SOYBEAN

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

Tables on pages 60-62 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 shows test locations and zone boundaries. All of these tests were planted between May 1 and June 10 at planting rates of 160,000 plants/acre. Herbicides were used as necessary for good weed control. Row spacings were 30 inches at Becker and Jackson and 10 inches at other locations. Plot combines were used to harvest the plots

Pages 63-64 provide results of the very early (far northern Minnesota) and special southeastern Minnesota variety tests. These locations were added to provide data for environments not represented by the other location tests.

Pages 64-70 provide results from specific tests of available Roundup Ready® varieties adapted to the northern, central and southern production zones.

Page 71 shows results from the special performance tests of soybean-cyst-nematode-resistant varieties in "infested" field sites near Lamberton, Waseca, and Madelia and "non-infested" field sites near Lamberton, Jackson, and Waseca. Planting techniques were the same as the regular performance tests.

Pages 72-76 provide performance and characteristics data from special-use soybean variety tests. These tests were conducted to provide reliable data for growers interested in producing these types of soybeans, which are typically grown under contract.

Page 76 provides important variety characteristics of publicly developed varieties entered in the 2003 tests.

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 achievement is affected by latitude. Each 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 2003 are provided in the tables. Harvest dates are typically 7 to 14 days later, depending upon drying 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 MN0302 indicated as 0.3, making it an early group 0 variety, while MN0901, 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.

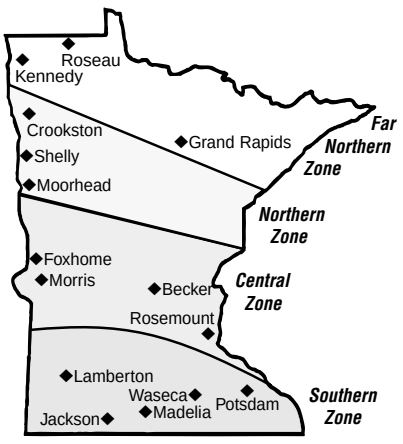
Yield

Because maturity is a very important attribute, varieties are arranged in the tables in order of their actual 2003 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.

In 2003 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-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.



Soybean Maturity Zones.

Chlorosis

These ratings are based on how much of the leaf area was yellowing in tests conducted on high lime (high pH) soils near Foxhome in 2003. Comparing chlorosis scores of varieties permits you to estimate how well they perform relative to each other. Actual chlorosis ratings can vary depending on the specific site and year of test. Specific scores and evaluation dates from the 2003 tests are provided at the following web site www.soybeans.umn.edu/home.htm

Some universities and companies use numerical scores rather than word descriptors to describe chlorosis tolerance. A comparison of these 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 2003 season only. The protein and oil information is presented on a percent of the mean of the test. The actual mean values are given at the bottom of each table.** Values over 100 indicate the protein and/or oil contents of the variety were 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 mean protein and oil values are expressed on a 13-percent moisture basis. This formula converts the protein and oil values to another moisture basis:

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

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:

$$\frac{\text{* price of meal \$/ton}}{2{,}000} = \text{\$/pound}$$

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 can cause significant yield reductions if susceptible varieties are planted in poorly drained, infested 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 "Genes for resistance" chart shows which genes provide resistance to the various races.

Soybean Cyst Nematode

Soybean Cyst Nematode (SCN), first identified in Minnesota in 1978, 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 (S), moderately susceptible (MS), moderately resistant (MR) and resistant (R) varieties planted in infested and non-infested fields in southern Minnesota are provided on page 71. The ratings for SCN resistance were determined using nematode counts from naturally infested field sites and a greenhouse test using a Minnesota field population of SCN.

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. Although SCN reproduction is less on MS-rated varieties than on S-rated varieties, for practical purposes these varieties should not be considered for planting in fields where SCN is present and being managed.

Management information is available from 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, web site 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

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	■	■	■	■						■		■		■	■	■		■	■	■	■				■		

of reducing white mold severity. 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.

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. Freeborn, IA1006, and IA2008R are available public varieties with resistance to BSR. Latham 388RR, Latham E2478T, and Latham L2136R are privately developed varieties reported to be moderately resistant to BSR. Latham 367RR, Latham E2336R, Latham E2145R and GL 1903RR are reported to be resistant to BSR.

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

Special-Use Varieties

There is growing interest in producing soybeans with special characteristics important to manufacturers of specialty food products. 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 MCIA at web site www.mncia@tc.umn.edu or telephone number 612-625-7766.

Source information.

Contact addresses and brand names for varieties entered in 2003 tests are:

Advantage Brand Soybean (Advantage), 17303 Highway 22, Good Thunder, MN 56037

Albert Lea Seed House (Viking), P.O. Box 127, 1414 W. Main, Albert Lea, MN 56007

Anderson Seeds (Anderson), 37825 Co. Rd 63, St. Peter, MN 56082

Bio Gene (Bio Gene), 5491 Tri County Hwy, Sardinia, OH 45171

Crow's Hybrid Corn Co. (Crows), 612 E Dunlap, Kentland, IN 47951

Dairyland Seed Co., Inc. (Dairyland), PO Box 958, 357D Hwy H, West Bend, WI 53095

Dennis Ewing Farm Seed (Yield King), 6131 North Fork Road, Ames, IA 50010

Earthwise Processors (Earthwise), 4111 30th Ave S, Moorhead, MN 56560

Excel Brand (Excel Brand), 116 E. State, Camp Point, IL 62320

Farm Advantage, 1275 Hwy 69, Belmond, IA 50421

Garst and AgriPro Seeds Company (Garst/ AgriPro), 2369 330th St., Box 500, Slater, IA 50244

Gold Country Seed, Inc. (GCS), 16506 Hwy. 15 N, P.O. Box 604, Hutchinson, MN 55350

Great Lakes Hybrids, Inc. (Great Lakes), 9915 W. M-21, Ovid, MI 48866

Helena (Helena), 7137 Vista Dr., W. Des Moines., IA 50266

Hyland Seeds (Hyland), Box 130 2 Hyland Drive, Blenheim, Ontario, Canada, NOP1A0

Iowa State University Research Foundation (Iowa AES), 310 Lab of Mechanics, Ames, IA 50011

Kruger Seed Company (Kruger), Highway 20 East, Box A, Dike, IA 50624

KSC/Challenger (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), 710 N Main St., Suite 201, River Falls, WI 54022

Maple Leaf Foods (MLF), 3080 Yonge St., Suite 2000, Toronto, Ontario, Canada M4N3N1

Midwest Seed Genetics (MW Genetics), 23751 Highway 30 East, Carroll, IA 51401

Minnesota Agricultural Experiment Station (Minn. AES), 190 Coffey Hall, 1420 Eckles Ave, St. Paul, MN 55108

Monsanto, (Dekalb, Asgrow), 800 N. Lindberg Blvd, St. Louis, MO 63167

Mustang Seed, Box 466, Madison, SD 57042

NDSU Research Foundation, (ND AES & RoughRider Genetics) Research Park, Rm 142A, Fargo, ND 58105

Northland Seed & Grain (Northland), 462 Holly Ave, St. Paul, MN 55102

Peterson Farm Seed (PFS), 3104 164th Ave SE, Harwood, ND 58042

Pioneer Hi-Bred Int'l, Inc. (Pioneer), 99 Navaho Ave, Suite 101-A, Mankato, MN 56001

Proseed (Proseed), 705 E Brewster, Harvey, ND 58341

Profiseed, Inc. (Profiseed), 1691 Highway 65, Hampton, IA 50441

Prairie Brand Research (PBR), 15 X Ave., Story City, IA 50248

Prairie Brand Seed Company (Prairie Brand), 15 X Ave., Story City, IA 50248

Quality Seed Co. (Quality Seed), 307 3rd Street, Alice, ND 58031

Renk Seed Co., (Renk) 6800 Wilburn Rd., Sun Prairie, WI 53590

Richland Organics (Richland Organics), 100 N. 10th St, Breckenridge, MN 56520

Sabre Initiatives LLC (Sabre), 2508 Trott Ave., SW P.O. Box 386, Willmar, MN 56201

Sand Seed Service, Inc. (Sands), PO Box 648, Marcus, IA 51035

Sansgaard Seed Farms, Inc. (Sansgaard), 15 X Ave., Story City, IA 50248

Seeds 2000 (Seeds 2000), PO Box 200, Brekenridge, MN 56520

Sodak Genetics (Sodak Genetics), Box 2207A, SDSU, Brookings, SD 57007

Star Brand Research (Star), PO Box 648, Marcus IA 51035

Stine Seed Co., (Stine), 2225 Laredo Trail, Adel, IA 50003

Stine Seed Farm, (Stine) 2225 Laredo Trail, Adel, IA 50003

Source information (continued).

Syngenta Seeds (NK Brand), 3701 W 49th St, Ste 206, Sioux Falls, SD 57106
Thompson Agronomics, Inc., (Thompson), 40321 130th Ave., Leland, IA 50453
Thompson Seeds, Inc., (Thompson), 40321 130th Ave., Leland, IA 50453
Top Farm Hybrids (Top Farm), P.O. Box 850, Cokato, MN 55321
Trelay Seeds (High Cycle), 11623 State Road 80, Livingston, WI 53544
UAP Seed (Dyna-Gro), PO Box 10, Wall Lake, IA 51466
Wensman Seed Company (Wensman), P.O. Box 190, Wadena, MN 56482
Ziller Seed Co., Inc. (Ziller), 76374 380th St, Bird Island, MN 55310

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 10 to June 10

Performance and characteristics of public and private soybean varieties, northern zone; Crookston, Moorhead and Shelly, 2001-2003.

Variety	Brand or Originator	Maturity Date	Yield, Percent of Mean			Percent of Mean		Maturity Rating	Phytophthora Gene	Chlorosis Score
			2001-2003	2002-2003	2003	Protein	Oil			
Jim	N.D. AES	9-7	100	98	97	98	97	00.7	S	3.0
MN0071	Minn. AES	9-8	–	94	99	99	102	00.7	Rps1	2.2
Lena	Peterson Farms Seed	9-10	–	–	107	94	103	00.8	Rps1	2.8
Glacier	Minn. AES	9-10	91	88	93	104	95	00.8	Rps6	1.8
Traill	N.D. AES	9-11	106	113	108	101	98	0.0	Rps1	2.3
Bravado	Earthwise	9-12	–	–	103	94	104	00.8	S	2.3
Barnes	N.D. AES	9-14	101	104	102	100	104	0.2	Rps6	2.2
MN0201	Minn. AES	9-14	94	94	97	111	94	0.2	Rps1	2.0
Walsh	N.D. AES	9-14	99	96	96	100	101	0.2	Rps6	2.3
MN0304	Minn. AES	9-14	-	97	87	101	101	0.3	Rps1k+Rps6	2.0
MN0301	Minn. AES	9-15	102	101	99	99	103	0.3	Rps1	1.8
90B43	Pioneer	9-16	104	104	107	97	103	0.4	Rps1c	2.2
Lambert	Minn. AES	9-17	103	106	104	98	102	0.7	Rps1	3.3
MN0302	Minn. AES	9-17	98	100	101	101	101	0.3	Rps1k	2.5
Viper	Earthwise	9-18	–	–	99	108	97	0.3	S	2.8
PB-033	Prairie Brand	9-20	–	–	103	98	99	0.3	S	3.2
Mean		9-14	38.4 bu/a	36.2 bu/a	31.6 bu/a	34.0%	19.2%			
LSD 20%			5%	7%	11%					

Performance and characteristics of public and private soybean varieties, central zone; Becker, Morris and Rosemount, 2001-2003.

Variety	Brand or Originator	Maturity Date	Yield, Percent of Mean				Percent of Mean		Maturity Rating	Phytophthora Gene	Chlorosis Score
			2001-2003	2002-2003		2003	Protein	Oil			
MN0302	Minn. AES	9-8	91	92	90	98	101		0.3	Rps1k	2.0
Barnes	N.D. AES	9-8	89	89	86	98	106		0.2	Rps6	3.0
Lambert	Minn. AES	9-11	101	102	99	99	102		0.7	Rps1	2.8
Viper	Earthwise	9-12	–	–	97	101	99		0.3	S	2.3
MN0902CN	Minn. AES	9-13	96	98	98	101	97		0.9	S	1.7
MN1005	Minn. AES	9-15	–	99	99	96	102		1.0	Rps1k	3.0
Surge	Minn.& S.D. AES	9-15	101	96	96	101	103		0.9	Rps1	2.7
91M10	Pioneer	9-17	–	–	102	100	100		1.1	S	2.3
MN1006CN	Minn. AES	9-18	–	100	106	99	100		1.0	Rps1	2.7
MN1302	Minn. AES	9-19	104	103	102	97	99		1.3	Rps1	2.5
Parker	Minn. AES	9-20	101	94	88	96	108		1.5	Rps1	3.0
Kato	Minn. AES	9-20	90	91	87	104	95		1.3	Rps1	2.2
1919	Kruger	9-21	–	–	116	103	95		1.7	S	3.3
1545	Farm Advantage	9-21	–	–	108	99	98		1.4	S	1.8
91B53	Pioneer	9-21	109	109	108	102	97		1.6	S	2.7
MN1401	Minn. AES	9-21	97	98	100	101	102		1.4	Rps1	2.0
PB-178	Prairie Brand	9-22	116	116	109	101	97		1.7	S	2.2
1918	Kruger	9-22	–	–	107	98	100		1.7	S	2.2
Freeborn	Minn. AES	9-22	97	96	92	104	96		1.6	Rps1	1.7
1549	Garst/AgriPro	9-23	–	–	112	103	100		1.5	S	2.0
PB-146	Prairie Brand	9-23	109	109	105	100	96		1.4	S	2.2
FA1545	Farm Advantage	9-23	–	110	103	100	99		1.4	S	2.7
T-3143	Thompson	9-24	–	–	92	99	104		1.4	S	2.7
Mean		9-18	51.1 bu/a	54.6 bu/a	49.3 bu/a	36.2%	18.6%				
LSD 20%			3%	7%	7%						

Performance and characteristics of public and private soybean varieties, southern zone; Jackson, Lamberton and Waseca, 2001-2003.

Variety	Brand or Originator	Maturity Date	Yield, Percent of Mean			Percent of Mean		Maturity Rating	Phytophthora Gene	Chlorosis Score
			2001-2003	2002-2003	2003	Protein	Oil			
MN1401	Minn. AES	9-15	93	91	93	102	96	1.4	Rps1	2.0
MN1301	Minn. AES	9-18	92	90	95	102	99	1.3	Rps1	2.5
MN1302	Minn. AES	9-18	95	95	95	98	101	1.3	Rps1k	1.7
PB-183	Prairie Brand	9-19	–	–	122	92	104	1.8	S	1.5
1846	Farm Advantage	9-19	–	114	107	104	98	1.8	S	3.0
Parker	Minn. AES	9-19	102	100	99	101	101	1.5	Rps1	2.8
MN1801	Minn. AES	9-19	98	93	86	103	102	1.8	Rps1c	2.8
342CNBrand	Latham	9-20	–	–	104	101	99	1.9	S	3.0
T-3182	Thompson	9-20	–	108	101	95	106	1.8	S	2.8
T-3201	Thompson Seeds	9-20	105	104	90	100	97	2.0	S	2.8
T-3189	Thompson	9-21	–	–	105	103	97	1.9	S	2.3
2318	Gold Country	9-21	–	–	102	106	95	1.7	S	2.3
SOI187	Sands	9-21	–	–	102	98	101	1.8	Rps1	3.3
PB-178	Prairie Brand	9-21	104	99	98	106	99	1.7	S	2.8
Freeborn	Minn. AES	9-21	91	85	89	105	98	1.6	Rps1	2.0
IA1006	Iowa AES	9-21	94	92	87	98	99	1.6	S	2.2
1888	Viking	9-22	–	–	115	105	97	1.8	S	2.7
280Brand	Latham	9-22	–	–	104	108	94	1.7	S	2.7
SOI202	Sands	9-22	–	–	99	97	102	2.0	S	2.7
SOI212N	Sands	9-22	–	–	97	99	101	2.1	Rps1	2.3
IA1008	Iowa AES	9-22	–	–	96	97	98	2.0	S	2.0
IA2050	Iowa AES	9-22	103	103	93	99	101	2.1	S	3.0
2220+SCN	Kruger	9-23	–	–	108	99	101	2.0	Rps1	3.0
570Brand	Latham	9-23	–	–	104	99	103	2.2	S	2.5
2244	Farm Advantage	9-23	–	108	102	101	98	2.2	Rps1	2.2
PB-230	Prairie Brand	9-23	102	103	99	96	101	2.3	S	2.2
Sturdy	Minn. AES	9-23	93	92	93	98	99	2.0	Rps1	2.3
SOI234	Sands	9-23	–	–	92	100	101	2.3	Rps1	2.8
2242	Kruger	9-24	–	–	114	96	101	2.0	S	3.2
2202	Kruger	9-24	–	–	107	97	103	2.0	S	2.5
92M10	Pioneer	9-24	–	–	102	96	102	2.1	Rps1c	2.7
PB-202	PBR	9-24	103	104	94	106	97	2.0	S	2.2
T-3222	Thompson	9-25	115	117	111	105	96	2.2	S	2.3
IA2021	Iowa AES	9-25	103	100	102	93	104	2.1	Rps1k	3.0
2323SCN	Kruger	9-25	–	–	97	98	101	2.1	S	2.8
MLF128	Maple Leaf Foods	9-25	–	–	96	103	102	1.7	S	2.8
IA2052	Iowa AES	9-28	101	103	107	97	98	2.3	Rps1	2.3
IA2008R	Iowa AES	9-28	98	96	91	93	98	2.1	Rps1k	2.5
E2478T	Latham	9-29	–	–	100	98	101	2.4	S	2.8
Mean		9-22	50.8 bu/a	46.3 bu/a	39.2 bu/a	34.2%	19.7%			
LSD 20%			5%	7%	8%					

Performance and characteristics of very early maturing soybean varieties; Grand Rapids, Kennedy and Roseau, 2001-2003.

Variety	Maturity Rating	Yield, Percent of Mean 2001-2003	2002-2003	2003	Percent of Mean Protein	Oil	Phytophthora Gene	Chlorosis Score
Jim	00.7	96	103	101	100	96	S	4.0
90A07	00.7	–	100	98	98	101	S	3.0
MN0071	00.7	104	96	97	99	102	Rps1	3.0
McCall	00.7	96	93	95	101	101	S	2.7
Agassiz	0.0	104	109	110	102	101	Rps1	3.3
Traill	0.0	100	97	100	101	98	S	2.7
Mean		34.0 bu/a	34.3 bu/a	32.6 bu/a	34.0%	18.2%		
LSD 20%		3%	4%	5%				

Performance and characteristics of conventional and Roundup Ready public and private soybean varieties, far northern zone; Roseau and Kennedy, 2001-2003.

Variety	Brand or Originator	Maturity Date	Yield, Percent of Mean 2001-2003	2002-2003	2003	Percent of Mean Protein	Oil	Maturity Rating	Phytophthora Gene	Chlorosis Score
Jim	N.D. AES	9-11	109	104	101	99	98	00.7	S	2.7
DKB005-51	Dekalb	9-12	–	–	88	99	104	00.5	Rps1	2.7
S00-J4	Syngenta	9-13	–	–	96	96	104	00.4	Rps1	2.7
MN0071	Minn. AES	9-15	104	98	104	99	104	00.7	Rps1	2.7
RR00-05	Proseed	9-15	–	–	101	102	98	00.5	Rps1	3.0
McCall	Minn. AES	9-15	93	93	96	99	98	00.7	S	2.7
S0076-6	Stine	9-16	–	–	109	99	98	00.8	Rps1	2.0
90A07	Pioneer	9-16	–	101	101	96	98	00.7	S	2.0
S0040-4	Stine	9-16	–	–	96	93	104	00.5	Rps1	2.5
W20091	Wensman	9-17	–	–	104	102	98	00.9	Rps1	2.0
04009RR	Peterson Farms Seeds	9-17	–	–	99	102	104	00.9	Rps1	2.3
03005RR	Peterson Farms Seeds	9-18	–	–	104	102	104	00.5	Rps1	2.3
PB0094	Prairie Brand	9-18	–	–	101	102	104	00.9	Rps1	2.0
PB0052	Prairie Brand	9-18	–	–	96	102	98	00.5	Rps1	2.5
30F05	Dyna-Gro	9-18	–	–	94	102	98	00.5	Rps1	2.7
30D09	Dyna-Gro	9-19	–	–	104	99	104	00.9	Rps1	2.2
RT0041	Croplan	9-20	–	–	94	105	98	0.0	S	2.5
RR00	Proseed	9-21	–	–	101	96	104	0.0	Rps1	2.7
PB0072	Prairie Brand	9-21	–	–	96	102	98	00.7	Rps1	2.5
Lena	Peterson Farms Seeds	9-22	–	–	112	93	109	00.8	Rps1	1.8
90B11	Pioneer	9-22	–	–	101	96	98	0.1	S	2.3
Traill	N.D. AES	9-22	96	93	99	99	98	0.0	Rps1	2.3
RG20022	RoughRider	9-22	–	–	96	102	93	0.0	S	2.0
Agassiz	Minn. AES	9-23	98	104	104	102	98	0.0	Rps1	2.3
04007RR	Peterson Farms Seeds	9-23	–	–	101	105	98	00.7	Rps1	2.3
S0086-4	Stine	9-25	–	–	101	93	109	00.8	Rps1	2.3
0095RR	Garst	9-25	–	–	99	105	93	00.9	S	2.2
RR20-11	Proseed	9-27	–	–	86	96	104	0.1	Rps1	2.3
RR10091	Proseed	9-28	–	–	94	102	98	00.9	Rps1	3.3
Mean		9-20	37.6 bu/a	39.2 bu/a	38.5 bu/a	34.4 %	18.3 %			
LSD 20%			4%	6%	9%					

Performance and characteristics of public soybean varieties, southeastern Minn., 1999-2003.

Variety	Maturity Rating	Yield, Percent of Mean 1999-2003	2000-2003	2001-2003	Percent of Mean Protein	Oil	Phytophthora Gene	Chlorosis Score
MN1302	1.3	–	–	99	94	102	Rps1k	2.3
MN1301	1.3	89	86	93	103	102	Rps1	2.0
MN1401	1.4	100	101	97	102	98	Rps1	2.7
91B53	1.5	–	–	101	102	101	S	2.7
Parker	1.5	99	97	96	101	101	Rps1	2.8
IA1006	1.6	102	101	96	99	98	S	2.7
Freeborn	1.6	93	93	91	101	99	Rps1	2.8
MN1801	1.8	102	102	101	99	100	Rps1c	3.3
Sturdy	2.0	108	110	109	102	99	Rps1	2.8
IA1008	2.0	91	89	100	98	99	S	2.8
IA2021	2.1	106	108	109	98	103	Rps1k	3.5
IA2050	2.1	107	107	103	101	98	S	3.8
IA2052	2.3	106	107	104	99	101	Rps1	3.3
Mean		41.2 bu/a	42.1 bu/a	41.4 bu/a	34.4%	18.2%		
LSD 20%		3%	5%	7%				

Performance and characteristics of Roundup Ready soybean varieties, northern zone; Crookston, Moorhead and Shelly, 2001-2003.

Variety	Brand or Originator	Maturity Date	Yield, Percent of Mean 2001-2003	2002-2003	2003	Percent of Mean Protein	Oil	Maturity Rating	Phytophthora Gene	Chlorosis Score
PB-0052RR	Prairie Brand	9-10	–	–	102	104	98	00.6	S	2.8
0082RR	Star	9-10	–	–	100	100	101	00.9	Rps1k	1.8
PB-0043RR	Sansqaard	9-10	–	–	92	95	107	00.4	S	1.7
PB-0094RR	Prairie Brand	9-11	–	95	110	100	101	00.9	Rps1k	1.8
PB-0093RR	Sansqaard	9-11	–	–	110	99	102	00.9	S	1.3
Ramsey	Hyland Seed	9-11	–	–	108	102	99	00.7	S	2.0
0051RR	Seeds 2000	9-11	–	–	107	99	103	00.5	S	1.0
RG20022	RoughRider	9-11	–	–	104	100	100	0.0	S	1.8
0052RR	Star	9-12	–	–	106	105	99	00.5	S	2.3
W20091RR	Wensman	9-12	–	–	104	101	102	00.9	Rps1k	1.2
0151RR	Star	9-12	–	–	99	96	104	0.0	Rps1	2.0
04007RR	Peterson Farms Seeds	9-12	–	–	98	106	99	00.7	S	1.7
0072RR	Star	9-12	–	–	95	103	99	00.7	S	2.3
PB-0072RR	Prairie Brand	9-12	–	–	92	101	98	00.7	S	1.7
0071RR	Seeds 2000	9-12	–	–	89	102	101	00.7	S	1.8
AG0201	Asgrow	9-13	–	–	100	97	102	0.2	S	2.7
AG0301	Asgrow	9-14	–	–	109	102	99	0.3	Rps1k	2.0
2021RR	Seeds 2000	9-14	–	96	108	93	105	0.2	Rps1c	3.0
PB-0232RR	Sansqaard	9-14	–	96	99	100	103	0.3	S	2.2
RR00	Proseed	9-14	–	–	91	97	104	0.0	Rps1c	2.3
6002RR	Top Farm	9-14	–	–	90	99	103	0.0	S	2.7
M-023RR	Mustang	9-15	–	103	109	100	101	0.2	Rps1k	2.2
PB-0799RR	Prairie Brand	9-15	–	101	102	98	102	0.5	Rps1k	1.7
C0551RR	LG Seeds	9-15	–	98	95	100	102	0.5	Rps1k	1.8
90B51	Pioneer	9-16	–	111	109	102	103	0.5	Rps1c	1.5
M-033RR	Mustang	9-16	–	–	105	97	101	0.3	Rps1k	1.8
S0086-4	Stine	9-16	–	–	101	97	106	00.9	S	2.0
0402KRR	Peterson Farms Seeds	9-16	–	–	94	102	98	0.2	Rps1k	2.2
044RR	Yield King	9-16	–	–	91	100	101	0.2	Rps1k	1.3
6020RR	Top Farm	9-17	–	–	96	100	100	0.2	S	2.8

Performance and characteristics of Roundup Ready soybean varieties, northern zone; Crookston, Moorhead and Shelly, 2001-2003 (continued).

Variety	Brand or Originator	Maturity Date	Yield, Percent of Mean 2001-2003	2002-2003	2003	Percent of Mean Protein	Oil	Maturity Rating	Phytophthora Gene	Chlorosis Score
0305RR	Peterson Farms Seeds	9-18	–	–	113	102	94	0.5	S	1.8
90B74	Pioneer	9-18	–	98	112	96	105	0.7	Rps1c	2.7
PB-0423RR	Sansqaard	9-18	-	–	102	101	100	0.4	S	1.7
RR1030	Proseed	9-18	–	–	99	102	98	0.3	S	2.7
S0200-4	Stine	9-18	–	–	99	96	105	0.2	S	2.0
PB-0363RR	PBR	9-18	–	–	98	99	101	0.3	S	2.7
RR0029	Proseed	9-18	–	–	96	93	105	0.2	Rps1	2.2
W2020RR	Wensman	9-18	–	–	95	99	102	0.2	S	2.3
RR20-11	Proseed	9-18	–	–	89	94	108	0.1	Rps1k	2.2
W2062RR	Wensman	9-19	–	–	106	100	101	0.5	S	1.8
8055RR	Exel Brand	9-19	-	–	101	108	95	0.5	S	2.7
DSR-075/RR	Dairyland	9-19	100	99	99	101	99	0.8	Rps1k	2.5
8046RR	Exel Brand	9-19	–	96	97	104	97	0.4	S	2.0
T-0711RR	Quality Seed Genetics	9-20	–	–	106	96	100	0.5	S	2.5
PB-0532RR	PBR	9-20	–	109	104	104	103	0.5	S	2.5
060RR	Kruger	9-20	–	–	103	98	98	0.4	S	2.2
055RR	KSC/Challenger	9-20	–	–	101	103	95	0.3	S	2.7
M-053RR	Mustang	9-21	–	–	104	102	98	0.5	S	1.8
S0536-4	Stine	9-21	–	–	102	99	100	0.5	Rps1k	1.8
055RR	Yield King	9-21	–	–	101	96	101	0.3	S	1.8
DSR-050/RR	Dairyland	9-22	–	–	109	104	98	0.6	S	2.5
DSR-040/RR	Dairyland	9-22	–	102	103	101	99	0.4	S	2.3
PB-0643RR	PBR	9-22	–	–	96	99	99	0.5	Rps1k	1.3
W2051RR	Wensman	9-22	–	–	93	98	101	0.5	Rps1k	2.2
078RR	KSC/Challenger	9-23	–	–	113	98	100	0.5	S	3.3
T-0606RR	Quality Seed Genetics	9-23	–	–	110	107	96	0.4	S	2.3
0406RR	Peterson Farms Seeds	9-23	–	–	97	99	99	0.6	Rps1k	1.5
M-054RR	Mustang	9-23	–	–	96	99	101	0.5	Rps1k	1.8
PB-0623RR	PBR	9-24	–	–	111	102	99	0.6	S	2.7
924	Helena	9-24	–	–	108	100	98	0.9	Rps1c	2.2
077RR	Kruger	9-24	–	–	100	99	97	0.5	S	2.2
041RR	Yield King	9-25	–	–	95	101	94	0.2	Rps1c	2.2
T-0404RR	Quality Seed Genetics	9-25	–	–	87	104	94	0.2	Rps1c	2.5
091RR	Yield King	9-26	–	–	108	101	92	0.7	S	2.3
082+RR	Kruger	9-26	–	–	99	100	96	0.6	S	2.0
T-0676RR	Quality Seed Genetics	9-26	–	–	88	102	95	0.4	Rps1c	2.7
066RR	Kruger	9-27	–	–	106	104	96	0.4	Rps1c	3.0
S0632-4	Stine	9-27	–	–	87	102	96	0.5	Rps1c	3.2
090RR	KSC/Challenger	9-29	–	–	105	98	97	0.7	S	2.3
101RR	KSC/Challenger	9-31	–	–	95	97	93	0.7	Rps1k	2.7
Mean		9-18	40.2 bu/a	43.4 bu/a	34.2 bu/a	33.8%	19.6%			
LSD 20%			5%	7%	10%					

Performance and characteristics of Roundup Ready soybean varieties, central zone; Becker, Rosemount and Morris, 2001-2003.

Variety	Brand or Originator	Maturity Date	Yield, Percent of Mean			Percent of Mean		Maturity Rating	Phytophthora Gene	Chlorosis Score
			2001-2003	2002-2003	2003	Protein	Oil			
AG0301	Asgrow	9-10	–	–	91	99	104	0.3	Rps1k	2.2
0242RR	Star	9-12	–	–	91	101	105	0.3	Rps1c	2.3
0660RR	Star	9-13	–	–	96	101	99	0.6	Rps1k	2.0
PB-0532RR	PBR	9-14	–	–	108	101	100	0.5	S	2.5
2305RR	Gold Country	9-14	–	–	104	101	101	0.5	S	1.8
0571RR	Star	9-14	–	–	103	100	101	0.5	Rps1k	1.8
RRRegal	Hyland Seeds	9-14	–	–	99	99	101	0.5	Rps1k	2.3
DKB07-52	Dekalb	9-14	–	–	98	103	99	0.7	S	1.8
DSR-075/RR	Dairyland	9-15	–	–	102	102	101	0.8	Rps1k	2.0
6042RR	Top Farm	9-15	–	–	100	98	102	0.4	S	2.3
PB-0940RR	Sansqaard	9-15	–	97	98	101	101	0.9	Rps1	1.7
0505RR	Star	9-15	–	–	98	98	103	0.5	S	3.0
AG0601	Asgrow	9-15	–	–	90	98	102	0.6	Rps1k	2.7
DKB09-52	Dekalb	9-16	–	–	103	100	105	0.9	Rps1k	1.8
W2062RR	Wensman	9-16	–	–	99	100	100	0.5	S	1.5
AG0801	Asgrow	9-16	98	96	98	100	98	0.8	Rps1k	2.0
SOI0931RR	Sands	9-17	–	–	98	97	102	0.9	Rps1	2.2
RRRandell	Hyland Seeds	9-17	–	–	97	101	97	0.8	Rps1k	1.7
0901RR	Garst/AgriPro	9-17	–	–	96	97	104	0.9	Rps1c	1.7
C0990RR	LG Seeds	9-18	–	–	112	100	99	0.9	S	2.3
PB-1241RR	Sansqaard	9-18	–	99	100	103	102	1.2	S	2.0
SD1081RR	Sodak Genetics	9-18	–	93	100	101	102	0.8	Rps1	1.8
DSR-132/RR	Dairyland	9-18	–	–	97	99	98	1.3	Rps1c	2.5
SD1091RR	Sodak Genetics	9-18	97	94	97	99	101	0.9	Rps1	1.8
6102RR	Top Farm	9-18	–	96	96	99	101	0.9	Rps1	2.0
91B03	Pioneer	9-18	–	92	94	97	101	1.0	Rps1k	2.3
W2093RR	Wensman	9-19	–	104	111	98	101	0.9	S	2.2
C1410RR	LG Seeds	9-19	–	107	110	102	98	1.4	S	2.2
7143	Farm Advantage	9-19	–	–	108	105	94	1.4	S	1.8
XR12Y20	Garst/AgriPro	9-19	–	–	108	97	102	1.2	S	2.2
RS101RR	Renk	9-19	102	104	108	99	97	1.0	Rps1c	1.8
DG38M14	Dyna-Gro	9-19	–	–	106	99	98	1.4	S	2.2
BG1203RR	BioGene	9-19	–	–	104	102	102	1.2	S	2.3
7093	Farm Advantage	9-19	–	–	104	103	97	0.9	S	2.2
M-124RR	Mustang	9-19	–	–	103	99	99	1.2	S	1.7
91B33	Pioneer	9-19	93	91	103	99	105	1.3	Rps1k	2.8
PB-0732RR	Sansqaard	9-19	–	–	103	101	102	0.7	S	2.0
XR15Y04	Garst/AgriPro	9-19	–	–	102	100	105	1.4	S	2.5
121+RR	KSC/Challenger	9-19	–	–	100	102	98	1.0	S	2.7
M-094RR	Mustang	9-19	–	–	100	106	95	0.9	S	2.2
S1346-4	Stine	9-19	–	101	100	101	100	1.3	S	2.3
34043BRR	Top Farm	9-19	–	–	100	102	100	1.4	S	1.7
PB-1063RR	Prairie Brand	9-19	–	–	99	103	99	1.0	S	2.2
1343NRR	Sand Research	9-19	–	–	99	103	98	1.3	S	2.0
PB-0812RR	Sansqaard	9-19	–	102	99	97	101	0.9	S	1.7
090RR	KSC/Challenger	9-19	–	92	96	99	101	0.7	S	2.2
Exp.62339R	Ziller	9-19	–	–	96	101	100	0.9	S	2.2
8131RR	Excel Brand	9-19	–	–	94	102	100	1.3	Rps1c	2.3
PB-1043RR	Prairie Brand	9-19	–	–	91	100	99	1.0	S	2.5
1004RR	Anderson	9-19	–	–	88	104	98	1.0	S	2.2

Performance and characteristics of Roundup Ready soybean varieties, central zone; Becker, Rosemount and Morris, 2001-2003 (continued).

Variety	Brand or Originator	Maturity Date	Yield, Percent of Mean 2001-2003	Yield, Percent of Mean 2002-2003	Yield, Percent of Mean 2003	Percent of Mean Protein	Percent of Mean Oil	Maturity Rating	Phytophthora Gene	Chlorosis Score
PB-0803RR	PBR	9-19	–	–	87	99	102	0.8	Rps1k	1.3
155+RR	Kruger	9-20	–	–	108	99	97	1.3	S	2.0
AG1401	Asgrow	9-20	–	103	106	97	100	1.4	Rps1k	2.0
DG31C15	Dyna-Gro	9-20	–	–	106	96	103	1.5	S	2.7
DSR-130/RR	Dairyland	9-20	105	104	105	98	101	1.3	S	2.3
2142RR	High Cycle	9-20	–	–	104	101	98	1.4	S	1.5
DG38J12	Dyna-Gro	9-20	–	–	103	102	94	1.2	S	2.8
S1100-4	Stine	9-20	–	–	103	102	98	1.3	S	2.5
RS093RR	Renk	9-20	–	–	99	104	98	0.9	S	2.7
118RR Brand	Latham	9-20	–	–	98	100	96	1.2	Rps1c	3.0
PB-1452RR	Prairie Brand	9-20	–	100	97	103	98	1.4	S	2.2
BT7106R	Ziller	9-20	100	100	97	96	103	1.0	Rps1c	2.0
101RR	Sabre	9-20	–	–	96	99	98	1.0	Rps1k	2.2
SOI1050RR	Sands	9-20	–	–	96	101	100	1.0	S	2.2
XR10Y10	Garst/AgriPro	9-20	–	–	86	101	101	1.0	S	1.8
W2085RR	Wensman	9-20	–	–	80	101	102	0.8	Rps1k	2.2
S0943-4	Stine	9-21	–	–	111	103	98	1.0	S	2.2
1703RR	Garst/AgriPro	9-21	–	–	109	99	101	1.5	Rps1c	2.0
PB-1552RR	PBR	9-21	–	102	106	98	100	1.5	S	1.3
SOI1441RR	Sands	9-21	–	–	105	97	103	1.4	S	1.8
101RR	Kruger	9-21	–	–	104	98	101	0.7	Rps1k	2.8
2131RR	High Cycle	9-21	–	101	98	103	97	1.3	S	3.2
PB-0923RR	Prairie Brand	9-21	–	–	96	98	100	0.9	Rps1k	2.0
RS159RR	Renk	9-21	103	101	96	95	100	1.5	Rps1c	1.8
W2103RR	Wensman	9-21	–	–	96	102	102	1.0	Rps1k	2.7
141RR/SCN	Yield King	9-22	–	–	110	96	101	1.2	Rps1k	2.3
91B52	Pioneer	9-22	106	105	107	102	102	1.5	Rps1k	2.0
2153RR	High Cycle	9-22	–	–	102	101	97	1.5	S	2.2
PB-1620RR	PBR	9-22	–	105	101	98	99	1.6	Rps1c	2.7
BT7150R	Ziller	9-22	104	104	100	98	98	1.5	Rps1c	2.3
DKB15-51	Dekalb	9-23	–	–	106	100	103	1.5	S	2.5
S1586-4	Stine	9-23	–	104	106	101	99	1.4	Rps1	2.8
132RR	Yield King	9-23	–	–	106	103	101	1.1	S	2.0
191+RR	KSC/Challenger	9-23	–	–	103	103	99	1.7	S	2.2
T-7166RR	Thompson	9-23	–	–	102	99	103	1.5	Rps1k	2.3
M-153RR	Mustang	9-23	–	105	101	97	102	1.5	S	1.5
131CNR	Anderson	9-23	–	–	98	94	103	1.3	Rps1k	2.0
SOI1540RR	Sands	9-24	–	–	107	96	103	1.5	S	2.3
1508RR	Anderson	9-24	107	106	105	100	101	1.5	S	3.0
T-7153RR	Thompson	9-24	–	–	105	101	102	1.5	S	2.7
145RR	Sabre	9-24	–	–	103	101	101	1.4	Rps1k	2.0
DSR-155/RR	Dairyland	9-24	–	–	101	98	102	1.5	Rps1k	2.8
161RR/SCN	KSC/Challenger	9-24	–	–	97	96	103	1.4	S	2.8
7174	Farm Advantage	9-24	–	102	96	103	102	1.5	Rps1k	1.7
M-163RR	Mustang	9-25	–	105	100	103	96	1.6	S	2.5
8172RR	Excel Brand	9-25	–	100	97	99	101	1.7	Rps1k	2.7
181RR	Kruger	9-26	–	–	103	102	98	1.6	S	3.0
190RR	Kruger	9-26	–	–	102	98	101	1.7	S	2.7
194RR	Yield King	9-26	–	–	97	96	98	1.7	S	2.7
191RR	Yield King	9-27	–	–	100	96	102	1.7	Rps1k	2.0
8193RR	Excel Brand	9-27	–	103	99	101	98	1.9	Rps1k	2.2
8173RR	Excel Brand	9-27	–	–	93	102	98	1.7	S	1.8
Mean		9-20	49.1 bu/a	54.2 bu/a	45.1 bu/a	35.7%	18.8%			
LSD 20%			8%	9%	10%					

Performance and characteristics of Roundup Ready soybean varieties, southern zone; Jackson, Lamberton and Waseca, 2001-2003.

Variety	Brand or Originator	Maturity Date	Yield, Percent of Mean 2001-2003	2002-2003	2003	Percent of Mean Protein	Oil	Maturity Rating	Phytophthora Gene	Chlorosis Score
XR15Y04	Garst/AgriPro	9-14	–	–	104	106	97	1.4	S	2.0
GL1400RR	Great Lakes	9-14	–	–	92	104	98	1.4	S	2.5
1524	Helena	9-15	–	–	101	104	99	1.4	S	2.5
W2145RR	Wensman	9-15	–	99	101	106	93	1.4	S	2.3
1508RR	Anderson	9-17	–	–	108	106	95	1.5	S	2.8
34043BRR	Top Farm	9-17	–	–	100	104	99	1.4	S	2.5
1703RR	Garst/AgriPro	9-17	–	–	92	99	99	1.5	Rps1c	2.0
ADV1660R	Advantage	9-18	–	–	92	93	100	1.6	S	2.0
BT7150R	Ziller	9-19	96	97	102	100	101	1.5	Rps1c	2.2
GL1502RR	Great Lakes	9-19	–	–	98	100	95	1.5	S	1.7
AG1701	Asgrow	9-19	–	–	93	100	98	1.7	Rps1c	2.2
1813	Helena	9-19	–	93	88	109	95	1.7	Rps1k	2.3
BG1600RR	BioGene	9-20	–	–	98	104	97	1.6	S	2.5
2162RR	High Cycle	9-20	–	–	97	97	103	1.6	Rps1k	2.3
1719RR	Anderson	9-20	99	96	95	102	102	1.7	Rps1k	2.3
2173RR	High Cycle	9-20	–	97	94	103	101	1.7	S	3.0
DKB19-52	Dekalb	9-20	–	–	93	98	102	1.9	Rps1k	2.8
PS4192	Profiseed	9-20	99	98	92	96	106	1.9	Rps1k	2.0
W2186RR	Wensman	9-20	–	95	92	105	101	1.8	Rps1k	2.8
C1712RR	LG Seeds	9-20	–	–	85	106	99	1.7	Rps1k	2.7
2182RR	High Cycle	9-20	–	–	83	104	100	1.8	Rps1k	2.7
PB-1743RR	Sansqaard	9-21	–	–	108	100	95	1.7	S	2.7
DKB15-51	Dekalb	9-21	-	100	100	99	99	1.5	S	3.0
PB-1552RR	PBR	9-21	–	–	99	103	100	1.5	S	2.0
SOI1730RR	Sands	9-21	–	–	96	102	97	1.7	S	2.2
1773RR	Viking	9-21	–	–	95	106	97	1.7	Rps1k	1.8
W2162RR	Wensman	9-21	–	95	94	103	98	1.6	S	2.3
RS199RR	Renk	9-21	–	99	92	96	106	1.9	Rps1k	2.7
6202RR	Top Farm	9-21	93	90	87	106	98	1.9	S	2.7
RS172RR	Renk	9-21	–	88	85	101	99	1.7	Rps1k	2.5
XR18P04	Garst/AgriPro	9-21	–	–	84	95	100	1.9	Rps1c	2.0
T-7221RR	Thompson	9-21	–	–	83	101	103	2.2	S	1.8
E1750R	Latham	9-22	–	–	103	102	98	1.7	Rps1k	2.7
DSR-184/RR	Dairyland	9-22	–	–	100	96	101	1.8	Rps1k	2.7
210RR	Kruger	9-22	–	95	97	103	97	1.9	S	3.0
191+RR	Yield King	9-22	–	–	97	95	107	1.7	S	2.3
195+RR/SCN	Kruger	9-23	–	–	112	105	104	1.8	Rps1k	2.8
AG2107	Asgrow	9-23	–	–	106	103	104	2.1	Rps1k	1.8
1319RR	Gold Country	9-23	–	–	106	102	101	1.9	Rps1k	2.3
ADV1773R	Advantage	9-23	–	–	104	98	103	1.7	Rps1k	1.8
GL2009RR	Great Lakes	9-23	–	–	104	101	106	2.0	Rps1k	1.7
Exp.23718R	Ziller	9-23	–	–	103	101	98	1.8	S	2.5
215RR	Sabre	9-23	–	–	102	100	105	2.1	S	2.5
ADV1883R	Advantage	9-23	–	–	101	98	103	1.8	S	2.7
191CNR	Anderson	9-23	–	–	101	101	105	1.9	Rps1k	2.3
92B13	Pioneer	9-23	–	99	101	99	98	2.1	Rps1k	2.2
M-203RR	Mustang	9-23	–	101	99	101	99	2.3	S	2.5
XR18Y82	Garst/AgriPro	9-23	–	–	97	97	105	1.9	Rps1k	2.5
C1911RR	LG Seeds	9-24	–	101	106	105	98	1.9	Rps1k	2.7
6221RR	Gold Country	9-24	–	–	105	99	103	2.2	Rps1k	2.3

Performance and characteristics of Roundup Ready soybean varieties, southern zone; Jackson, Lamberton and Waseca, 2001-2003 (continued).

Variety	Brand or Originator	Maturity Date	Yield, Percent of Mean			Percent of Mean		Maturity Rating	Phytophthora Gene	Chlorosis Score
			2001-2003	2002-2003	2003	Protein	Oil			
ADV2135R	Advantage	9-24	105	105	103	98	101	2.1	Rps1k	2.0
DSR-228/RR	Dairyland	9-24	103	102	102	104	96	2.3	S	2.3
DKB22-51	Dekalb	9-24	–	99	100	95	102	2.2	S	2.3
181RR	KSC/Challenger	9-24	–	–	100	97	103	1.6	S	2.7
T-7213RR	Thompson	9-24	–	–	100	106	97	2.1	S	2.8
T-7232RR	Thompson	9-24	–	103	100	97	104	2.3	Rps1k	2.0
223+RR	KSC/Challenger	9-24	–	–	99	98	103	2.0	S	2.3
PS4215	Profiseed	9-24	–	101	96	102	100	2.1	Rps1k	2.2
RS212RR	Renk	9-24	–	97	92	94	104	2.1	Rps1k	2.5
211+RR	Kruger	9-24	–	–	90	95	103	2.0	S	2.2
92M00	Pioneer	9-24	–	–	89	98	101	2.0	Rps1k	1.8
497RRBrand	Latham	9-25	–	–	117	98	103	2.2	Rps1k	2.2
T-7205RR	Thompson	9-25	–	114	116	99	103	2.0	Rps1k	2.2
M-201RR	Mustang	9-25	108	103	115	99	104	2.1	Rps1k	2.3
2157RR	Viking	9-25	-	105	112	99	96	2.1	Rps1k	2.2
DSR-199/RR	Dairyland	9-25	101	99	109	101	99	1.9	Rps1k	2.0
2111RR	Anderson	9-25	–	107	107	99	101	2.1	S	2.2
233+RR	KSC/Challenger	9-25	–	–	107	101	99	2.1	Rps1k	2.8
W2211RR	Wensman	9-25	–	–	106	99	101	2.1	S	2.2
8237RR	Excel Brand	9-25	–	–	105	95	100	2.3	S	2.3
C2121RR	LG Seeds	9-25	–	–	105	98	98	2.1	S	1.3
L2136RBrand	Latham	9-25	–	–	104	101	102	2.1	S	2.3
RS223RR	Renk	9-25	–	–	104	94	106	2.2	S	2.0
T-7214RR	Thompson	9-25	–	105	104	105	98	2.1	S	2.5
227RR	Yield King	9-25	–	–	104	99	101	2.0	S	3.5
7192	Farm Advantage	9-25	–	108	103	99	104	1.9	S	2.5
BT7213R	Ziller	9-25	–	–	103	101	99	2.1	S	3.0
GR2037	Midwest	9-25	–	104	102	98	104	2.0	S	2.0
92B38	Pioneer	9-25	104	102	101	103	96	2.3	S	2.3
AG2106	Asgrow	9-25	–	–	100	96	101	2.1	Rps1k	2.3
PB-2243RR	Prairie Brand	9-25	–	–	99	101	98	2.2	S	3.5
2201RR	High Cycle	9-25	99	99	98	101	102	2.0	S	2.0
PB-1981RR	PBR	9-25	–	105	98	103	97	2.1	S	1.8
GL1903RR	Great Lakes	9-25	99	99	97	99	96	1.9	S	2.3
194RR	KSC/Challenger	9-25	–	–	97	96	102	1.7	S	2.5
PB-2352RR	PBR	9-25	–	100	97	95	104	2.3	Rps1k	2.7
DG3190RR	Dyna-Gro	9-25	–	–	96	101	96	1.9	Rps1k	2.5
GL2201RR	Great Lakes	9-25	–	–	96	99	104	2.2	S	2.2
2018RR	Garst/AgriPro	9-25	104	103	95	101	99	2.0	Rps1k	2.2
S2116-4	Stine	9-26	–	–	114	93	105	2.1	S	2.3
E2145R	Latham	9-26	–	–	109	99	98	2.1	Rps1k	2.0
S2103-4	Stine	9-26	–	106	108	99	102	2.2	Rps1k	2.0
T-7192RR	Thompson	9-26	–	–	107	104	97	1.9	Rps1k	2.5
222ARR	Yield King	9-26	–	–	107	102	98	1.9	Rps1k	2.2
8227RR	Excel Brand	9-26	–	–	104	101	99	2.2	Rps1k	2.7
PB-2112RR	Prairie Brand	9-26	–	106	104	97	102	2.1	S	2.0
8236RR	Excel Brand	9-26	–	–	101	99	100	2.3	S	1.8
191RR	Kruger	9-26	–	–	101	102	98	1.7	Rps1k	1.7
SOI1940RR	Sands	9-26	–	–	100	98	101	1.9	Rps1k	2.2
7212	Farm Advantage	9-26	–	97	98	96	104	2.1	Rps1k	2.2

Performance and characteristics of Roundup Ready soybean varieties, southern zone; Jackson, Lamberton and Waseca, 2001-2003 (continued).

Variety	Brand or Originator	Maturity Date	Yield, Percent of Mean			Percent of Mean		Maturity Rating	Phytophthora Gene	Chlorosis Score
			2001-2003	2002-2003	2003	Protein	Oil			
PS22J1RR	Profiseed	9-26	–	–	97	96	101	2.2	S	1.8
T-7239RR	Thompson	9-26	–	–	87	98	99	2.3	S	3.5
223ARR	Yield King	9-26	–	–	78	99	104	2.0	Rps1k	2.8
SOI2143RR	Sands	9-27	–	–	111	98	104	2.1	Rps1k	2.2
SOI2141ARR	Sands	9-27	–	–	110	97	102	2.1	S	1.8
E2336R	Latham	9-27	–	–	109	101	99	2.3	S	1.8
PB-1943RR	Sansqaard	9-27	–	–	107	96	103	2.0	Rps1k	2.2
BT7193R	Ziller	9-27	–	103	107	98	102	1.9	S	2.0
AG2403	Asgrow	9-27	–	–	104	96	104	2.4	Rps1k	2.2
M-234RR	Mustang	9-27	–	–	103	101	97	2.3	S	3.2
PB-1921RR	Prairie Brand	9-27	-	102	103	101	96	1.9	Rps1k	2.2
PB-2141RR	Prairie Brand	9-27	108	108	103	98	103	2.1	Rps1k	2.8
PB-2443RR	Sansqaard	9-27	–	–	103	100	99	2.4	S	3.2
DSR-221/RR	Dairyland	9-27	103	101	101	100	99	2.1	S	1.5
367RRBrand	Latham	9-27	–	–	101	99	97	1.9	Rps1k	2.2
8200WRR	Excel Brand	9-27	–	–	99	99	101	2.1	S	2.7
M-224RR	Mustang	9-27	–	–	94	99	101	2.2	Rps1k	1.8
DG3218RR	Dyna-Gro	9-27	–	99	93	96	101	2.1	S	1.8
PB-2343RR	PBR	9-27	–	–	93	99	102	2.3	S	2.0
7233	Farm Advantage	9-27	–	–	92	99	101	2.3	Rps1k	2.0
DG3200RR	Dyna-Gro	9-27	–	97	84	97	96	2.0	S	2.7
DG3242RR	Dyna-Gro	9-28	–	–	106	98	97	2.4	Rps1k	3.2
AG2105	Asgrow	9-28	–	99	105	100	98	2.1	Rps1k	2.0
7258	Farm Advantage	9-28	–	–	94	99	96	2.4	S	2.0
PB-2123RR	Sansqaard	9-29	–	–	95	97	100	2.1	Rps1k	2.2
Mean		9-23	52.9 bu/a	50.3 bu/a	41.0 bu/a	33.9%	19.7%			
LSD 20%			5%	7%	8%					

Performance and characteristics of soybean-cyst-nematode-infested (Lamberton, Madelia and Waseca) and non-infested (Jackson, Lamberton and Waseca) sites, 2001-2003.

			Yield, Percent of Mean											
	Brand or	Maturity	Infested Sites			Non-Infested Sites			Percent of Mean		Maturity	Phytophthora	Chlorosis	SCN
Variety	Originator	Date	01-03	02-03	2003	01-03	02-03	2003	Protein	Oil	Rating	Gene	Score	Rating
MN1006CN	Minn. AES	9-19	–	–	87	–	–	98	100	98	1.0	Rps1	2.2	R
PB-1392NRR	PBR	9-20	–	–	97	–	–	94	101	101	1.3	S	2.0	MS
1490N	Garst/AgriPro	9-21	–	–	102	–	–	104	99	98	1.4	S	1.8	MR
Parker	Minn. AES	9-23	90	84	90	96	100	96	99	101	1.5	Rps1	2.0	S
Freeborn	Minn. AES	9-24	–	–	107	–	–	93	109	95	1.6	Rps1	2.3	R
161RR/SCN	KSC/Challenger	9-24	–	–	98	–	–	106	102	92	1.6	S	2.3	S
91M90	Pioneer	9-24	–	–	96	–	–	95	101	103	1.9	Rps1k	2.3	R
131CNR	Anderson	9-24	–	–	83	–	–	96	93	102	1.3	Rps1k	1.7	S
IA1008	Iowa AES	9-25	–	–	110	–	–	100	103	91	2.0	S	2.3	MR
2220+SCN	Kruger	9-25	–	–	107	–	–	101	101	100	2.0	Rps1	2.5	MR
2181CN	Viking	9-25	–	105	106	–	100	97	101	95	2.1	Rps1	2.7	MR
S1562-4	Stine	9-25	–	–	98	–	–	95	95	105	1.5	S	2.7	MR
T-7211CR	Thompson	9-25	–	104	96	–	89	88	100	100	2.1	S	2.5	MR
221RR/SCN	Kruger	9-25	–	–	95	–	–	100	100	95	2.0	S	2.3	MR
T-3183CN	Thompson	9-26	–	113	111	–	100	107	102	100	1.8	S	2.5	MR
195+RR/SCN	Kruger	9-26	–	–	105	–	–	107	99	103	1.8	Rps1k	2.0	MR
PB-232N	PBR	9-26	–	–	104	–	–	99	101	100	1.9	Rps1k	2.5	MR
PB-210N	Prairie Brand	9-26	116	111	104	98	97	99	99	97	2.1	Rps1	2.3	MS
PB-2092NRR	Prairie Brand	9-26	–	106	99	–	100	101	104	96	2.0	S	2.8	R
PB-1483NRR	PBR	9-26	–	–	97	–	–	105	97	100	1.4	S	1.8	R
4421NRR	Gold Country	9-26	–	–	94	–	–	93	101	101	2.0	S	2.3	MR
DG35N16	Dyna-Gro	9-26	–	–	89	–	–	90	93	104	1.6	S	2.2	MS
AG2107	Asgrow	9-27	–	–	118	–	–	104	99	105	2.1	Rps1k	3.0	R
GR2031	Midwest	9-27	–	–	113	–	–	103	98	101	2.0	Rps1k	2.0	MS
DG33X19	Dyna-Gro	9-27	–	–	111	–	–	96	98	104	1.9	Rps1k	1.8	MR
PB-2183NRR	Prairie Brand	9-27	–	–	111	–	–	103	96	103	2.1	Rps1k	1.8	R
202RR/SCN	KSC/Challenger	9-27	–	–	110	–	–	111	106	99	2.0	Rps1c	3.2	MR
92M30	Pioneer	9-27	–	–	107	–	–	109	102	99	2.3	S	2.0	R
SOI2151NRR	Sands	9-27	–	–	105	–	–	110	96	102	2.1	Rps1k	1.8	MR
SOI2221NRR	Sands	9-27	–	–	105	–	–	99	102	100	2.2	Rps1c	2.8	MR
191CNR	Anderson	9-27	–	–	102	–	–	99	94	106	1.9	Rps1k	2.0	MS
1908CNRR	Viking	9-27	–	–	101	–	–	108	97	105	1.9	Rps1k	2.7	MR
7204N	Farm Advantage	9-27	–	–	100	–	–	101	95	106	2.0	Rps1k	2.0	MR
2202RR/SCN	High Cycle	9-27	–	–	99	–	–	106	97	101	2.0	Rps1k	2.7	MR
DKB20-52	Dekalb	9-27	–	–	93	–	–	103	95	104	2.0	Rps1k	2.8	MR
S1962-4	Stine	9-27	–	98	91	–	95	96	103	98	1.8	Rps1c	3.2	MR
M-194NRR	Mustang	9-28	–	–	119	–	–	110	99	105	1.9	Rps1k	2.2	MR
SOI2042NRR	Sands	9-28	–	–	100	–	–	102	104	98	2.0	Rps1c	2.5	MS
388RRN	Latham	9-28	–	–	98	–	–	95	104	98	1.9	Rps1c	2.5	MR
L2038R Brand	Latham	9-28	–	–	95	–	–	95	100	99	2.0	Rps1k	1.8	MS
PB-1992NRR	Prairie Brand	9-28	–	98	92	–	102	108	101	101	1.9	Rps1c	2.5	MR
SOI1871NRR	Sands	9-28	–	–	90	–	–	99	100	100	1.8	S	2.3	MS
IA2021	Iowa AES	9-28	81	75	81	98	102	95	95	103	2.1	Rps1k	2.8	S
2341NRR	Sands	9-29	–	–	119	–	–	102	101	98	2.3	S	3.0	MS
2323SCN	KSC/Challenger	9-29	–	–	109	–	–	106	99	97	2.3	S	2.3	MS
C2317R	Crows	9-29	–	–	104	–	–	105	100	99	2.3	S	3.0	S
DKB24-51	Dekalb	9-29	–	–	97	–	–	94	103	100	2.4	Rps1c	3.7	MR
DG3221NRR	Dyna-Gro	9-29	–	–	97	–	–	93	97	102	2.2	Rps1c	3.0	MR
Loda	Illinois AES	9-29	–	–	94	–	–	98	103	95	2.4	Rps1	2.3	MR
DG3216NRR	Dyna-Gro	9-29	–	–	89	–	–	91	99	101	2.1	Rps1c	3.0	MR
AG2405	Asgrow	9-30	–	–	101	–	–	96	101	100	2.4	S	3.5	R
92M50	Pioneer	9-31	–	–	86	–	–	91	93	105	2.5	Rps1k	2.2	MR
Mean		9-26	33.4	35.1	35.1	50.9	46.6	40.9	34.3%	20.2%				
LSD 20%			5%	7%	16%	3%	4%	8%						

*Bushels/acre

Performance of special-use soybean varieties, northern zone; Crookston, Moorhead and Shelly, 2001-2003.

Variety	Releasing Institution	Maturity Date	Yield, Percent of Mean			Percent of Mean	
			2001-2003	2002-2003	2003	Protein	Oil
Jim	N.D. AES	9-6	108	104	97	100	97
TraiII	N.D. AES	9-11	–	–	113	102	99
MN0201	Minn. AES	9-12	–	105	101	107	97
MN0203SP	Minn. AES	9-12	88	88	90	107	94
UM3	Minn. AES	9-12	91	86	84	97	104
Walsh	N.D. AES	9-13	–	109	107	96	106
MN0202SP	Minn. AES	9-13	96	93	91	90	102
MN0302	Minn. AES	9-14	121	121	118	100	102
Nannonatto	N.D. AES	9-14	–	–	92	94	98
Nornatto	N.D. AES	9-15	–	–	107	94	99
Norpro	N.D. AES	9-15	106	104	101	100	103
MK0649	Richland Organics	9-16	–	–	102	95	103
MN0205SP	Minn. AES	9-16	97	98	99	98	102
MN0303SP	Minn. AES	9-16	99	92	96	95	103
Danatto	N.D. AES	9-18	95	96	103	118	97
MK0953	Richland Organics	9-18	–	–	97	106	95
Mean		9-14	31.1 bu/a	31.1 bu/a	30.4 bu/a	35.4%	18.9%
LSD 20%			7%	8%	8%		

Performance of special-use soybean varieties, central zone; Becker, Morris and Rosemount, 2001-2003.

Variety	Releasing Institution	Maturity Date	Yield, Percent of Mean			Percent of Mean	
			2001-2003	2002-2003	2003	Protein	Oil
MN0201	Minn. AES	9-9	–	–	94	101	100
Danatto	N.D. AES	9-10	71	66	59	94	99
Proto	Minn. AES	9-11	95	97	90	102	97
MN0302	Minn. AES	9-12	–	107	107	95	107
MN0601SP	Minn. AES	9-12	88	86	84	108	90
Lambert	Minn. AES	9-13	106	106	110	98	101
MN1004SP	Minn. AES	9-13	90	91	88	93	102
MN0803SP	Minn. AES	9-14	87	87	79	101	101
Minnatto	Minn. AES	9-14	88	86	75	99	103
MN1003SP	Minn. AES	9-15	114	115	115	98	108
Evans	Minn. AES	9-15	–	–	115	93	113
MN0903SP	Minn. AES	9-15	110	107	109	97	102
MN0802SP	Minn. AES	9-15	–	96	94	93	110
Surge	Minn. & S.D. AES	9-16	119	113	117	96	105
91M10	Pioneer	9-16	–	–	117	94	105
Toyopro	Minn. AES	9-16	99	102	96	102	96
MN1302	Minn. AES	9-17	–	–	117	91	108
MN1103SP	Minn. AES	9-17	112	113	116	95	108
MN1201SP	Minn. AES	9-17	102	100	107	100	105
Minnpro	Northland Organics	9-17	–	–	93	103	94
MN1303SP	Minn. AES	9-17	95	95	82	108	88
Altapro	Northland Organics	9-18	94	92	86	109	84
Parker	Minn. AES	9-19	117	110	108	97	103
Kato	Minn. AES	9-19	106	103	98	99	99
MN1007SP	Minn. AES	9-19	87	87	73	102	92
MN1101SP	Minn. AES	9-20	–	110	116	100	104
MN1306SP	Minn. AES	9-20	–	85	78	90	103
MN1102SP	Minn. AES	9-21	115	114	115	99	104
MN1305SP	Minn. AES	9-21	–	104	101	99	101
Mean		9-16	40.2 bu/a	40.4 bu/a	36.4 bu/a	38.1%	17.3%
LSD 20%			5%	7%	9%		

Performance of special-use soybean varieties, southern zone; Jackson, Lamberton and Waseca, 2001-2003.

Variety	Releasing Institution	Maturity Date	Yield, Percent of Mean			Percent of Mean	
			2001-2003	2002-2003	2003	Protein	Oil
MN1103SP	Minn. AES	9-15	106	100	94	100	104
MN1101SP	Minn. AES	9-16	100	93	100	104	98
MN1004SP	Minn. AES	9-16	81	76	87	100	102
MN1001SP	Minn. AES	9-16	71	66	67	99	95
MN1404SP	Minn. AES	9-17	90	83	88	105	96
MN1502SP	Minn. AES	9-18	103	98	101	103	99
MN1604SP	Minn. AES	9-18	–	83	83	98	97
MN1302	Minn. AES	9-20	–	116	122	93	106
MN1406SP	Minn. AES	9-20	101	100	100	99	105
MN1305SP	Minn. AES	9-20	97	95	96	97	102
MN1408SP	Minn. AES	9-20	75	71	69	100	99
IA1005	Iowa AES	9-21	–	110	105	95	104
MN1306SP	Minn. AES	9-21	98	88	93	97	101
Parker	Minn. AES	9-22	124	118	128	98	103
MN1403SP	Minn. AES	9-22	114	110	115	95	106
MN1503SP	Minn. AES	9-22	111	107	115	100	102
MN1606SP	Minn. AES	9-22	–	110	112	100	105
IA1008	Iowa AES	9-22	–	113	110	97	99
IA2050	Iowa AES	9-22	–	119	109	94	105
2022	Viking	9-22	–	–	108	93	104
Royalpro	Northland Organics	9-22	105	101	101	102	101
Soyapro	Northland Organics	9-22	102	101	100	103	98
IA1009	Iowa AES	9-22	–	105	97	90	101
IA1007	Iowa AES	9-22	–	90	90	100	102
MN1501SP	Minn. AES	9-22	–	83	84	102	90
HP204	Iowa AES	9-22	–	95	79	101	96
MN1607SP	Minn. AES	9-23	–	115	122	102	101
MN1407SP	Minn. AES	9-23	112	111	112	102	98
MN1603SP	Minn. AES	9-23	98	96	99	98	98
ACHime	Maple Leaf Foods	9-23	–	–	93	102	98
IA2028	Iowa AES	9-23	–	97	93	95	108
Vinton 81	Iowa AES	9-23	96	92	91	103	96
IA2016	Iowa AES	9-23	–	97	80	98	99
IA2035	Iowa AES	9-23	–	83	71	95	92
92M10	Pioneer	9-24	–	–	120	90	109
IA2017	Iowa AES	9-24	–	106	103	99	101
IA2025	Iowa AES	9-24	–	94	92	102	98
MN1605SP	Minn. AES	9-24	–	89	92	96	97
IA2024	Iowa AES	9-24	–	85	78	94	92
MLF61	Maple Leaf Foods	9-25	–	–	115	99	98
IA2012	Iowa AES	9-25	–	100	104	98	100
IA2034	Iowa AES	9-25	–	110	100	98	101
IA2030	Iowa AES	9-25	–	99	97	98	105
IA2041	Iowa AES	9-25	–	106	93	101	98
IA2027	Iowa AES	9-25	–	95	87	96	103
IA2033	Iowa AES	9-25	–	92	83	104	98
IA2011	Iowa AES	9-26	–	102	95	97	101
IA2042	Iowa AES	9-26	–	98	93	104	94
IA2032	Iowa AES	9-26	–	100	91	99	104
IA2029	Iowa AES	9-26	–	88	84	97	102

Performance of special-use soybean varieties, southern zone; Jackson, Lamberton and Waseca, 2001-2003 (continued).

Variety	Releasing Institution	Maturity Date	Yield, Percent of Mean 2001-2003	2002-2003	2003	Percent of Mean Protein	Oil
IA2020	Iowa AES	9-26	–	90	76	98	105
MN2101SP	Minn. AES	9-27	109	116	117	101	100
MN2001SP	Minn. AES	9-27	115	108	111	102	103
IA2040	Iowa AES	9-27	–	106	96	102	94
IA2023	Iowa AES	9-27	–	79	75	107	84
Mean		9-22	37.7 bu/a	36.8 bu/a	32.6 bu/a	36.7%	18.6%
LSD 20%			4%	4%	7%		

Characteristics of special-use soybean varieties, northern zone; Crookston, Moorhead and Shelly, 2001-2003.

Variety	Releasing Institution	Maturity Rating	Special Characteristics	Hilum Color	Phytophthora Gene	Chlorosis Score	Seeds/Lb
Jim	N.D. AES	00.8	General Purpose	Yellow	S	2.2	3,220
Traill	N.D. AES	0.0	General Purpose	Yellow	Rps1	1.7	3,088
MN0201	Minn. AES	0.2	General Purpose	Yellow	Rps1	3.0	3,783
MN0203SP	Minn. AES	0.2	Small Seed	Yellow	Rps1	2.2	6,219
UM3	Minn. AES	00.9	Small Seed	Yellow	Rps1	3.0	7,695
Walsh	N.D. AES	0.2	General Purpose	Yellow	Rps6	2.7	3,047
MN0202SP	Minn. AES	0.2	Small Seed	Yellow	Rps1	3.0	5,821
MN0302	Minn. AES	0.3	General Purpose	Buff	Rps1k	3.0	3,691
Nannonatto	N.D. AES	0.3	Small Seed	Yellow	S	2.3	6,306
Nornatto	N.D. AES	0.2	Small Seed	Yellow	S	2.2	4,779
Norpro	N.D. AES	0.4	Higher Protein	Yellow	S	2.7	2,838
MK0649	Richland Organics	0.3	Small Seed	Yellow	S	2.2	6,394
MN0205SP	Minn. AES	0.2	Small Seed	Yellow	Rps1	2.8	5,747
MN0303SP	Minn. AES	0.3	Small Seed	Yellow	Rps1	2.5	6,306
Danatto	N.D. AES	0.4	Small Seed	Yellow	S	2.0	5,159
MK0953	Richland Organics	0.3	Large Seed, Higher Protein	Yellow	S	2.3	2,215

Characteristics of special-use soybean varieties, central zone; Becker, Morris and Rosemount, 2001-2003.

Variety	Releasing Institution	Maturity Rating	Special Characteristics	Hilum Color	Phytophthora Gene	Chlorosis Score	Seeds/Lb
MN0201	Minn. AES	0.2	General Purpose	Yellow	Rps1	2.8	3,661
Danatto	N.D. AES	0.4	Small Seed	Yellow	S	3.2	5,341
Proto	Minn. AES	0.5	Higher Protein	Buff	S	2.3	2,686
MN0302	Minn. AES	0.3	General Purpose	Buff	Rps1k	3.3	3,314
MN0601SP	Minn. AES	0.6	Higher Protein	Yellow	Rps1c	3.2	4,018
Lambert	Minn. AES	0.7	General Purpose	Buff	Rps1	2.8	3,175
MN1004SP	Minn. AES	1.0	Low Sat., Low Linolenic Acid	Black	Rps1	3.2	2,987
MN0803SP	Minn. AES	0.8	Smaller Seed Higher Protein	Yellow	Rps1	2.2	4,830
Minnatto	Minn. AES	0.9	Small Seed	Yellow	Rps1	3.7	4,283
MN1003SP	Minn. AES	1.0	Higher Protein	Brown	S	2.7	2,640
Evans	Minn. AES	0.5	Yellow Hilum	Yellow	Rps1	2.5	2,948
MN0903SP	Minn. AES	0.9	Higher Protein	Yellow	Rps1	3.0	2,536
MN0802SP	Minn. AES	0.8	Low Linolenic Acid	Black	Rps1	2.2	2,892
Surge	Minn. & S.D. AES	0.9	General Purpose	Imperfect Black	Rps1	2.5	2,415
91M10	Pioneer	1.1	Yellow Hilum	Yellow	S	2.3	2,855
Toyopro	Minn. AES	0.8	Higher Protein	Yellow	S	2.7	3,175
MN1302	Minn. AES	1.3	General Purpose	Buff	Rps1k	3.0	2,624
MN1103SP	Minn. AES	1.1	Low Linolenic Acid	Black	Rps1	3.7	2,735
MN1201SP	Minn. AES	1.2	Large Seed, Higher Protein	Yellow	Rps1	2.8	2,172
Minnpro	Northland Organics	0.8	Higher Protein	Yellow	S	2.5	2,702

Characteristics of special-use soybean varieties, central zone; Becker, Morris and Rosemount, 2001-2003. (continued).

MN1303SP	Minn. AES	1.3	Large Seed, Higher Protein	Yellow	S	3.3	3,632
Altapro	Northland Organics	1.0	Higher Protein	Yellow	S	3.3	3,519
Parker	Minn. AES	1.5	General Purpose	Buff	Rps1	3.3	3,027
Kato	Minn. AES	1.3	General Purpose	Black	Rps1	2.3	2,522
MN1007SP	Minn. AES	1.0	Small Seed	Yellow	Rps1	2.5	5,747
MN1101SP	Minn. AES	1.1	Large Seed, Higher Protein	Yellow	Rps1	3.7	2,162
MN1306SP	Minn. AES	1.3	Small Seed	Yellow	Rps1	2.5	7,828
MN1102SP	Minn. AES	1.1	Large Seed, Higher Protein	Yellow	Rps1	2.8	2,316
MN1305SP	Minn. AES	1.3	Large Seed, Higher Protein	Yellow	Rps1	2.3	2,102

Characteristics of special-use soybean varieties, southern zone; Jackson, Lamberton and Waseca, 2001-2003.

Variety	Releasing Institution	Maturity Rating	Special Characteristics	Hilum Color	Phytophthora Gene	Chlorosis Score	Seeds/Lb
MN1103SP	Minn. AES	1.1	Low Linolenic Acid	Black	Rps1	2.7	2,873
MN1101SP	Minn. AES	1.1	Large Seed	Yellow	Rps1	3.2	2,248
MN1004SP	Minn. AES	1.0	Large Seed, Higher Protein	Black	Rps1	2.7	2,967
MN1001SP	Minn. AES	1.0	Small Seed	Yellow	Rps1	2.8	6,676
MN1404SP	Minn. AES	1.4	Large Seed, Higher Protein	Yellow	Rps1	2.5	2,142
MN1502SP	Minn. AES	1.2	Large Seed, Higher Protein	Yellow	Rps1	3.0	2,377
MN1604SP	Minn. AES	1.3	Small Seed	Yellow	Rps1	2.8	6,580
MN1302	Minn. AES	1.3	General Purpose	Buff	Rps1k	2.2	3,007
MN1406SP	Minn. AES	1.4	Large Seed, Higher Protein	Yellow	Rps1	2.8	2,428
MN1305SP	Minn. AES	1.3	Large Seed, Higher Protein	Yellow	Rps1	2.8	2,204
MN1408SP	Minn. AES	1.4	Small Seed	Yellow	Rps1	3.2	6,053
IA1005	Iowa AES	1.4	Large Seed, Higher Protein	Yellow	S	2.0	2,454
MN1306SP	Minn. AES	1.3	Small Seed	Yellow	Rps1	2.5	6,879
Parker	Minn. AES	1.5	General Purpose	Buff	Rps1	2.7	2,855
MN1403SP	Minn. AES	1.4	Large Seed	Yellow	Rps1	3.2	2,536
MN1503SP	Minn. AES	1.5	Large Seed, Higher Protein	Yellow	Rps1	2.5	2,467
MN1606SP	Minn. AES	1.6	Large Seed, Higher Protein	Yellow	Rps1	2.2	2,389
IA1008	Iowa AES	1.6	Yellow Hilum	Yellow	S	3.0	3,047
IA2050	Iowa AES	1.7	General Purpose	Black	S	3.5	3,197
2022	Viking	2.0	Yellow Hilum	Yellow	Rps1c	2.8	2,892
Royalpro	Northland Organics	1.6	Large Seed, Higher Protein	Yellow	S	3.0	2,172
Soyapro	Northland Organics	1.6	Large Seed, Higher Protein	Yellow	S	3.2	2,236
IA1009	Iowa AES	1.7	Yellow Hilum	Yellow	S	3.2	3,338
IA1007	Iowa AES	1.8	Large Seed, Higher Protein	Yellow	S	3.0	1,787
MN1501SP	Minn. AES	1.8	Small Seed	Yellow	S	4.0	6,394
HP204	Iowa AES	2.0	Large Seed, Higher Protein	Yellow	S	3.7	2,352
MN1607SP	Minn. AES	1.6	Large Seed, Higher Protein	Yellow	Rps1	2.3	2,293
MN1407SP	Minn. AES	1.4	Large Seed, Higher Protein	Brown	Rps1	2.7	1,900
MN1603SP	Minn. AES	1.6	Large Seed, Higher Protein	Yellow	S	2.8	1,823
ACHime	Maple Leaf Foods	2.1	Large Seed, Higher Protein	Yellow	S	2.7	2,305
IA2028	Iowa AES	2.4	Lipoxygenase Free	Yellow	Rps1	2.7	2,454
Vinton 81	Iowa AES	2.0	Large Seed, Higher Protein	Yellow	Rps1c	3.0	2,389
IA2016	Iowa AES	2.2	Large Seed, Higher Protein	Yellow	S	3.0	2,389
IA2035	Iowa AES	2.4	Small Seed	Yellow	S	2.2	6,879
92M10	Pioneer	2.1	Yellow Hilum	Yellow	Rps1c	2.0	3,338
IA2017	Iowa AES	2.2	Large Seed, Higher Protein	Yellow	S	3.2	2,495
IA2025	Iowa AES	2.2	Lipoxygenase Free	Yellow	S	2.7	2,551
MN1605SP	Minn. AES	2.0	Small Seed	Yellow	Rps1	3.0	6,580
IA2024	Iowa AES	2.5	Small Seed	Yellow	S	2.2	6,676
MLF61	Maple Leaf Foods	1.8	Large Seed, Higher Protein	Yellow	S	3.2	2,609

Characteristics of special-use soybean varieties, southern zone; Jackson, Lamberton and Waseca, 2001-2003 (continued).

Variety	Releasing Institution	Maturity Rating	Special Characteristics	Hilum Color	Phytophthora Gene	Chlorosis Score	Seeds/Lb
IA2012	Iowa AES	2.2	Large Seed	Yellow	S	2.5	1,794
IA2034	Iowa AES	2.5	Large Seed, Higher Protein	Yellow	S	2.7	2,454
IA2030	Iowa AES	2.3	Lipoxygenase Free	Yellow	S	2.5	2,162
IA2041	Iowa AES	2.1	Large Seed, Higher Protein	Yellow	S	3.7	2,565
IA2027	Iowa AES	2.4	Lipoxygenase Free	Yellow	S	2.7	2,328
IA2033	Iowa AES	2.4	Lipoxygenase Free	Yellow	S	3.3	2,316
IA2011	Iowa AES	2.2	Lacks Lipoxygenase 2	Yellow	S	3.2	2,454
IA2042	Iowa AES	2.1	Large Seed, Higher Protein	Yellow	S	3.7	2,270
IA2032	Iowa AES	2.5	Lipoxygenase Free	Yellow	S	2.2	2,259
IA2029	Iowa AES	2.4	Lipoxygenase Free	Yellow	S	2.8	2,215
IA2020	Iowa AES	2.3	Large Seed, Higher Protein	Yellow	S	3.0	2,131
MN2101SP	Minn. AES	2.1	Large Seed, Higher Protein	Brown	Rps1	3.3	2,121
MN2001SP	Minn. AES	2.0	Large Seed, Higher Protein	Yellow	Rps1	2.5	2,270
IA2040	Iowa AES	2.4	Large Seed, Higher Protein	Yellow	S	2.3	1,831
IA2023	Iowa AES	2.4	Small Seed	Yellow	S	2.7	6,394

Characteristics of publicly developed soybean varieties entered in 2003 tests.

Variety	Releasing Institution	Maturity Rating	Phytophthora Gene	BSR Reaction	SCN Reaction	Chlorosis Score
McCall	Minn. AES	00.7	S	S	S	2.7
MN0071	Minn. AES	00.7	Rps1	S	S	2.2
Jim	N.D. AES	00.8	S	S	S	4.0
Glacier	Minn. AES	00.8	Rps6	S	S	1.8
Agassiz	Minn. AES	0.0	Rps1	S	S	3.3
Traill	N.D. AES	0.0	Rps1	S	S	2.3
Walsh	N.D. AES	0.2	Rps6	S	S	2.3
Barnes	N.D. AES	0.2	Rps6	S	S	2.2
MN0201	Minn. AES	0.2	Rps1	R	S	2.0
MN0301	Minn. AES	0.3	Rps1	S	S	1.8
MN0302	Minn. AES	0.3	Rpslk	S	S	2.5
MN0304	Minn. AES	0.3	Rps1k + Rps6	R	S	2.0
Lambert	Minn. AES	0.7	Rps1	S	S	2.8
MN0902CN	Minn. AES	0.9	Rps1	R	R	1.7
MN1005	Minn. AES	1.0	Rps1k	S	S	3.0
MN1006CN	Minn. AES	1.0	Rps1	S	R	2.7
Surge	S.D. + Minn. AES	0.9	Rps1	S	S	2.7
MN1301	Minn. AES	1.3	Rpslc	S	S	2.5
Kato	Minn. AES	1.3	Rps1	S	S	2.2
MN1302	Minn. AES	1.3	Rpslk	R	S	1.7
MN1401	Minn. AES	1.4	Rps1	S	S	2.0
Parker	Minn. AES	1.5	Rps1	S	S	2.8
Freeborn	Minn. AES	1.6	Rps1	R	R	1.7
IA1006	Iowa AES	1.6	S	R	S	2.2
MN1801	Minn. AES	1.8	Rps1c	S	S	2.8
Sturdy	Minn. AES	2.0	Rps1	S	S	2.3
IA1008	Iowa AES	2.0	S	S	R	2.0
IA2008R	Iowa AES	2.1	Rpslk	R	S	2.5
IA2021	Iowa AES	2.1	Rpslk	S	S	3.0
IA2050	Iowa AES	2.1	S	S	S	3.0
IA2052	Iowa AES	2.3	Rps1	R	S	2.3
Loda	Illinois AES	2.3	Rps1	S	R	2.3