Rps1c	2.0	—	R1
NS0057R2	Northstar Genetics	9-14	—	—	101	99	102	0.05	Rps1c	2.0	—	R2
H007Y12	Hefty Seed Co.	9-14	—	—	94	101	103	0.07	Rps1c	2.3	AM	R2
AG00632	Monsanto	9-14	—	—	94	99	100	0.0	Rps1k ¹	2.0	AC	R2
MN0071	Minnesota AES	9-14	95	98	93	98	104	0.01	Rps1a	2.8	—	CV
PB-00560R2	Prairie Brand	9-15	—	—	110	100	102	0.05	Rps1c	2.0	CM	R2
P2 11-07	Proseed	9-15	—	—	108	101	102	0.07	—	1.8	CR	R2
PFS 12R005	Peterson Farms Seed	9-15	—	—	107	101	102	0.05	Rps1c	2.0	CMG	R2
NS0077R2	Northstar Genetics	9-15	—	—	105	101	102	0.07	Rps1c	2.0	—	R2
900Y71	Pioneer Hi-Bred	9-15	—	92	91	100	102	0.07	Rps1c	2.3	GAT	R1
AG0131	Monsanto	9-16	—	106	107	102	97	0.1	Rps1c	2.3	AC	R2
PB-00711X	Prairie Brand	9-16	—	—	105	99	102	0.07	Rps1c	2.0	CM	R2
HS 006RY24	Hyland Seeds	9-16	—	—	81	101	96	00.6	Rps1k	2.8	CM	R2
PB-00870R2	Prairie Brand	9-17	—	—	108	100	102	0.07	Rps1c	2.0	CM	R2
H009Y12	Hefty Seed Co.	9-17	—	—	92	102	95	0.09	Rps1k	2.0	AM	R2
AG00932	Monsanto	9-18	—	—	105	100	95	0.0	Rps1c	2.3	AC	R2
Traill	No. Dakota AES	9-18	96	102	105	105	97	00.9	S	2.5	—	CV
PFS 12R007	Peterson Farms Seed	9-18	—	—	104	100	101	0.07	Rps1c	2.5	CMG	R2
PB-00511X	Prairie Brand	9-18	—	—	100	100	100	0.05	Rps1c	2.3	CM	R2
MSS-09-001	Meridian Seeds	9-18	—	—	84	111	92	0.1	—	2.5	—	CV
PFS 11R02	Peterson Farms Seed	9-19	—	—	107	98	101	0.2	Rps1k	2.0	CMG	R2
0090RR	NuTech Seed - G2	9-19	108	104	105	100	104	0.09	S	2.5	SCE	R1
PFS 11R01	Peterson Farms Seed	9-19	—	—	105	97	102	0.1	Rps1k	2.0	CMG	R2
MN0105	Minnesota AES	9-19	93	98	100	104	96	0.1	Rps1c	3.3	—	CV
HS 009RY01	Hyland Seeds	9-19	—	—	97	99	99	00.9	—	2.0	CM	R2
DSTC9-001/R2Y	Dairyland Seed Co.	9-19	—	—	92	98	102	00.9	Rps1c	2.0	CM	R2
MN0095	Minnesota AES	9-20	104	106	109	99	103	0.09	Rps1a	1.8	—	CV
31009R2Y	Thunder Seed Inc.	9-20	—	—	107	97	100	0.09	Rps1c	2.0	—	R2
6009	NuTech Seed - G2	9-20	—	—	104	98	105	0.09	Rps1k	2.0	SCE	R1
MN0107	Minnesota AES	9-20	—	—	103	104	93	0.1	Rps1a	2.8	—	CV
H01Y11	Hefty Seed Co.	9-20	—	—	99	98	101	0.0	Rps1k	1.5	AM	R2
PB-00950R2	Prairie Brand	9-20	—	101	98	98	100	0.09	Rps1c	2.3	CM	R2
MN0106RR	Minnesota AES	9-20	96	93	88	102	97	0.1	Rps1a	3.5	—	R1
MN0091	Minnesota AES	9-20	—	82	72	102	99	0.09	Rps1c	2.8	—	CV
PB-Q240R2	Prairie Brand	9-21	—	—	114	100	98	0.1	Rps1c	2.0	CM	R2
AG0231	Monsanto	9-21	—	112	111	98	97	0.2	Rps1k	2.0	AC	R2
P2 11-10	Proseed	9-21	—	—	98	100	101	0.1	—	2.8	CR	R2
Mustang 01212	Mustang Seeds	9-22	—	—	114	100	99	0.1	Rps1c	2.0	AC	R1
Bravado	SunOpta Grains	9-22	108	107	111	97	101	00.9	Rps1k	2.3	AM	CV
Valor	SunOpta Grains	9-22	105	102	102	104	93	0.1	Rps1k	2.5	AM	CV
30005RR	Thunder Seed Inc.	9-22	—	—	100	98	102	0.05	S	2.8	—	R1
900Y81	Pioneer Hi-Bred	9-22	—	—	99	98	99	0.08	Rps1c	3.5	GAT	R1
6012	NuTech Seed - G2	9-22	—	—	96	98	101	0.1	Rps1c	4.0	SCE	R1
CA 132	Unity Seed Company	9-22	—	—	73	98	99	0.1	—	3.0	—	CV
H00Y12	Hefty Seed Co.	9-23	—	—	99	99	102	0.0	Rps1c ¹ ,Rps3a	2.3	AM	R2
6010	NuTech Seed	9-23	—	—	98	99	104	0.06	Rps1k	3.3	SCE	R1
PB-0111X	Prairie Brand	9-24	—	—	110	99	101	0.1	Rps1c ¹ ,Rps3a	2.3	CM	R2
3201R2Y	Thunder Seed Inc.	9-24	—	—	110	99	99	0.1	Rps1c ¹ ,Rps3a	2.5	—	R2
NS0187R2	Northstar Genetics	9-25	—	—	99	99	98	0.08	Rps1c	2.3	—	R2
MN0101	Minnesota AES	9-25	96	95	98	102	98	0.1	Rps1a	2.3	—	CV
6025	NuTech Seed - G2	9-25	—	—	96	101	102	0.2	—	3.3	SCE	R1
Mean		9-19	38.3	44.3	48.8	32.7	18.3					
LSD 20%			2%	2%	4%							

¹ Greenhouse test results do not agree with originator's designation.

Entries are listed by the name under which they are submitted for testing, which may be either variety or brand.

Table 2. Performance and characteristics of conventional and transgenic soybean varieties, northern zone; Crookston, Moorhead and Shelly, 2009-2011.

Variety or Brand	Originator	Maturity Date	Yield, Percent of Mean			Percent of Mean		Maturity Rating	Phytophthora Gene	Chlorosis Score	Seed Treat	Trans Trait
			2009-2011	2010-2011	2011	Protein	Oil					
MN0071	Minnesota AES	9-11	86	87	88	98	106	00.7	Rps1a	2.3	—	CV
HS 006RY24	Hyland Seeds	9-13	—	—	84	103	96	00.6	Rps1k	3.0	CM	R2
HXR2Y35	Hyland Seeds	9-13	—	—	76	100	98	0.5	Rps1c	2.5	CM	R2
Jim	No. Dakota AES	9-14	103	106	107	101	101	00.7	S	2.8	—	CV
Cavalier	No. Dakota AES	9-14	97	100	99	101	99	00.7	Rps6	2.5	—	CV
MN0095	Minnesota AES	9-15	104	97	99	100	102	00.9	Rps1a	2.3	—	CV
HXR2Y34	Hyland Seeds	9-15	—	—	95	104	96	0.2	Rps1c	2.5	CM	R2
P2 11-40	Proseed	9-15	—	—	74	100	98	0.4	—	2.3	CR	R2
Valor	SunOpta Grains	9-16	108	101	97	103	97	0.1	Rps1k	3.0	AM	CV
Traill	No. Dakota AES	9-16	101	97	94	101	101	00.9	S	2.8	—	CV
Bravado	SunOpta Grains	9-16	103	96	91	98	101	00.9	Rps1k	3.3	AM	CV
HS 01RY02	Hyland Seeds	9-17	—	—	108	98	102	0.1	—	2.3	CM	R2
MN0107	Minnesota AES	9-17	108	102	99	102	98	0.1	Rps1k	2.5	—	CV
MN0208CN	Minnesota AES	9-17	99	94	91	105	102	0.2	Rps1a	3.0	—	CV
Mk0205	Richland Organics, Inc.	9-17	—	—	87	102	100	0.2	Rps1a	2.5	—	CV
PB-0240R2	Prairie Brand	9-18	—	—	110	99	101	0.1	Rps1c	2.3	CM	R2
6025	NuTech Seed - G2	9-18	—	—	101	100	104	0.2	—	4.0	SCE	R1
PB-00950R2	Prairie Brand	9-18	—	—	97	97	101	0.09	Rps1c	2.5	CM	R2
MN0105	Minnesota AES	9-18	98	99	95	104	97	0.1	Rps1c	3.5	—	CV
H05Y12	Hefty Seed Co.	9-18	—	—	93	100	101	0.5	Rps1c	2.8	AM	R2
MN0106RR	Minnesota AES	9-18	90	90	88	103	99	0.1	Rps1a	2.5	—	R1
Ashtibula	No. Dakota AES	9-19	0	110	112	95	107	0.5	Rps6	3.0	—	CV
DSR-0200/R2Y	Dairyland Seed Co.	9-19	—	—	105	100	101	0.2	Rps1c	2.0	CM	R2
3204R2Y	Thunder Seed Inc.	9-19	—	—	91	101	92	0.4	S	3.5	—	R2
MN0201	Minnesota AES	9-19	98	91	89	105	98	0.2	Rps1a	2.3	—	CV
H0212L	Hefty Seed Co.	9-20	—	—	113	101	103	0.2	Rps1k	3.0	AM	LL
90Y42	Pioneer Hi-Bred	9-20	107	104	102	96	106	0.4	Rps1k	2.5	GAT	R1
HXR2Y36	Hyland Seeds	9-20	—	—	70	103	93	0.6	Rps1a	3.3	CM	R2
HS 04RY03	Hyland Seeds	9-21	—	—	105	97	100	0.4	—	3.0	CM	R2
Excalibur	SunOpta Grains	9-21	—	98	87	112	97	0.5	Rps1k	2.3	AM	CV
HS 009RY01	Hyland Seeds	9-22	—	—	101	97	101	00.9	—	3.0	CM	R2
6052	NuTech Seed - G2	9-22	—	—	98	101	104	0.5	Rps1k	2.0	SCE	R1
P2 11-60	Proseed	9-23	—	—	111	99	99	0.6	—	2.0	CR	R2
6050	NuTech Seed - G2	9-23	—	106	106	99	102	0.5	Rps1k	3.0	SCE	R1
90Y50	Pioneer Hi-Bred	9-23	113	113	106	98	105	0.5	Rps1k	3.0	GAT	R1
0525RR	NuTech Seed - G2	9-23	—	101	93	101	100	0.5	—	2.8	SCE	R1
NS0327R2	Northstar Genetics	9-24	—	—	114	95	103	0.3	Rps1c	3.8	—	R2
SO-0070	SunOpta Grains	9-24	93	87	80	110	97	0.5	S	3.3	AM	CV
3205R2Y	Thunder Seed Inc.	9-25	—	—	114	97	102	0.5	S	2.3	—	R2
PFS 12R05	Peterson Farms Seed	9-25	—	—	107	96	102	0.5	—	2.3	CMG	R2
P2 11-50	Proseed	9-25	—	—	105	98	101	0.5	—	2.5	CR	R2
Mk0508	Richland Organics, Inc.	9-25	—	—	94	97	97	0.8	Rps1k	2.5	—	CV
MN0504	Minnesota AES	9-25	112	105	94	94	103	0.5	Rps1a	3.0	—	CV
H04Y12	Hefty Seed Co.	9-26	—	—	119	101	99	0.4	Rps1c	2.3	AM	R2
Mustang 06942	Mustang Seeds	9-26	—	—	115	97	101	0.9	S	2.5	AC	R1
NS0516R2	Northstar Genetics	9-26	—	120	115	101	102	0.5	Rps1c	2.8	—	R2
NS0216R2	Northstar Genetics	9-26	—	—	110	99	97	0.2	Rps1c	2.5	—	R2
H03Y12	Hefty Seed Co.	9-26	—	—	101	101	97	0.3	Rps1c	2.5	AM	R2
PFS 11R03	Peterson Farms Seed	9-26	—	—	97	100	99	0.3	Rps1c	2.5	CMG	R2
MN0503RR	Minnesota AES	9-26	87	83	78	106	98	0.5	Rps1a	3.3	—	R1
0686RR	NuTech Seed	9-27	—	115	107	101	99	0.6	Rps1a ¹	4.0	SCE	R1
PB-0510R2	Prairie Brand	9-27	—	—	103	101	97	0.6	Rps3a	2.3	CM	R2
H0410L	Hefty Seed Co.	9-27	—	103	97	100	102	0.4	Rps1k ¹	2.8	AM	LL
PFS 12R06	Peterson Farms Seed	9-28	—	—	115	100	98	0.6	Rps3a	2.8	CMG	R2
PFS 11R08	Peterson Farms Seed	9-28	—	—	112	98	98	0.8	Rps3	3.0	CMG	R2
3202R2Y	Thunder Seed Inc.	9-28	—	—	112	101	101	0.2	Rps1k	3.3	—	R2
PB-0913X	Prairie Brand	9-28	—	—	98	96	99	0.6	Rps1a	2.8	CM	R2
MN0309RR	Minnesota AES	9-28	95	93	81	100	103	0.3	Rps1k	3.3	—	R1
PB-0880R2	Prairie Brand	9-29	—	—	119	96	102	0.6	S	4.0	CM	R2
NS0626R2	Northstar Genetics	9-29	—	—	113	98	97	0.6	Rps3a	3.0	—	R2
PB-0721R2	Prairie Brand	9-29	—	112	112	98	99	0.6	Rps3a	3.0	CM	R2
PB-0650R2	Prairie Brand	9-29	—	—	105	97	101	0.4	S	2.8	CM	R2
3103R2Y	Thunder Seed Inc.	9-29	—	—	103	101	99	0.3	Rps1c	2.8	—	R2
DSR-0603/R2Y	Dairyland Seed Co.	9-29	—	—	102	100	97	0.6	Rps1c	4.5	CM	R2
PB-0411X	Prairie Brand	9-30	—	—	105	101	97	0.5	S	2.3	CM	R2
MN0401RR	Minnesota AES	9-30	97	91	91	101	101	0.4	Rps1a	3.0	—	R1
HS 08RY05	Hyland Seeds	9-31	—	—	110	98	98	0.8	—	3.5	CM	R2
6078	NuTech Seed	9-31	—	—	108	99	96	0.5	Rps1c	3.8	SCE	R1
7M61	Titan Pro	9-31	—	—	105	99	98	0.6	Rps1c	3.0	AC	R2
Mean		9-22	38.7	40.8	44.2	33.0	18.1					
LSD 20%			2%	2%	5%							

¹ Greenhouse test results do not agree with originator's designation.

Entries are listed by the name under which they are submitted for testing, which may be either variety or brand.

Table 3. Performance and characteristics of conventional and transgenic soybean varieties, central zone; Becker, Morris and Rosemount, 2009-2011.

Variety or Brand	Originator	Maturity Date	Yield, Percent of Mean			Percent of Mean		Maturity Rating	Phytophthora Gene	Chlorosis Score	Seed Treat	Trans Trait
			2009-2011	2010-2011	2011	Protein	Oil					
90Y70	Pioneer Hi-Bred	9-13	—	—	106	101	103	0.7	Rps1k	3.3	GAT	R1
Shyenne	No. Dakota AES	9-13	102	99	99	97	102	0.7	Rps1c	4.3	—	CV
MN0506RRCN	Minnesota AES	9-13	93	91	92	103	103	0.5	Rps1a	3.8	—	R1
MN0309RR	Minnesota AES	9-14	93	91	92	103	103	0.3	Rps1k	3.5	—	R1
AG0732	Monsanto	9-15	—	—	107	99	103	0.7	Rps1c	2.5	AC	R2
Surge	So. Dakota AES	9-15	108	101	105	105	103	0.7	Rps1a	3.4	—	CV
SD1093RR	Sodak Genetics	9-16	103	101	100	102	103	0.9	S	3.3	—	R1
6098	NuTech Seed - G2	9-16	—	—	94	96	104	0.9	Rps1k	2.8	SCE	R1
MN0503RR	Minnesota AES	9-16	86	82	80	106	102	0.5	Rps1a	2.3	—	R1
Mustang 09822	Mustang Seeds	9-17	—	—	113	101	102	0.9	Rps1k	3.8	AC	R1
P2 10-80	Proseed	9-17	—	—	96	98	103	0.8	—	3.0	CR	R2
DST08-002/R2Y	Dairyland Seed Co.	9-17	—	—	94	100	102	0.8	—	3.0	CM	R2
MN1013	Minnesota AES	9-17	97	92	92	102	100	1.0	Rps1k	3.8	—	CV
MN0606CN	Minnesota AES	9-17	105	96	89	99	101	0.6	S	2.8	—	CV
MN0907	Minnesota AES	9-17	98	90	84	99	104	0.9	Rps1k+6	3.8	—	CV
PB-1066R2	Prairie Brand	9-18	—	—	118	101	101	1.5	Rps1k	3.0	CM	R2
3108R2Y	Thunder Seed Inc.	9-18	—	—	111	100	100	0.8	Rps3a	2.5	—	R2
6092	NuTech Seed - G2	9-18	—	—	105	100	105	0.9	Rps1k	2.3	SCE	R1
90Y90	Pioneer Hi-Bred	9-18	—	—	103	103	99	0.9	Rps1c	4.3	GAT	R1
MN1011CN	Minnesota AES	9-18	—	99	101	102	97	1.0	Rps1a	3.0	—	CV
9M21	Titan Pro	9-19	—	—	113	101	101	0.9	Rps1k	2.8	AC	R2
91Y41	Pioneer Hi-Bred	9-19	—	—	109	97	103	1.4	Rps1c	3.0	GAT	R1
AG0832	Monsanto	9-19	—	—	105	101	103	0.8	Rps1a	2.8	AC	R2
HS 08RY05	Hyland Seeds	9-19	—	—	104	100	101	0.8	—	2.8	CM	R2
6118	NuTech Seed	9-19	—	—	102	99	104	1.1	Rps1c	2.8	SCE	R1
MN0806CN	Minnesota AES	9-19	100	90	89	98	106	0.8	6	2.8	—	CV
91M10	Pioneer Hi-Bred	9-19	—	—	88	103	102	0.9	Rps1a	3.5	—	CV
AG1431	Monsanto	9-20	—	123	127	101	102	1.4	Rps1c	3.0	AC	R2
6162	NuTech Seed - G2	9-20	—	—	109	97	105	1.6	Rps1c	3.8	SCE	R1
MN0908CN	Minnesota AES	9-20	—	—	105	100	100	0.9	S	3.5	—	CV
P2 11-90	Proseed	9-20	—	—	103	98	103	0.9	—	3.8	CR	R2
PFS 12R15N	Peterson Farms Seed	9-21	—	—	106	94	105	1.5	Rps1k	3.5	CMG	R2
3106R2Y	Thunder Seed Inc.	9-21	—	—	103	99	101	0.6	S	2.5	—	R2
MN1204RRCN	Minnesota AES	9-22	—	99	106	101	101	1.2	S	3.8	—	R1
MN1107RR	Minnesota AES	9-22	102	99	102	101	101	1.1	Rps1a	3.3	—	R1
NS1257R2	Northstar Genetics	9-23	—	—	98	102	97	1.2	Rps3a	2.8	—	R2
Viking 1521N	Albert Lea Seed	9-24	—	—	97	104	94	1.5	—	3.8	—	CV
3211R2Y	Thunder Seed Inc.	9-24	—	—	96	103	97	1.1	Rps1a	3.3	—	R2
Mustang 13552	Mustang Seeds	9-25	—	—	103	101	99	1.3	Rps1c	3.0	AC	R1
11M61	Titan Pro	9-25	—	—	99	101	99	1.1	Rps1a	2.8	AC	R2
SD2121RR	Sodak Genetics	9-25	—	—	87	98	97	1.2	Rps1c	2.8	—	R2
PFS 12R12	Peterson Farms Seed	9-26	—	—	108	102	100	1.1	Rps1a	2.5	CMG	R2
3114R2Y	Thunder Seed Inc.	9-26	—	—	107	100	97	1.4	Rps1c	3.5	—	R2
143R2Y	Anderson Seeds	9-26	—	—	97	99	101	1.4	Rps1c	2.5	—	R1
MN1410	Minnesota AES	9-26	107	103	97	101	102	1.4	S	3.0	—	CV
DSR-1215/R2Y	Dairyland Seed Co.	9-26	—	101	96	99	98	1.2	Rps1c	3.3	CM	R2
6142	NuTech Seed - G2	9-26	—	—	96	101	100	1.4	—	3.5	SCE	R1
Deuel	So. Dakota AES	9-26	105	100	94	101	103	1.1	Rps1k	2.8	—	CV
PFS 12R14N	Peterson Farms Seed	9-27	—	—	115	97	99	1.4	Rps1c	3.3	CMG	R2
Viking 1707R2N	Albert Lea Seed	9-27	—	—	111	101	97	1.7	—	3.3	—	R2
AG1631	Monsanto	9-27	—	115	109	99	99	1.6	Rps1c	3.3	AC	R2
NS1477NR2	Northstar Genetics	9-27	—	—	107	98	99	1.4	Rps1a	3.3	—	R2
PB-1523R2	Prairie Brand	9-27	—	—	107	103	98	1.5	Rps1c	4.0	CM	R2
PB-1483R2	Prairie Brand	9-27	—	—	107	98	99	1.4	Rps1c	4.0	CM	R2
PB-1410R2	Prairie Brand	9-27	—	—	101	99	97	1.4	Rps1c	2.0	CM	R2
14M61	Titan Pro	9-27	—	—	101	101	95	1.4	Rps1c	2.3	AC	R2
PB-1320R2	Prairie Brand	9-27	—	—	98	99	96	1.3	Rps1c	2.0	CM	R2
PB-1120R2	Prairie Brand	9-27	—	—	98	102	97	1.3	Rps1c	3.3	CM	R2
PB-1823R2	Prairie Brand	9-27	—	—	93	100	97	1.5	Rps1c	2.5	CM	R2
MN1610CN	Minnesota AES	9-27	—	—	87	99	98	1.6	Rps1a	4.3	—	CV

Table 3. (continued) Performance and characteristics of conventional and transgenic soybean varieties, central zone; Becker, Morris and Rosemount, 2009-2011.

Variety or Brand	Originator	Maturity Date	Yield, Percent of Mean			Percent of Mean		Maturity Rating	Phytophthora Gene	Chlorosis Score	Seed Treat	Trans Trait
			2009-2011	2010-2011	2011	Protein	Oil					
NS1726NR2	Northstar Genetics	9-28	—	—	106	99	99	1.7	Rps1c ¹	2.8	—	R2
PB-1743R2	Prairie Brand	9-28	—	—	106	100	97	1.5	Rps1c	3.3	CM	R2
NS7159NR	Northstar Genetics	9-28	—	—	103	95	104	1.5	Rps1k	3.5	—	R1
PB-1591R2	Prairie Brand	9-28	—	—	100	99	97	1.5	S	3.8	CM	R2
15M20	Titan Pro	9-28	—	110	100	98	96	1.5	Rps1c	2.8	CM	R2
Viking 1440R2	Albert Lea Seed	9-28	—	—	98	101	99	1.4	—	3.3	—	R2
Viking 1718N	Albert Lea Seed	9-28	—	—	98	99	97	1.7	—	3.5	—	CV
Mustang 15522	Mustang Seeds	9-28	—	—	94	97	99	1.5	Rps1c	3.3	AC	R1
PB-2042R2	Prairie Brand	9-28	—	102	94	98	101	2.0	Rps1k ¹ ,Rps1c	3.3	CM	R2
DSR-1808/R2Y	Dairyland Seed Co.	9-29	—	—	102	99	95	1.8	Rps1c	3.0	CM	R2
SD2171RR	Sodak Genetics	9-29	—	109	102	100	96	1.7	Rps1c	2.3	—	R2
Mustang 16221	Mustang Seeds	9-29	—	—	98	100	96	1.6	S	2.8	AC	R1
162R2Y	Anderson Seeds	9-29	—	—	97	101	95	1.6	Rps1c	3.5	—	R1
PB-1722R2	Prairie Brand	9-29	—	108	97	100	96	1.5	Rps1k	3.0	CM	R2
6185	NuTech Seed	9-29	—	—	91	98	99	1.8	—	3.0	SCE	R1
PB-1942R2	Prairie Brand	9-29	—	101	90	99	98	1.5	Rps1k	3.3	CM	R2
SD2101RR	Sodak Genetics	9-29	—	—	82	100	100	1.0	Rps1k	3.3	—	R2
DSR-2011/RR	Dairyland Seed Co.	9-30	—	—	100	101	99	2.0	—	3.0	CM	R1
DSR-2105/R2Y	Dairyland Seed Co.	9-30	—	—	92	98	97	2.1	Rps1k	3.5	CM	R2
P2 11-11	Proseed	9-30	—	—	81	105	90	1.1	—	3.0	CR	R2
Mean		9-23	45.2	47.6	43.2	34.7	17.4					
LSD 20%			2%	2%	5%							

¹ Greenhouse test results do not agree with originator's designation.

Entries are listed by the name under which they are submitted for testing, which may be either variety or brand.

Table 4. Performance and characteristics of conventional transgenic soybean varieties, southern zone; Lamberton, Waseca and Westbrook, 2009-2011.

Variety or Brand	Originator	Maturity Date	Yield, Percent of Mean			Percent of Mean		Maturity Rating	Phytophthora Gene	Chlorosis Score	Seed Treat	Trans Trait
			2009-2011	2010-2011	2011	Protein	Oil					
MN1610CN	Minnesota AES	9-17	—	—	106	95	101	1.6	Rps1a	4.0	—	CV
MN1609	Minnesota AES	9-17	—	—	105	97	101	1.6	Rps6	3.0	—	CV
MN1107RR	Minnesota AES	9-18	—	—	105	95	103	1.1	Rps1a	3.0	—	R1
15B10	Titan Pro	9-18	—	—	110	101	101	1.5	Rps1k	2.5	CM	CV
91Y61	Pioneer Hi-Bred	9-18	—	—	105	101	96	1.6	—	3.5	GAT	R1
MN1410	Minnesota AES	9-18	—	—	99	97	102	1.4	S	3.8	—	CV
SD1111RR	So. Dakota AES	9-18	—	—	101	99	97	1.1	Rps1a	3.5	—	CV
MN1504RR	Minnesota AES	9-19	—	—	109	98	99	1.5	Rps1k	3.5	—	R1
2179L	NuTech Seed	9-19	—	108	107	101	101	1.7	—	2.5	SCE	CV
MN1702SP	Minnesota AES	9-19	—	—	102	97	100	1.7	Rps1a	3.8	—	CV
AG1631	Monsanto	9-20	—	—	110	99	99	1.6	Rps1c	2.8	AC	R2
PB-1743R2	Prairie Brand	9-21	—	—	93	104	94	1.5	Rps1c	3.0	CM	R2
NS1726NR2	Northstar Genetics	9-21	—	—	111	96	104	1.7	Rps1c ¹	2.5	—	R2
IA1021	Iowa AES	9-21	—	—	108	102	99	1.6	Rps1a	2.5	—	CV
PB-1823R2	Prairie Brand	9-21	—	104	106	102	98	1.5	Rps1c	2.5	CM	R2
MN1701CN	Minnesota AES	9-21	—	108	106	102	99	1.7	Rps1k+6	3.8	—	CV
MN1803RR	Minnesota AES	9-21	—	—	98	101	96	1.8	Rps1a	3.0	—	CV
AG1931	Monsanto	9-22	—	—	113	101	100	1.9	Rps1c	3.8	AC	R2
91Y92	Pioneer Hi-Bred	9-22	—	—	105	99	99	1.9	Rps1c	3.3	GAT	R1
92Y11	Pioneer Hi-Bred	9-22	—	—	111	99	97	2.1	Rps1k	3.8	GAT	R1
Davison	So. Dakota AES	9-22	—	—	96	99	99	2.2	Rps1a	3.3	—	CV
222	NuTech Seed	9-22	—	—	110	100	100	2.2	—	3.8	SCE	CV
Mustang 17722	Mustang Seeds	9-23	—	—	108	99	98	1.7	Rps1k	3.3	AC	R1
7208	NuTech Seed - G2	9-23	—	—	99	95	103	2.0	Rps1c	2.8	SCE	R1
20M1	Titan Pro	9-23	—	—	95	101	98	1.9	Rps1c	3.0	CM	R2
154	NuTech Seed	9-23	106	104	100	103	99	1.5	—	3.5	SCE	LL
PB-2143R2	Prairie Brand	9-23	—	109	108	101	102	2.1	Rps1c	2.8	CM	R2
PB-1812X	Prairie Brand	9-23	—	110	110	100	102	1.8	S	3.5	CM	R2
IA1010	Iowa AES	9-23	—	—	99	101	99	2.1	Rps1a	3.5	—	CV
Mustang 20622	Mustang Seeds	9-24	—	—	103	105	97	2.0	Rps1c	3.8	AC	R1
PB-2042R2	Prairie Brand	9-24	102	108	107	101	101	2.0	Rps1c	2.8	CM	R2
DST16-001/R2Y	Dairyland Seed Co.	9-24	106	104	106	97	104	1.6	Rps1c	3.5	CM	R2

Table 4. (continued) Performance and characteristics of conventional transgenic soybean varieties, southern zone; Lamberton, Waseca and Westbrook, 2009-2011.

Variety or Brand	Originator	Maturity Date	Yield, Percent of Mean			Percent of Mean		Maturity Rating	Phytophthora Gene	Chlorosis Score	Seed Treat	Trans Trait
			2009-2011	2010-2011	2011	Protein	Oil					
AG1832	Monsanto	9-24	—	103	99	99	101	1.8	Rps1k	2.8	AC	R2
NS2077NR2	Northstar Genetics	9-24	—	—	101	98	102	2.0	Rps1c	4.0	—	R2
AG2031	Monsanto	9-24	—	—	95	99	104	2.0	Rps1c	3.0	AC	R2
Mustang 18922	Mustang Seeds	9-24	—	102	105	100	104	1.8	S	4.3	AC	R1
Viking 2044R2N	Albert Lea Seed	9-24	—	102	102	96	101	2.0	—	3.5	—	R2
162R2Y	Anderson Seeds	9-24	—	100	98	103	98	1.6	—	2.8	—	R1
18M10	Titan Pro	9-24	—	—	114	100	98	1.8	Rps1k	3.5	CM	R2
IA1022	Iowa AES	9-24	—	108	106	99	101	1.8	S	2.5	—	CV
7192	NuTech Seed - G2	9-24	—	104	101	97	102	1.9	Rps1c	2.3	SCE	R1
204R2Y	Anderson Seeds	9-24	—	—	104	101	98	2.0	Rps1c	3.8	—	R1
PB-1942R2	Prairie Brand	9-24	—	107	112	100	103	1.5	Rps1k	2.8	CM	R2
242CN	NuTech Seed	9-24	—	—	92	106	94	2.4	—	2.5	SCE	CV
IA2007	Iowa AES	9-24	—	—	100	97	103	2.8	Rps1a	4.8	—	CV
DSR-1808/R2Y	Dairyland Seed Co.	9-25	—	—	100	101	99	1.8	Rps1c	3.5	CM	R2
6228	NuTech Seed	9-25	—	—	100	95	101	2.2	—	2.8	SCE	R1
PB-1722R2	Prairie Brand	9-25	—	—	96	101	97	1.5	Rps1k	3.8	CM	R2
7212	NuTech Seed - G2	9-25	105	106	97	95	102	2.1	Rps1k	3.0	SCE	R1
Viking 2300R2	Albert Lea Seed	9-25	—	—	103	104	98	2.3	—	2.3	—	R2
3199L	NuTech Seed	9-25	97	98	101	101	96	1.9	Rps1k	3.0	SCE	LL
24M21	Titan Pro	9-25	—	—	105	101	100	2.4	Rps3a	3.8	AC	R2
202	NuTech Seed	9-25	—	109	107	98	98	2.0	Rps1k	3.3	SCE	CV
184R2Y	Anderson Seeds	9-25	—	—	93	102	96	1.8	—	3.0	—	R1
PB-2343R2	Prairie Brand	9-25	109	105	103	102	97	2.2	Rps1k	3.3	CM	R2
AG2330	Monsanto	9-25	—	—	101	100	99	2.3	Rps1k	4.0	AC	R2
Viking O.2265	Albert Lea Seed	9-25	—	—	98	102	101	2.2	—	4.3	—	CV
Mustang 24322	Mustang Seeds	9-25	—	—	98	98	101	2.4	Rps1a	2.5	AC	R1
Viking 2000R2N	Albert Lea Seed	9-26	—	—	98	95	101	2.0	—	2.5	—	R2
23M9	Titan Pro	9-26	—	99	103	100	98	2.3	Rps1c	4.3	CM	R2
DSR-2105/R2Y	Dairyland Seed Co.	9-26	99	95	90	106	95	2.1	Rps1k	2.8	CM	R2
7250	NuTech Seed - G2	9-26	—	106	107	101	99	2.5	Rps1k	3.0	SCE	R1
NS2377NR2	Northstar Genetics	9-26	—	—	98	105	97	2.3	Rps1k	3.0	—	R2
6224	NuTech Seed	9-26	—	102	100	100	102	2.1	—	3.5	SCE	R1
182	NuTech Seed	9-26	—	—	96	98	99	1.8	—	4.0	SCE	CV
PB-2099NRR2	Prairie Brand	9-26	—	—	99	101	101	2.0	Rps1c	2.5	CM	R2
PB-2242R2	Prairie Brand	9-26	—	—	96	102	97	2.2	Rps1a	2.3	CM	R2
20B20	Titan Pro	9-26	93	90	86	104	94	2.0	Rps1k	3.8	CM	CV
DSR-2240/R2Y	Dairyland Seed Co.	9-26	106	106	105	100	99	2.2	Rps1c	2.8	CM	R2
22M11	Titan Pro	9-26	106	103	105	91	107	2.2	Rps1c	3.5	AC	R2
PB-2221R2	Prairie Brand	9-26	—	73	79	99	98	2.2	Rps1c	2.8	CM	R2
IA2068	Iowa AES	9-26	—	95	87	98	101	2.0	S	3.3	—	CV
IA2073	Iowa AES	9-26	93	87	81	101	98	2.0	Rps1a	4.3	—	CV
Viking 2174CNRR	Albert Lea Seed	9-27	—	92	89	102	98	2.1	—	2.8	—	R1
7235	NuTech Seed	9-27	105	101	87	98	98	2.3	Rps1c	4.0	SCE	R1
DSR-2011/RR	Dairyland Seed Co.	9-27	—	98	100	102	102	2.0	—	4.0	CM	R1
PB-2419RR2	Prairie Brand	9-27	96	97	93	102	102	2.3	S	2.8	CM	R2
7245	NuTech Seed	9-27	94	95	97	103	104	2.4	—	3.0	SCE	R1
7230	NuTech Seed - G2	9-27	95	92	72	105	97	2.3	Rps1c	4.0	SCE	R1
92Y51	Pioneer Hi-Bred	9-27	103	102	94	99	102	2.5	Rps1k	3.8	GAT	R1
NS2477R2	Northstar Genetics	9-27	95	91	93	105	97	2.4	Rps1c	4.3	—	R2
3229L	NuTech Seed	9-27	90	92	85	102	101	2.2	Rps1k	3.3	SCE	LL
IA2094	Iowa AES	9-27	—	87	81	99	104	2.2	Rps1a	4.3	—	CV
IA3024	Iowa AES	9-29	—	—	90	102	99	2.6	S	3.5	—	CV
Mean		9-24	55.3	56.4	52.9	32.4	18.5					
LSD 20%			2%	2%	5%							

¹ Greenhouse test results do not agree with originator's designation.

Entries are listed by the name under which they are submitted for testing, which may be either variety or brand.

Table 5. Characteristics of special-use soybean varieties, northern zone; Crookston, Moorhead and Shelly, 2011.

Variety or Brand	Originator	Maturity Rating	Special Characteristics	Hilum Color	Phytophthora Gene	Chlorosis Score	Seeds/Lb.	Trans Trait
MN0071	Minnesota AES	00.7	General Purpose	Brown	Rps1a	2.5	2,993	CV
Cavalier	No. Dakota AES	00.7	General Purpose	Yellow	Rps6	2.5	2,679	CV
MN0095	Minnesota AES	00.9	General Purpose	Imperfect Black	Rps1a	2.0	3,191	CV
MN0107	Minnesota AES	0.1	General Purpose	Yellow	Rps1k	2.0	2,730	CV
MN0105	Minnesota AES	0.1	General Purpose	Yellow	Rps1c	1.8	2,764	CV
UM3	Minnesota AES	0.3	Small Seed	Yellow	Rps1a	1.8	6,576	CV
MN0209SP	Minnesota AES	0.2	Small Seed	Yellow	Rps1a	1.8	4,717	CV
MN0103SP	Minnesota AES	0.1	Small Seed	Yellow	Rps1a	1.8	5,564	CV
CA 132	Unity Seed Company	0.0	Small Seed	Yellow	S	2.3	6,576	CV
SK918 Brand	SK Food International	0.5	Natto	Yellow	S	2.3	3,557	CV
MN0096SP	Minnesota AES	00.9	Higher Protein	Yellow	S	2.3	2,713	CV
MN0402SP	Minnesota AES	0.4	Small Seed	Yellow	Rps1a	1.5	5,636	CV
Proto	Minnesota AES	0.4	Higher Protein	Buff	S	2.5	2,630	CV
MN0210SP	Minnesota AES	0.2	Small Seed	Yellow	Rps1a	2.0	5,106	CV
MN0093SP	Minnesota AES	00.9	Small Seed	Grey	Rps1a	2.0	5,167	CV
MN0605SP	Minnesota AES	0.6	Higher Protein	Buff	Rps1c	2.0	2,874	CV

Crops are listed by the name under which they are submitted for testing, which may be either variety or brand.

Table 6. Performance of special-use soybean varieties, northern zone; Crookston, Moorhead and Shelly, 2009-2011.

Variety or Brand	Originator	Maturity Date	Yield, Percent of Mean			Percent of Mean	
			2009-2011	2010-2011	2011	Protein	Oil
MN0071	Minnesota AES	9-11	103	108	105	96	108
Cavalier	No. Dakota AES	9-14	99	113	113	96	103
MN0095	Minnesota AES	9-16	121	124	127	97	104
MN0107	Minnesota AES	9-16	118	117	113	101	97
MN0105	Minnesota AES	9-17	107	113	111	101	100
UM3	Minnesota AES	9-17	—	89	95	95	100
MN0209SP	Minnesota AES	9-18	—	98	106	100	99
MN0103SP	Minnesota AES	9-19	83	84	97	96	102
CA 132	Unity Seed Company	9-19	—	—	87	96	101
SK918 Brand	SK Food International	9-20	—	—	117	95	106
MN0096SP	Minnesota AES	9-22	78	81	70	111	96
MN0402SP	Minnesota AES	9-23	—	92	93	97	98
Proto	Minnesota AES	9-23	—	95	88	111	93
MN0210SP	Minnesota AES	9-24	—	95	89	99	98
MN0093SP	Minnesota AES	9-25	96	92	89	91	102
MN0605SP	Minnesota AES	9-30	97	91	92	113	92
Mean		9-20	35.7	34.8	42.5	33.5	18
LSD 20%			2%	2%	4%		

Entries are listed by the name under which they are submitted for testing, which may be either variety or brand.

Table 7. Characteristics of special-use soybean varieties, central zone; Becker, Morris and Rosemount, 2011.

Variety or Brand	Originator	Maturity Rating	Special Characteristics	Hilum Color	Phytophthora Gene	Chlorosis Score	Seeds/Lb.	Trans Trait
MK0508	Richland Organics, Inc.	0.8	Small Seed	Grey	S	2.8	5,047	CV
SK918 Brand	SK Food International	0.5	Natto	Yellow	S	3.0	3,472	CV
MK831	Richland Organics, Inc.	0.8	—	—	Rps1k	4.0	3,617	CV
SK095 Brand	SK Food International	0.9	Small Seed	Yellow	S	2.5	4,932	CV
SK 0786 Brand	SK Food International	0.7	Higher Protein	Grey	S	4.3	2,599	CV
MN1012SP	Minnesota AES	1.0	Small Seed	Yellow	Rps1a	4.0	5,564	CV
Sheyenne	No. Dakota AES	0.7	General Purpose	Yellow	Rps1c	3.3	2,837	CV
SK9801 Brand	SK Food International	1.0	Black Seed Coat	Black	Rps1k	4.8	2,782	CV
MK1016	Richland Organics, Inc.	1.0	Small Seed	Yellow	S	2.3	5,229	CV
Surge	Minn. & S.D. AES	1.0	General Purpose	Imperfect Black	Rps1a	3.8	2,438	CV
MN0605SP	Minnesota AES	0.6	Higher Protein	Yellow	Rps1c	2.8	2,679	CV
MK9101	Richland Organics, Inc.	1.0	—	—	Rps1a	3.8	2,226	CV
Toyopro	Minnesota AES	0.8	Higher Protein	Yellow	S	3.3	3,215	CV
MN1401BL	Minnesota AES	1.4	Black Seed Coat	Black	Rps1a	3.8	2,480	CV
91M10	Pioneer	0.9	—	—	Rps1a	4.0	2,800	CV
MN0804SP	Minnesota AES	0.8	Higher Protein	Yellow	Rps1a	4.5	2,713	CV
MN0805SP	Minnesota AES	0.8	Small Seed	Yellow	Rps6	2.8	5,106	CV
MN1309SP	Minnesota AES	1.3	Tofu	Black	Rps1a	4.3	2,855	CV
MN1203SP	Minnesota AES	1.2	Small Seed	Yellow	—	4.3	4,521	CV
MN1104SP	Minnesota AES	1.1	Large Seed	Yellow	Rps1a	2.8	2,296	CV
MN1410	Minnesota AES	1.4	General Purpose	Buff	S	4.0	2,913	CV
MN1505SP	Minnesota AES	1.5	Higher Protein	Yellow	Rps1a	3.8	2,614	CV
MN0807SP	Minnesota AES	0.8	Higher Protein	Yellow	S	3.5	3,056	CV
Viking O.1706	Albert Lea Seed	1.7	—	Brown	—	3.3	3,807	CV

Entries are listed by the name under which they are submitted for testing, which may be either variety or brand.

Table 8. Performance of special-use soybean varieties, central zone; Becker, Morris and Rosemount, 2009-2011.

Variety or Brand	Originator	Maturity Date	Yield, Percent of Mean			Percent of Mean	
			2009-2011	2010-2011	2011	Protein	Oil
MK0508	Richland Organics, Inc.	9-9	—	98	99	95	100
MK831	Richland Organics, Inc.	9-9	—	—	95	94	106
SK918 Brand	SK Food International	9-9	—	—	95	94	113
SK095 Brand	SK Food International	9-11	—	—	97	98	98
SK 0786 Brand	SK Food International	9-11	—	—	93	105	99
MN1012SP	Minnesota AES	9-11	81	80	77	94	97
Sheyenne	No. Dakota AES	9-12	111	109	108	93	104
SK9801 Brand	SK Food International	9-12	—	113	108	91	112
MK1016	Richland Organics, Inc.	9-12	—	94	102	99	97
Surge	Minn. & S.D. AES	9-13	110	109	113	101	103
MN0605SP	Minnesota AES	9-15	97	98	106	112	89
MK9101	Richland Organics, Inc.	9-15	—	—	104	102	102
Toyopro	Minnesota AES	9-15	—	—	98	109	95
MN1401BL	Minnesota AES	9-16	112	110	116	97	106
91M10	Pioneer	9-17	—	115	105	97	104
MN0804SP	Minnesota AES	9-17	102	102	105	106	95
MN0805SP	Minnesota AES	9-17	87	91	90	108	86
MN1309SP	Minnesota AES	9-19	104	99	110	99	104
MN1203SP	Minnesota AES	9-21	94	95	82	96	97
MN1104SP	Minnesota AES	9-23	97	96	106	99	104
MN1410	Minnesota AES	9-25	116	111	115	98	104
MN1505SP	Minnesota AES	9-25	—	95	95	102	99
MN0807SP	Minnesota AES	9-25	86	82	75	112	87
Viking O.1706	Albert Lea Seed	9-29	—	—	110	97	97
Mean		9-16	42.2	42.2	41.5	35.8	17.3
LSD 20%			2%	2%	5%		

Entries are listed by the name under which they are submitted for testing, which may be either variety or brand.

Table 9. Characteristics of special-use soybean varieties, southern zone; Lamberton, Waseca and Westbrook, 2011.

Variety or Brand	Originator	Maturity Rating	Special Characteristics	Hilum Color	Phytophthora Gene	Chlorosis Score	Seeds/Lb.	Trans Trait
MN1411SP	Minnesota AES	1.4	Large Seed	Yellow	Rps1c	2.3	2,237	CV
MN1101SP	Minnesota AES	1.1	Large Seed, Higher Protein	Yellow	Rps1a	3.8	2,321	CV
MN1401BL	Minnesota AES	1.4	Black Seed Coat	Black	Rps1a	2.0	2,663	CV
MN1104SP	Minnesota AES	1.1	Tofu	Yellow	Rps1a	2.5	2,346	CV
MN1410	Minnesota AES	1.4	General Purpose	Buff	S	2.3	2,782	CV
MN1309SP	Minnesota AES	1.3	Higher Protein	Black	Rps1a	2.5	2,818	CV
Viking O.2022	Albert Lea Seed	2.0	—	Yellow	—	3.0	2,800	CV
MN1503SP	Minnesota AES	1.5	Higher Protein	Yellow	Rps1a	2.3	2,372	CV
MN1806SP	Minnesota AES	1.8	Large Seed, Higher Protein	Yellow	Rps1a	2.8	2,097	CV
MN1607SP	Minnesota AES	1.6	Higher Protein	Yellow	Rps1a	2.5	2,359	CV
MN1505SP	Minnesota AES	1.5	Higher Protein	Yellow	Rps1a	2.3	2,509	CV
MN1805SP	Minnesota AES	1.8	Large Seed, Higher Protein	Yellow	Rps1a	2.5	2,097	CV
MN2001SP	Minnesota AES	2.0	Large Seed, Higher Protein	Yellow	Rps1a	3.0	2,226	CV
Vinton 81	Iowa AES	2.0	Large Seed, Higher Protein	Yellow	Rps1c	3.0	2,309	CV
IA1022	Iowa AES	1.8	General Purpose	Yellow	S	2.3	3,035	CV
Viking O.2078	Albert Lea Seed	2.0	—	Brown	—	2.8	3,168	CV
Viking O.2265	Albert Lea Seed	2.2	—	Brown	—	2.8	3,288	CV
IA2094	Iowa AES	2.2	General Purpose	Yellow	S	2.5	3,364	CV

Entries are listed by the name under which they are submitted for testing, which may be either variety or brand.

Table 10. Performance of special-use soybean varieties, southern zone; Lamberton, Waseca and Westbrook, 2009-2011.

Variety or Brand	Originator	Maturity Date	Yield, Percent of Mean			Percent of Mean	
			2009-2011	2010-2011	2011	Protein	Oil
MN1411SP	Minnesota AES	9-12	94	95	99	102	98
MN1101SP	Minnesota AES	9-12	93	93	90	102	96
MN1401BL	Minnesota AES	9-15	105	102	103	98	104
MN1104SP	Minnesota AES	9-15	104	100	99	99	101
MN1410	Minnesota AES	9-16	116	116	112	97	102
MN1309SP	Minnesota AES	9-16	105	106	108	96	104
Viking O.2022	Albert Lea Seed	9-19	—	—	102	94	103
MN1503SP	Minnesota AES	9-19	101	96	94	103	97
MN1806SP	Minnesota AES	9-19	87	86	85	107	94
MN1607SP	Minnesota AES	9-20	99	96	97	100	99
MN1505SP	Minnesota AES	9-20	102	102	95	103	98
MN1805SP	Minnesota AES	9-21	87	95	92	104	99
MN2001SP	Minnesota AES	9-21	88	90	91	104	97
Vinton 81	Iowa AES	9-22	84	77	76	104	98
IA1022	Iowa AES	9-25	122	131	124	94	104
Viking O.2078	Albert Lea Seed	9-26	—	—	110	96	102
Viking O.2265	Albert Lea Seed	9-27	—	—	113	99	100
IA2094	Iowa AES	9-27	—	115	111	97	101
Mean		9-20	45.6	46.5	44.9	34.2	18.8
LSD 20%			2%	2%	5%		

Entries are listed by the name under which they are submitted for testing, which may be either variety or brand.

Table 11. Characteristics of publicly developed, general-use soybean varieties entered in 2011 tests.

Variety or Brand	Originator	Maturity Rating	Hilum Color	Phytophthora Gene	BSR Reaction	SCN Reaction	Chlorosis Score	Trans Trait
Cavalier	No. Dakota AES	00.7	Yellow	Rps6	—	S	2.5	CV
Jim	No. Dakota AES	00.7	Yellow	S	S	S	2.8	CV
MN0071	Minnesota AES	00.7	Brown	Rps1a	S	S	2.5	CV
MN0091	Minnesota AES	00.9	Yellow	Rps1c	S	S	2.8	CV
MN0095	Minnesota AES	00.9	Imperfect Black	Rps1a	—	S	2.0	CV
Trail	No. Dakota AES	0.0	Yellow	S	S	S	2.8	CV
MN0101	Minnesota AES	0.1	Yellow	Rps1a	—	S	2.3	CV
MN0105	Minnesota AES	0.1	Yellow	Rps1c	—	S	1.8	CV
MN0106RR	Minnesota AES	0.1	Black	Rps1a	—	S	3.5	R1
MN0107	Minnesota AES	0.1	Yellow	Rps1k	—	S	2.0	CV
MN0201	Minnesota AES	0.2	Yellow	Rps1a	—	S	2.3	CV
MN0208CN	Minnesota AES	0.2	Yellow	Rps1a	—	R	3.0	CV
MN0308CN	Minnesota AES	0.3	Yellow	Rps1k	—	R	3.0	CV
MN0309RR	Minnesota AES	0.3	Buff	Rps1k	—	S	3.3	R1
MN0401RR	Minnesota AES	0.4	Buff	Rps1a	—	S	3.0	R1
Ashtibula	No. Dakota AES	0.5	Yellow	Rps6	—	S	3.0	CV
MN0503RR	Minnesota AES	0.5	Yellow	Rps1a	—	S	3.3	R1
MN0504	Minnesota AES	0.5	Buff	Rps1a	—	S	3.0	CV
MN0506RRCN	Minnesota AES	0.5	Gray	S	—	R	3.8	R1
MN0606CN	Minnesota AES	0.6	Yellow	S	—	R	2.8	CV
Sheyenne	No. Dakota AES	0.7	Yellow	Rps1c	—	S	3.3	CV
MN0806CN	Minnesota AES	0.8	Yellow	S	—	R	2.8	CV
MN0907	Minnesota AES	0.9	Yellow	Rps1k+6	—	S	3.8	CV
MN0908CN	Minnesota AES	0.9	Yellow	S	—	R	3.5	CV
MN1011CN	Minnesota AES	1.0	Yellow	Rps1a	—	R	2.5	CV
MN1013	Minnesota AES	1.0	Yellow	Rps1k	—	S	3.8	CV
Surge	Minn. & S.D. AES	1.0	Imperfect Black	Rps1a	S	S	3.8	CV
MN1107RR	Minnesota AES	1.1	Buff	Rps1a	—	S	3.3	R1
SD1111RR	So. Dakota AES	1.1	Yellow	S	—	S	3.5	R1
MN1204RRCN	Minnesota AES	1.2	Yellow	S	—	R	3.8	R1
MN1401BL	Minnesota AES	1.4	Black	Rps1a	—	S	3.8	CV
MN1410	Minnesota AES	1.4	Buff	S	—	S	4.0	CV
MN1413CN	Minnesota AES	1.4	Yellow	S	—	R	4.0	CV
MN1804CN	Minnesota AES	1.4	Black	Rps1c	—	R	3.8	CV
MN1504RR	Minnesota AES	1.5	Black	Rps1k	—	S	3.5	R1
IA1020	Iowa AES	1.6	Brown	—	—	S	3.8	CV
IA1021	Iowa AES	1.6	Yellow	—	—	S	2.5	CV
MN1609	Minnesota AES	1.6	Yellow	Rps6	—	S	3.0	CV
MN1610CN	Minnesota AES	1.6	Yellow	Rps1a	—	R	3.8	CV
MN1701CN	Minnesota AES	1.7	Yellow	S	—	R	3.8	CV
IA1022	Iowa AES	1.8	Yellow	S	S	S	2.3	CV
MN1803RR	Minnesota AES	1.8	Buff	Rps1a	—	S	3.0	R1
IA2068	Iowa AES	2.0	Yellow	S	S	S	4.3	CV
IA2073	Iowa AES	2.0	Black	—	—	S	4.0	CV
IA1010	Iowa AES	2.1	Yellow	—	—	S	3.5	CV
IA2094	Iowa AES	2.2	Yellow	S	S	S	4.8	CV
IA3024	Iowa AES	2.6	Imperfect Black	S	—	S	3.5	CV
IA2007	Iowa AES	2.8	Brown	—	—	S	4.8	CV

Entries are listed by the name under which they are submitted for testing, which may be either variety or brand.

Table 12. Performance and characteristics of soybean varieties, central zone; at cyst nematode infested (Danvers, Gaylord, and Rosemount) sites, 2009-2011.

Variety or Brand	Originator	Maturity Date	Yield, Percent of Mean			Percent of Mean		Maturity Rating	Phytophthora Gene	Chlorosis Score	SCN Rating	Seed Treat	Trans Trait
			2009-2011	2010-2011	2011	Protein	Oil						
MN0308CN	Minnesota AES	9-15	—	—	48	108	103	0.3	Rps1k	3.0	R	—	CV
MN0506RRCN	Minnesota AES	9-16	88	91	84	107	100	0.5	S	3.5	R	—	RR
Shyenne	No. Dakota AES	9-17	102	100	93	98	104	0.8	Rps1c	2.5	S	—	CV
3209R2YN	Thunder Seed Inc.	9-18	—	—	112	101	101	0.9	Rps1k	3.5	R	—	R2
Mustang 09822	Mustang Seeds	9-18	—	—	111	103	101	0.9	Rps1k	2.5	R	AC	R1
9M21	Titan Pro	9-18	—	—	110	101	103	0.9	Rps1k	3.0	R	AC	R2
MN1011CN	Minnesota AES	9-18	100	101	96	102	97	1.0	Rps1a	3.0	R	—	CV
MN0806CN	Minnesota AES	9-18	98	95	91	99	104	0.8	S	2.8	R	—	CV
MN0606CN	Minnesota AES	9-18	101	97	90	99	102	0.9	S	2.8	R	—	CV
PB-1066R2	Prairie Brand	9-19	—	—	113	101	102	1.5	Rps1k	4.5	R	CM	—
91Y41	Pioneer Hi-Bred	9-19	—	—	109	99	101	1.4	Rps1c	3.0	R	GAT	R1
NS1177NR2	Northstar Genetics	9-19	—	—	96	100	102	1.1	Rps1k	3.3	R	—	R2
MN0908CN	Minnesota AES	9-19	102	99	94	101	98	0.9	S	3.3	R	—	CV
PFS 12R15N	Peterson Farms Seed	9-20	—	—	106	93	103	1.5	Rps1k	2.5	R	CMG	R2
MN1413CN	Minnesota AES	9-20	108	100	93	96	104	1.4	S	4.0	R	—	CV
PFS 12R14N	Peterson Farms Seed	9-21	—	—	108	99	98	1.4	Rps1c	4.3	MR	CMG	R2
PB-1523R2	Prairie Brand	9-21	—	—	106	102	97	1.5	Rps1c	3.5	R	CM	R2
PB-1483R2	Prairie Brand	9-21	—	—	101	99	97	1.4	Rps1c	3.3	MR	CM	R2
MN1410	Minnesota AES	9-21	101	101	95	102	101	1.4	S	3.0	S	—	CV
PB-1743R2	Prairie Brand	9-22	—	—	113	100	97	1.5	Rps1c	3.0	R	CM	—
143R2Y	Anderson Seeds	9-22	—	—	111	98	98	1.4	Rps1c	3.0	MR	—	R1
NS7159NR	Northstar Genetics	9-22	—	—	109	96	103	1.5	Rps1k	2.3	R	—	R1
15M20	Titan Pro	9-22	—	—	105	97	97	1.5	Rps1c	2.8	R	CM	R2
NS1477NR2	Northstar Genetics	9-22	—	—	98	99	99	1.4	Rps1a	3.3	R	—	R2
Mustang 15522	Mustang Seeds	9-23	—	—	104	99	98	1.5	Rps1c	2.5	R	AC	R1
PB-1823R2	Prairie Brand	9-23	—	—	104	102	96	1.5	Rps1c	2.5	R	CM	R2
PB-1722R2	Prairie Brand	9-24	—	116	104	100	97	1.5	Rps1k	3.5	R	CM	R2
PB-1942R2	Prairie Brand	9-24	—	—	104	98	99	1.5	Rps1k	3.5	R	CM	R2
7235	NuTech Seed	9-24	—	—	91	101	97	1.1	Rps1c	2.8	R	SCE	R1
Mean		9-20	42.0	43.8	45.5	33.4	17.8						
LSD 20%			2%	2%	5%								

Entries are listed by the name under which they are submitted for testing, which may be either variety or brand.

Table 13. Performance and characteristics of soybean varieties, relative maturity (RM) > 1.5, central zone; at cyst nematode infested (Danvers, Gaylord, and Rosemount) sites, 2009-2011.

Variety or Brand	Originator	Maturity Date	Yield, Percent of Mean			Percent of Mean		Maturity Rating	Phytophthora Gene	Chlorosis Score	SCN Rating	Seed Treat	Trans Trait
			2009-2011	2010-2011	2011	Protein	Oil						
DST08-002/R2Y	Dairyland Seed Co.	9-19	—	—	94	99	103	0.8	—	2.3	R	CM	R2
MN1804CN	Minnesota AES	9-20	—	—	82	99	102	1.8	Rps1c	3.8	R	—	CV
AG1631	Monsanto	9-21	—	—	118	98	103	1.6	Rps1c	3.0	R	AC	R2
MN1410	Minnesota AES	9-21	99	98	91	103	103	1.4	S	3.8	LR	—	CV
Mustang 17722	Mustang Seeds	9-22	—	—	108	100	102	1.7	Rps1k	3.5	R	AC	R1
91Y92	Pioneer Hi-Bred	9-22	—	—	107	101	102	1.9	Rps1c	4.5	R	GAT	R1
7164	NuTech Seed - G2	9-22	—	—	104	101	97	1.6	—	4.0	R	SCE	R1
AG1931	Monsanto	9-22	—	—	101	102	101	1.9	Rps1c	3.5	R	AC	R2
7186	NuTech Seed - G2	9-22	—	—	101	98	106	1.8	Rps1k	4.8	R	SCE	R1
MN1701CN	Minnesota AES	9-22	98	95	89	98	99	1.7	S	3.5	R	—	CV
NS1726NR2	Northstar Genetics	9-23	—	—	118	99	99	1.7	Rps1c ¹	3.0	R	—	R2
AG2031	Monsanto	9-23	—	114	116	102	101	2.0	Rps1c	4.5	R	AC	R2
Mustang 20622	Mustang Seeds	9-23	—	—	113	100	98	2.0	Rps1c	3.8	R	AC	R1
PB-2042R2	Prairie Brand	9-23	—	—	112	101	104	2.0	Rps1c+Rps1k	4.0	R	CM	R2
Mustang 16221	Mustang Seeds	9-23	—	—	112	101	98	1.6	S	3.8	R	AC	R1
Mustang 18922	Mustang Seeds	9-23	—	—	110	99	99	1.8	S	3.5	R	AC	R1
DSR-2105/R2Y	Dairyland Seed Co.	9-23	—	—	104	98	99	2.1	Rps1k	3.8	R	CM	R2
7208	NuTech Seed - G2	9-23	—	—	103	101	102	2.0	Rps1c	3.8	R	SCE	R1
NS2377NR2	Northstar Genetics	9-23	—	—	100	98	102	2.3	Rps1k	2.3	R	—	R2
92Y11	Pioneer Hi-Bred	9-23	—	104	99	98	100	2.1	Rps1k	4.5	R	GAT	R1
IA1022	Iowa AES	9-23	103	101	98	96	104	1.8	S	2.8	R	—	CV
7226	NuTech Seed - G2	9-23	—	101	96	100	101	2.2	Rps1k	3.0	R	SCE	R1
91Y72	Pioneer Hi-Bred	9-23	—	—	96	100	103	1.7	Rps1k+6	2.5	R	GAT	R1
MN1610CN	Minnesota AES	9-23	—	—	94	101	99	1.6	Rps1a	3.3	R	—	CV
IA3024	Iowa AES	9-23	—	—	78	99	97	2.6	S	2.8	LR	—	CV
PB-1812X	Prairie Brand	9-24	—	—	106	99	99	1.8	S	4.0	R	CM	—
DSR-1808/R2Y	Dairyland Seed Co.	9-24	—	—	103	99	99	1.8	Rps1c	3.5	R	CM	R2
162R2Y	Anderson Seeds	9-24	—	—	96	102	97	1.6	—	3.3	R	—	R1
2324+	NuTech Seed	9-24	—	—	95	102	102	2.3	—	4.0	R	SCE	R1
7192	NuTech Seed - G2	9-24	—	—	90	105	95	1.9	Rps1c	4.0	R	SCE	R1
PB-2242R2	Prairie Brand	9-24	—	—	88	100	94	2.2	Rps1a	3.3	S	CM	R2
IA2073	Iowa AES	9-24	—	87	79	100	97	2.0	S	3.3	LR	—	CV
Mean		9-23	44.5	44.5	43.3	33.1	17.4						
LSD 20%			2%	2%	5%								

¹ Greenhouse test results do not agree with originator's designation.

Entries are listed by the name under which they are submitted for testing, which may be either variety or brand.

Table 14. Performance and characteristics of soybean varieties, southern zone; at soybean cyst nematode infested (Gaylord, Lamberton and Waseca) sites, 2009-2011.

Variety or Brand	Originator	Maturity Date	Yield, Percent of Mean			Percent of Mean		Maturity Rating	Phytophthora Gene	Chlorosis Score	SCN Rating	Seed Treat	Trans Trait
			2009-2011	2010-2011	2011	Protein	Oil						
MN0908CN	Minnesota AES	9-18	91	89	94	100	103	0.9	S	3.8	R	—	CV
MN1011CN	Minnesota AES	9-18	92	86	82	100	101	1.0	Rps1a	2.5	R	—	CV
MN1413CN	Minnesota AES	9-19	101	100	98	99	104	1.4	S	3.5	R	—	CV
MN1410	Minnesota AES	9-20	97	92	95	103	103	1.4	S	4.5	LR	—	CV
MN1804CN	Minnesota AES	9-20	—	—	68	99	102	1.8	Rps1c	4.0	R	—	CV
MN1204RRCN	Minnesota AES	9-21	94	92	96	100	104	1.2	S	4.8	R	—	RR
AG1931	Monsanto	9-22	—	—	116	102	101	1.9	Rps1c	3.0	R	AC	R2
PB-1823R2	Prairie Brand	9-22	—	—	110	102	101	1.5	Rps1c	3.3	R	CM	R2
NS1726NR2	Northstar Genetics	9-22	—	—	109	102	98	1.7	Rps1c ¹	2.8	R	—	R2
91Y92	Pioneer Hi-Bred	9-23	—	—	114	101	103	1.9	Rps1c	3.3	R	GAT	R1
PB-1743R2	Prairie Brand	9-23	—	—	112	101	98	1.5	Rps1c	3.0	R	CM	R1
IA1020	Iowa AES	9-23	103	99	104	100	98	1.6	S	3.8	R	—	CV
Mustang 17722	Mustang Seeds	9-23	—	—	104	102	102	1.7	Rps1k	2.5	R	AC	R1
MN1610CN	Minnesota AES	9-23	—	94	95	101	99	1.6	Rps1a	3.8	R	—	CV
MN1701CN	Minnesota AES	9-23	103	100	95	98	101	1.7	S	3.8	R	—	CV
MN1803RR	Minnesota AES	9-23	—	—	76	103	101	1.8	Rps1a	4.3	S	—	RR
AG2031	Monsanto	9-24	—	109	110	102	100	2.0	Rps1c	4.5	R	AC	R2
92Y11	Pioneer Hi-Bred	9-24	—	99	103	97	101	2.1	Rps1k	4.3	R	GAT	R1
PB-2143R2	Prairie Brand	9-24	—	—	102	101	98	2.1	Rps1c	3.5	S	CM	R2
7208	NuTech Seed - G2	9-24	—	—	101	100	104	2.0	Rps1c	3.8	R	SCE	R1
162R2Y	Anderson Seeds	9-24	—	—	100	103	98	1.6	—	2.8	R	—	R1
NS2077NR2	Northstar Genetics	9-24	—	—	97	100	97	2.0	Rps1c	4.3	R	—	R2
20M1	Titan Pro	9-25	—	—	113	97	101	1.9	Rps1c	2.8	R	CM	R2
PB-2042R2	Prairie Brand	9-25	—	111	112	102	101	2.0	Rps1c+Rps1k	3.8	R	CM	R2
Mustang 20622	Mustang Seeds	9-25	—	—	110	100	99	2.0	Rps1c	3.0	R	AC	R1
18M10	Titan Pro	9-25	—	—	109	100	102	1.8	Rps1k	3.0	R	CM	R2
DSR-1808/R2Y	Dairyland Seed Co.	9-25	—	—	106	100	99	1.8	Rps1c	4.3	LR	CM	R2
IA1022	Iowa AES	9-25	107	105	106	94	105	1.8	S	3.8	R	—	CV
PB-1812X	Prairie Brand	9-25	—	—	104	98	100	1.8	S	4.5	R	CM	R1
204R2Y	Anderson Seeds	9-25	—	—	103	100	99	2.0	Rps1c	4.0	R	—	R1
Mustang 18922	Mustang Seeds	9-25	—	—	103	98	99	1.8	S	3.8	R	AC	R1
IA2073	Iowa AES	9-25	89	84	85	100	98	2.0	S	4.0	S	—	CV
184R2Y	Anderson Seeds	9-26	—	—	108	98	102	1.8	—	3.8	R	—	R1
PB-2099NRR2	Prairie Brand	9-26	112	109	106	97	101	2.0	Rps1c	3.5	R	CM	R2
7230	NuTech Seed - G2	9-26	—	99	105	100	101	2.3	Rps1c	4.5	R	SCE	R1
7226	NuTech Seed - G2	9-26	111	106	105	99	102	2.2	Rps1k	3.3	R	SCE	R1
DSR-2105/R2Y	Dairyland Seed Co.	9-26	—	—	104	98	101	2.1	Rps1k	3.0	R	CM	R2
PB-1722R2	Prairie Brand	9-26	—	102	100	101	102	1.5	Rps1k	3.5	R	CM	R2
IA2068	Iowa AES	9-26	—	—	87	98	99	2.0	S	4.3	R	—	CV
PB-1942R2	Prairie Brand	9-27	—	107	108	98	103	1.5	Rps1k	3.5	R	CM	R2
AG2330	Monsanto	9-27	—	102	106	103	95	2.3	Rps1k	4.0	R	AC	R2
PB-2343R2	Prairie Brand	9-27	—	—	104	98	101	2.2	Rps1k	2.8	R	CM	R2
7245	NuTech Seed	9-27	—	—	98	100	101	2.4	—	3.8	R	SCE	R1
22M11	Titan Pro	9-27	—	—	91	99	99	2.2	Rps1c	3.0	R	AC	R2
Mustang 24322	Mustang Seeds	9-27	—	—	90	100	98	2.4	Rps1a	2.8	S	AC	R1
PB-2242R2	Prairie Brand	9-27	—	—	86	100	95	2.2	Rps1a	3.5	S	CM	R2
IA2094	Iowa AES	9-27	—	—	85	101	98	2.2	S	4.8	LR	—	CV
7250	NuTech Seed - G2	9-28	—	110	110	97	103	2.5	Rps1k	4.0	R	SCE	R1
92Y53	Pioneer Hi-Bred	9-28	—	—	100	95	101	2.5	Rps1k	3.8	R	GAT	R1
7235	NuTech Seed	9-28	—	105	96	102	101	2.3	—	4.0	R	SCE	R1
24M21	Titan Pro	9-28	—	—	96	99	98	2.4	Rps3+Rps1a	2.5	LR	AC	R2
92Y51	Pioneer Hi-Bred	9-29	—	—	101	102	99	2.5	Rps1k	3.5	R	GAT	R1
7258	NuTech Seed - G2	9-29	—	—	97	106	98	2.5	Rps1k	5.0	R	SCE	R1
IA3024	Iowa AES	9-29	—	—	78	97	97	2.6	S	3.5	S	—	CV
Mean		9-25	46.8	49.6	47.2	32.4	18.3						
LSD 20%			2%	2%	6%								

¹ Greenhouse test results do not agree with originator's designation.

Entries are listed by the name under which they are submitted for testing, which may be either variety or brand.

Table 15. Greenhouse bioassay, and field plot test of soybean varieties of central zone in Minnesota for resistance to soybean cyst nematode; Danvers, Gaylord and Rosemount, 2011.

Variety or Brand	Originator	Maturity Rating	SCN Resistance Source ¹	Greenhouse Test					Field Reproductive Index		
				HG Type 0 (Race 3)		Field Egg Count			Danvers (Pi = 258)	Gaylord (Pi = 233)	Rosemount (Pi = 1115)
				Fl	Res. ²	Danvers Ei	Gaylord Ei	Rosemount Ei	Pf/Pi	Pf/Pi	Pf/Pi
MN0308CN	Minnesota AES	0.3	PI88788	9.7	R	10.5	5.4	10.3	2.3	3.6	1.0
MN0506RRCN	Minnesota AES	0.5	PI88788	0.7	R	7.8	4.4	3.6	4.9	1.1	0.3
Shenene	No. Dakota AES	0.8	S	64.6	S	48.4	104.6	131.0	6.8	46.1	27.7
3209R2YN	Thunder Seed Inc.	0.9	N	7.3	R	45.1	7.4	16.7	3.0	4.9	2.3
Mustang 09822	Mustang Seeds	0.9	PI88788	6.7	R	26.5	13.1	13.5	6.9	4.8	1.0
9M21	Titan Pro	0.9	PI88788	5.7	R	7.3	5.7	10.5	2.4	4.5	0.8
MN1011CN	Minnesota AES	1.0	PI88788	3.4	R	10.5	2.6	8.8	0.6	1.8	1.0
MN0806CN	Minnesota AES	0.8	PI88788	0.9	R	7.2	2.1	5.4	0.8	1.1	0.6
MN0606CN	Minnesota AES	0.9	PI88788	1.3	R	10.5	7.3	8.1	1.2	2.3	0.9
PB-1066R2	Prairie Brand	1.5	PI88788	5.0	R	2.0	3.4	7.4	0.3	1.4	0.4
91Y41	Pioneer Hi-Bred	1.4	PI88788	2.5	R	6.0	3.8	6.9	2.5	2.5	0.7
NS1177NR2	Northstar Genetics	1.1	PI88788	2.8	R	59.0	10.7	8.8	5.3	30.4	0.6
MN0908CN	Minnesota AES	0.9	887/209	4.8	R	16.6	2.8	7.8	5.4	3.8	1.0
PFS 12R15N	Peterson Farms Seed	1.5	PI88788	5.8	R	18.4	12.9	12.2	4.1	3.5	0.9
MN1413CN	Minnesota AES	1.4	PI88788	1.4	R	20.3	2.0	4.6	1.6	6.1	0.5
PFS 12R14N	Peterson Farms Seed	1.4	PI88788	28.6	MR	50.4	17.1	7.4	6.4	15.5	1.0
PB-1523R2	Prairie Brand	1.5	PI88788	3.4	R	9.9	6.9	9.1	4.2	2.3	0.9
PB-1483R2	Prairie Brand	1.4	Peking	23.9	MR	8.0	6.4	15.7	5.0	3.9	1.6
MN1410	Minnesota AES	1.4	S	61.5	S	151.6	95.4	69.0	5.4	97.1	10.5
PB-1743R2	Prairie Brand	1.5	PI88788	2.8	R	41.7	6.3	7.3	4.9	6.4	1.2
143R2Y	Anderson Seeds	1.4	Peking	23.7	MR	35.1	10.0	6.1	14.7	3.0	1.2
NS7159NR	Northstar Genetics	1.5	PI88788	3.4	R	20.5	4.8	5.6	4.1	2.1	0.5
15M20	Titan Pro	1.5	PI88788	3.0	R	20.5	3.3	8.6	5.5	2.0	0.8
NS1477NR2	Northstar Genetics	1.4	Peking	0.7	R	49.7	2.4	3.4	3.8	1.9	0.2
Mustang 15522	Mustang Seeds	1.5	PI88788	4.8	R	56.3	5.7	16.2	1.3	2.3	1.2
PB-1823R2	Prairie Brand	1.5	PI88788	5.5	R	6.0	6.4	17.6	0.9	4.7	1.0
PB-1722R2	Prairie Brand	1.5	PI88788	4.9	R	17.8	8.8	13.0	11.2	2.8	1.2
PB-1942R2	Prairie Brand	1.5	PI88788	3.9	R	53.7	1.8	13.4	6.3	2.5	1.2
7235	NuTech Seed	1.1	PI88788	5.1	R	25.8	8.6	11.8	6.7	8.5	0.6

¹ Resistance source provided by originator: N = no data provided. S = susceptible.

² SCN resistance rating: R = resistant at FI 10% or less; MR = moderately resistant at FI 11-30%; LR = low resistant at FI 31-60%; S = susceptible at FI >60%.

Crops are listed by the name under which they are submitted for testing, which may be either variety or brand.

Table 16. Greenhouse bioassay, and field plot test of soybean varieties of central zone in Minnesota, relative maturity (RM)>1.5, for resistance to soybean cyst nematode; Danvers, Gaylord and Rosemount, 2011.

Variety or Brand	Originator	Maturity Rating	SCN Resistance Source ¹	Greenhouse Test					Field Reproductive Index		
				HG Type 0 (Race 3)		Field Egg Count			Danvers (Pi = 133)	Gaylord (Pi = 383)	Rosemount (Pi = 2792)
				FI	Res. ²	Danvers Ei	Gaylord Ei	Rosemount Ei	Pf/Pi	Pf/Pi	Pf/Pi
DST08-002/R2Y	Dairyland Seed Co.	0.8	PI88788	3.0	R	60.9	11.2	7.7	1.3	4.6	0.2
MN1804CN	Minnesota AES	1.8	PI209332	1.3	R	28.6	3.6	13.8	5.3	9.8	0.3
AG1631	Monsanto	1.6	N	4.2	R	45.5	7.5	9.4	1.4	9.9	0.3
MN1410	Minnesota AES	1.4	S	37.7	LR	88.7	114.2	112.9	10.8	250.0	2.6
Mustang 17722	Mustang Seeds	1.7	PI88788	4.1	R	65.9	9.6	8.4	8.1	12.6	0.2
91Y92	Pioneer Hi-Bred	1.9	PI88788	2.2	R	102.3	4.7	10.4	17.3	5.7	0.2
7164	NuTech Seed - G2	1.6	PI88788	2.4	R	50.0	11.5	7.7	2.1	22.2	0.4
AG1931	Monsanto	1.9	N	3.8	R	42.7	10.0	13.6	7.8	7.3	0.4
7186	NuTech Seed - G2	1.8	Peking	0.3	R	54.6	0.4	8.8	1.5	0.8	0.2
MN1701CN	Minnesota AES	1.7	887/209	2.0	R	163.3	39.4	16.5	19.9	17.3	0.6
NS1726NR2	Northstar Genetics	1.7	PI88788	2.5	R	104.6	11.3	11.1	19.2	4.4	0.4
AG2031	Monsanto	2.0	N	3.2	R	40.9	3.9	13.2	7.5	1.1	0.2
Mustang 20622	Mustang Seeds	2.0	PI88788	4.1	R	29.6	2.1	7.9	5.4	1.3	0.3
PB-2042R2	Prairie Brand	2.0	PI88788	5.1	R	52.3	24.4	6.5	2.4	19.1	0.2
Mustang 16221	Mustang Seeds	1.6	PI88788	1.2	R	65.5	14.4	5.8	1.7	3.3	0.2
Mustang 18922	Mustang Seeds	1.8	PI88788	3.7	R	40.5	18.2	10.4	7.4	4.8	0.5
DSR-2105/R2Y	Dairyland Seed Co.	2.1	PI88788	5.7	R	224.2	29.0	11.3	21.4	25.7	0.2
7208	NuTech Seed - G2	2.0	PI88788	2.7	R	26.8	12.0	7.3	0.5	18.3	0.3
NS2377NR2	Northstar Genetics	2.3	PI88788	4.3	R	51.8	20.9	10.6	5.0	27.4	0.4
92Y11	Pioneer Hi-Bred	2.1	Peking	4.0	R	31.8	5.1	6.9	3.9	2.5	0.3
IA1022	Iowa AES	1.8	PI88788	0.7	R	188.3	13.1	22.3	18.0	7.8	0.5
7226	NuTech Seed - G2	2.2	Peking	2.4	R	84.1	7.9	10.6	14.2	4.0	0.2
91Y72	Pioneer Hi-Bred	1.7	PI88788	2.9	R	20.0	27.1	22.5	3.4	22.5	0.7
MN1610CN	Minnesota AES	1.6	PI88788	1.7	R	54.6	19.4	11.5	6.7	12.1	0.3
IA3024	Iowa AES	2.6	S	34.7	LR	111.4	117.6	103.6	20.4	406.6	3.1
PB-1812X	Prairie Brand	1.8	PI88788	1.9	R	147.8	7.8	10.2	14.1	21.5	0.3
DSR-1808/R2Y	Dairyland Seed Co.	1.8	PI88788	3.9	R	154.2	17.5	24.2	26.1	5.3	0.9
162R2Y	Anderson Seeds	1.6	PI88788	2.1	R	50.0	11.6	6.5	9.2	4.2	0.2
2324+	NuTech Seed	2.3	PI88788	2.0	R	156.4	13.9	13.6	2.5	4.6	0.3
7192	NuTech Seed - G2	1.9	PI88788	1.2	R	106.9	7.1	5.0	1.1	1.5	0.2
PB-2242R2	Prairie Brand	2.2	PI88788	64.1	S	50.0	112.8	90.6	3.3	64.4	3.4
IA2073	Iowa AES	2.0	S	43.7	LR	111.4	85.8	87.1	20.4	80.5	2.2

¹ Resistance source provided by originator: N = no data provided. S = susceptible.

² SCN resistance rating: R = resistant at FI 10% or less; MR = moderately resistant at FI 11-30%; LR = low resistant at FI 31-60%; S = susceptible at FI >60%. Entries are listed by the name under which they are submitted for testing, which may be either variety or brand.

Table 17. Greenhouse bioassay and field plot test of soybean varieties of southern zone in Minnesota for resistance to soybean cyst nematode; Gaylord, Lamberton and Waseca, 2011.

Variety or Brand	Originator	Maturity Rating	SCN Resistance Source ¹	Greenhouse Test					Field Reproductive Index		
				HG Type 0 (Race 3)		Field Egg Count			Danvers (Pi = 405)	Lamberton (Pi = 2858)	Waseca (Pi = 1301)
				FI	Res. ²	Gaylord Ei	Ei	Waseca Ei	Pf/Pi	Pf/Pi	Pf/Pi
MN0908CN	Minnesota AES	0.9	887/209	8.2	R	9.3	34.8	20.5	4.4	2.3	1.0
MN1011CN	Minnesota AES	1.0	PI88788	3.4	R	8.4	23.6	10.0	1.1	2.3	1.4
MN1413CN	Minnesota AES	1.4	PI88788	1.5	R	7.9	40.1	7.3	4.6	3.7	1.3
MN1410	Minnesota AES	1.4	S	57.0	LR	97.4	97.1	128.7	122.9	5.6	16.6
MN1804CN	Minnesota AES	1.8	PI209332	3.7	R	18.9	31.7	13.1	7.7	1.2	0.6
MN1204RRCN	Minnesota AES	1.2	PI88788	1.5	R	3.3	44.0	12.9	1.7	2.1	0.6
AG1931	Monsanto	1.9	N	4.1	R	21.2	32.1	22.3	7.6	1.5	1.7
PB-1823R2	Prairie Brand	1.5	PI88788	4.2	R	8.6	33.7	11.6	11.2	1.5	5.5
NS1726NR2	Northstar Genetics	1.7	PI88788	4.3	R	10.3	42.9	17.2	11.0	2.0	1.3
91Y92	Pioneer Hi-Bred	1.9	PI88788	3.1	R	4.7	33.9	18.4	3.1	1.4	2.9
PB-1743R2	Prairie Brand	1.5	PI88788	2.9	R	3.1	13.7	5.9	4.7	1.0	1.8
IA1020	Iowa AES	1.6	S	3.2	R	14.5	44.8	17.9	34.4	1.8	1.7
Mustang 17722	Mustang Seeds	1.7	PI88788	3.8	R	24.9	27.8	27.4	32.4	0.7	5.2
MN1610CN	Minnesota AES	1.6	PI88788	5.7	R	11.5	28.5	19.4	21.5	1.4	1.1
MN1701CN	Minnesota AES	1.7	887/209	3.5	R	75.9	37.0	12.9	95.7	1.1	1.9
MN1803RR	Minnesota AES	1.8	S	74.4	S	134.7	116.2	95.1	38.5	6.4	6.1
AG2031	Monsanto	2.0	N	8.6	R	18.5	34.6	10.7	23.4	1.7	2.1
92Y11	Pioneer Hi-Bred	2.1	Peking	3.4	R	6.6	44.4	17.9	2.2	1.8	1.2
PB-2143R2	Prairie Brand	2.1	PI88788	107.4	S	387.5	62.9	47.2	195.6	1.4	10.8
7208	NuTech Seed - G2	2.0	PI88788	3.5	R	14.6	29.3	18.5	5.7	1.6	1.7
162R2Y	Anderson Seeds	1.6	PI88788	1.5	R	8.7	25.3	15.3	1.7	0.9	2.3
NS2077NR2	Northstar Genetics	2.0	PI88788	3.4	R	6.9	35.3	8.9	24.6	1.2	2.6
20M1	Titan Pro	1.9	PI88788	3.9	R	5.2	28.4	16.0	9.4	0.6	2.3
PB-2042R2	Prairie Brand	2.0	PI88788	5.1	R	31.7	37.4	26.0	27.2	1.5	0.9
Mustang 20622	Mustang Seeds	2.0	PI88788	3.2	R	19.2	28.1	16.0	5.2	1.6	1.1
18M10	Titan Pro	1.8	PI88788	4.7	R	7.1	44.6	21.9	1.1	1.2	2.5
DSR-1808/R2Y	Dairyland Seed Co.	1.8	PI88788	30.6	LR	25.2	32.0	37.0	3.3	2.0	3.7
IA1022	Iowa AES	1.8	PI88788	1.5	R	25.4	35.8	4.8	27.9	1.5	1.2
PB-1812X	Prairie Brand	1.8	PI88788	3.4	R	15.6	26.0	22.0	9.1	3.6	4.2
204R2Y	Anderson Seeds	2.0	PI88788	4.1	R	14.5	41.3	12.1	2.1	1.2	3.9
Mustang 18922	Mustang Seeds	1.8	PI88788	3.8	R	12.4	22.5	22.0	1.8	2.0	1.8
IA2073	Iowa AES	2.0	S	88.9	S	102.6	102.9	71.3	231.6	4.0	5.7
184R2Y	Anderson Seeds	1.8	PI88788	2.1	R	13.5	53.1	11.9	1.6	1.9	2.2
PB-2099NRR2	Prairie Brand	2.0	PI88788	3.1	R	36.1	60.3	14.3	38.8	1.2	1.7
7230	NuTech Seed - G2	2.3	PI88788	6.3	R	13.9	19.1	14.7	4.4	1.5	2.1
7226	NuTech Seed - G2	2.2	Peking	3.8	R	5.0	11.5	20.5	2.2	0.3	1.2
DSR-2105/R2Y	Dairyland Seed Co.	2.1	PI88788	6.6	R	35.8	32.1	11.2	51.2	2.3	2.0
PB-1722R2	Prairie Brand	1.5	PI88788	3.9	R	29.6	48.5	14.1	8.8	2.8	1.5
IA2068	Iowa AES	2.0	PI88788	2.4	R	16.7	24.4	7.8	1.7	0.4	0.8
PB-1942R2	Prairie Brand	1.5	PI88788	9.0	R	15.7	37.4	17.5	22.5	1.2	1.0
AG2330	Monsanto	2.3	N	4.7	R	23.9	31.1	43.9	13.0	1.1	2.4
PB-2343R2	Prairie Brand	2.2	PI88788	3.5	R	10.3	33.4	39.7	3.5	2.0	2.5
7245	NuTech Seed	2.4	PI88788	4.4	R	3.3	30.6	37.9	3.6	1.8	2.6
22M11	Titan Pro	2.2	PI88788	5.8	R	16.3	49.7	6.8	5.3	4.7	1.3
Mustang 24322	Mustang Seeds	2.4	PI88788	75.2	S	160.4	106.3	155.2	99.7	7.2	47.8
PB-2242R2	Prairie Brand	2.2	PI88788	83.0	S	157.5	104.1	150.3	9.4	6.1	14.8
IA2094	Iowa AES	2.2	S	53.5	LR	97.4	158.8	110.5	14.2	7.5	5.2
7250	NuTech Seed - G2	2.5	Peking	0.8	R	2.1	17.0	10.3	2.0	0.9	0.4
92Y53	Pioneer Hi-Bred	2.5	Peking	2.9	R	3.8	12.8	17.1	1.8	1.3	1.0
7235	NuTech Seed	2.3	PI88788	3.1	R	85.1	32.3	10.0	52.9	1.1	3.2
24M21	Titan Pro	2.4	PI88788	54.4	LR	70.7	73.6	52.7	56.2	3.2	11.3
92Y51	Pioneer Hi-Bred	2.5	PI88788	4.7	R	5.5	44.0	19.5	9.8	1.4	2.1
7258	NuTech Seed - G2	2.5	PI88788	2.8	R	6.4	36.5	17.9	5.6	1.8	1.1
IA3024	Iowa AES	2.6	S	103.2	S	145.2	123.0	262.9	31.9	3.3	14.0

¹ Resistance source provided by originator: N = no data provided. S = susceptible.

² SCN resistance rating: R = resistant at FI 10% or less; MR = moderately resistant at FI 11-30%; LR = low resistant at FI 31-60%; S = susceptible at FI >60%. Entries are listed by the name under which they are submitted for testing, which may be either variety or brand.