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## Soybeans: 2009 Crop Performance Results

Cooperative Extension Service, South Dakota State University

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EC 775  
Revised  
Annually

# SOYBEAN

Variety Performance Trials—2009 Results



South Dakota State University • Cooperative Extension Service • U.S. Department of Agriculture

The crop performance trials are available at <http://plantsci.sdstate.edu/varietytrials/vartrial.html>

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**EC 775—Precision Planted Soybeans 2009 Crop Performance Results  
is available electronically on the internet**

<http://agbiopubs.sdstate.edu/articles/EC775-09.pdf>



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??00 copies printed by CES at a cost of \$0.79 each. EC775. November 2009.

# SOYBEAN

## Variety Performance Trials–2009 Results

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Soybean production is greatly affected by variety selection. This circular reports the agronomic performance of entries in the 2009 South Dakota performance trials for glyphosate-resistant and conventional or non-glyphosate-resistant soybean varieties. Major factors in variety selection include yield, maturity, lodging resistance, and *Phytophthora* root rot resistance.

### General

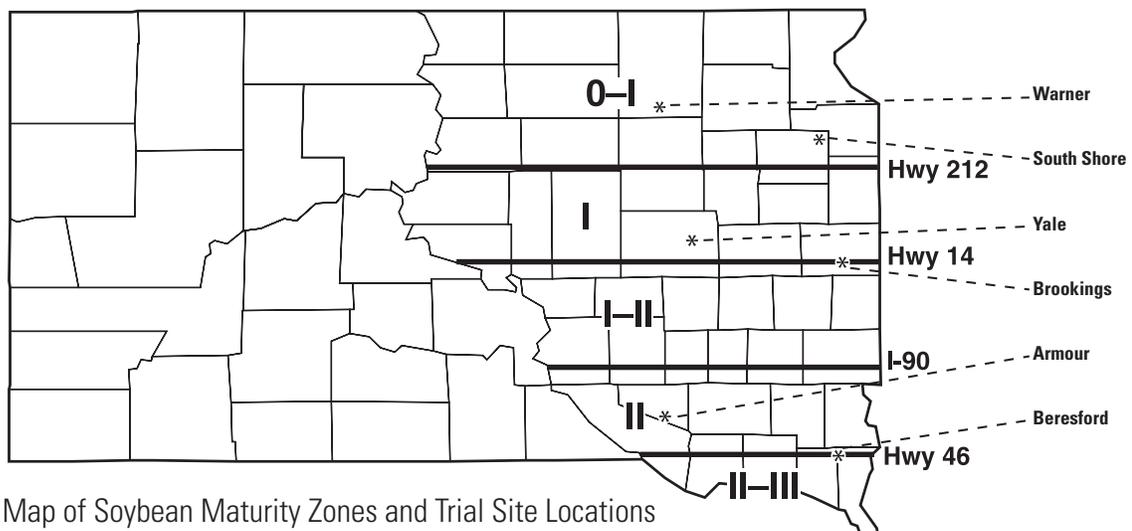
Soybean varieties are classified according to maturity groups that, in turn, are adapted to maturity zones. Maturity zones are based on day length and are therefore affected by latitude. The very early maturity group-00 varieties are best suited to Canada and bordering regions of the U.S., while maturity group-0, group-I, and group-II varieties are suited to South Dakota. The later groups III-VIII are suited to Iowa, Nebraska, and south to Texas.

These soybean trial results are reported according to the prevalent maturity zones in South Dakota (see map). The glyphosate-resistant soybean variety trials were conducted in the following test zones and locations: Northern test zone: maturity groups-0 and -I at South Shore and Warner; Central test zone: maturity groups-0, -I, and -II at Brookings and Bancroft; and Southern test zone: maturity groups-I and -II at Beresford and Geddes.

The conventional non-glyphosate-resistant soybean variety trials are conducted at the following SDSU-affiliated research farms: Northeast Research Farm, South Shore - Maturity groups -0 and -I; SDSU Plant Science Farm, Brookings - Maturity groups -0, -I, and -II; and the Southeast SD Agricultural Experiment Station, Beresford - Maturity groups -I and -II. There are transition areas where varieties of two maturity groups may perform similarly. In such cases, rainfall and or elevation may moderate the effect of latitude on maturity. In most cases, an earlier maturity group may be seeded in a zone suited to a later maturity group; this is only practical if seeding is delayed, or if reseeded following hail, or if double-cropping.

*Phytophthora* root rot (PRR) is an important soybean disease in South Dakota and is often controlled or managed with the use of resistant varieties. Resistance to *Phytophthora* root rot is fungus-race specific. Thus, resistance to one PRR race does not always impart resistance to other races. Knowledge of the prevalent PRR races in your area is important. If you suspect you have a PRR problem, then the use of varieties with a wide range of rot resistance is strongly suggested (see discussion of *Phytophthora* under “General Test Procedures”).

An alternative method of control is the use of “tolerant varieties.” Tolerant varieties are not resistant to PRR in the seedling stage. Thus, a PRR fungicide must be applied to protect them.



Map of Soybean Maturity Zones and Trial Site Locations

Currently, we do not evaluate variety field tolerance; therefore, field tolerance ratings are not available.

**Certified seed is the best source of seed and the only way to be assured of the genetic purity of the variety seeded.** In addition, inoculation of seed with the appropriate nitrogen-fixing bacterium is a good practice. Always inoculate if seeding soybeans in soils not previously cropped to soybeans. On older soybean soils, there is no guarantee that beneficial bacteria will be present to naturally inoculate planted seed. Therefore, inoculation of seed at planting is an inexpensive means of increasing the percentage of plants that will fix nitrogen in the current crop year.

## Yield

Yields are obtained from the South Dakota Crop Performance Testing Program (CPT). Current-year yields are included for each entry tested, along with 2-year averages where varieties have been tested for two years. Yield test averages and least significant difference (LSD) values are rounded-off to the nearest bushel and printed at the bottom of each yield column.

The LSD value can be used to determine if varieties differ in yield per acre. For example, assume variety A averages 30 bu., variety B averages 25 bu., and the calculated LSD value is 4 bu. The average difference between varieties A and B is 5 bu ( $30 - 25 = 5$ ). Since the average difference of 5 bu. is greater than the test LSD value of 4 bu., variety A (30 bu.) is significantly higher in yield than for B (25 bu.). In contrast, if variety A averages 28 bu. and B averages 25 bu., the average difference would be 3 bu ( $28 - 25 = 3$ ). In this case, both varieties would have a similar yield average, because their difference of 3 bu. is less than the test LSD value of 4 bu.

Use LSD values to identify the best-yielding varieties. The LSD value at the bottom of each yield column is used to calculate a minimum top-yield value. For example, if the highest column yield value is 50 bu., subtract the LSD value of 5 bu. to obtain an intermediate value of 45 bu. ( $50 - 5 = 45$ ). The minimum top yield value has to be greater than this intermediate value of 45 bu., and because the yield values are rounded to the nearest bushel, it must be at least 46 bu. Thus, varieties with an average of 46 bu. or higher are included in the top-yield group. **Note: Entries tested for two years may also have a top-yield group value in the 2009-yield column.**

**NOTE:** Each company selects the appropriate maturity group trial (maturity group-0, -I, or -II trial) and locations for their entries. Companies generally have one or more maturity-group checks for their varieties. There are, however, no standard regional or national check varieties for maturity. A late group-I variety from one company may be similar in maturity to an early group-I or early group-II variety from another company, because companies use different check varieties for maturity. Therefore, this testing program does not guarantee that entries are placed in the appropriate maturity-group trial. Borderline entries with maturity ratings at or near the arbitrary breaks between the late group-0's and early group-I's and between the late group-I's and early-group-II's may crossover in some test trials. It is suggested that you note the reported maturity rating of every entry you are considering. Since all entries at a location are seeded the same day, one can compare the relative difference in days to maturity among varieties tested at that location. Use caution when

comparing the maturity rating of a variety over many locations. Variations in soil moisture and temperature often differ between locations, resulting in some maturity variations over locations.

The efforts of D. Doyle, SDSU Agronomy Farm; A. Heuer, NE Research Farm, South Shore; and R. Berg and staff, SE Research Farm, Beresford, in obtaining the data are gratefully acknowledged. Also, the assistance and cooperation of our farmer co-operators, Allen and Inel Ryckman, Warner, S.D.; Curtis Sybesma, Geddes, S.D.; and E. Weerts Inc., Bancroft, S.D., is gratefully acknowledged.

## Protein and Oil Content

The 2009 protein and oil values (adjusted to a 13% moisture) were determined using a calibrated FOSS TECATOR Model Infratec 1229 Grain Analyzer. Three replicates of every variety in each trial were tested. Samples of known protein and oil were tested by the SDSU Agricultural Experiment Station Biochemistry Laboratory and were used to calibrate the analyzer.

## Weather and Seasonal Precipitation

Seasonal rainfall and its distribution and average temperatures at weather reporting stations nearest each test trial are reported in table A for the period April 1 to October 31.

Seasonal precipitation sums were above average at Aberdeen (3.15"), South Shore (2.95"), and Huron (2.25"); near average at Centerville (0.65"); and below average at Brookings (-1.38") and White Lake (-1.37"). The greatest moisture deficits tended to occur at most locations in April and May. In some cases this early season moisture deficits resulted in the delayed emergence of some crops seeded at their normal seeding dates.

Seasonal average temperatures from April to October were at or near normal at Brookings and Centerville. Seasonal temperatures were below average at Aberdeen (-2.37°F), South Shore (-3.07°F), Huron (-2.00°F), and White Lake (-3.13°F). The monthly departures from average temperatures in June, July, and August varied from near normal at Brookings and Centerville to nearly 7°F below average at South Shore and White Lake in July.

In summary, the growing-season precipitation totals for soybeans varied from -1.3" below normal to over 3" above normal across the six locations tested, with the greatest precipitation generally occurring in October.

In addition, the greatest monthly departures from average temperature occurred in June, July, August, and October. The monthly temperatures in June, July, and August varied from near normal at Brookings and Centerville to nearly -7°F at South Shore and White Lake in July.

## General Test Procedures

These procedures apply to both the glyphosate-resistant and the conventional non-glyphosate-resistant soybean trials, except for the chemical weed control imposed. Trial locations, soil types, tillage methods, previous crops, pesticide usage, and seeding dates are indicated in table B.

**Test Procedures:** A row spacing of 30 inches was used at all locations. The seeding rate was 165,000 pure-live-seeds per acre for all varieties and locations. Test plots consist of 4-row plots, 20-feet long, with 3 replications at all locations. Soybean inoculation was accomplished by applying Nitragin-brand Soybean Soil

Implant down the seed tube, according to label instructions and rates, during seeding. Seeding at all locations was accomplished using a Monosem precision row-crop planter. The center 2 rows of each plot were harvested for yield.

**Yield:** Plots were harvested and yields were adjusted to a 13% moisture content basis and expressed in bushels per acre. Harvest was accomplished using a Massey Ferguson 8XP small-plot combine.

**Reporting variety maturity:** Variety maturity is reported as “days to maturity,” or DTM. Entries are mature when 95% of the pods have turned brown. Each maturity value is obtained by determining the average number of days from seeding to maturity for two replicates and expressing as DTM at each location. Table DTM values are an average of four replicates (two for each location), unless data is at a location (in such cases, the DTM average is based on 2 replications).

**Lodging Score:** Scores at maturity are based on the erectness of the main stem of plants within each variety: 1 = all plants erect, 2 = slight lodging, 3 = some lodging at a 45o-angle, 4 = severe lodging, and 5 = all plants flat.

**Phytophthora Root Rot (PRR):** The gene resistance of each variety to PRR is supplied by each seed company (proprietary entries) or by the USDA (Uniform Soybean Tests, Northern States, public entries). A key for each type of PRR gene and the race resistance it imparts to a variety is given in table C. Specific race resistance to PRR, as reported by seed company, can be determined by noting the PRR gene in the variety index table D (glyphosate-resistant) and table E (non-glyphosate resistant) and referencing the gene back to table C to find the range of race resistance. Currently, races -1, -3, and -4 are the most-common races in South Dakota.

## GLYPHOSATE-RESISTANT SOYBEAN VARIETY TRIAL RESULTS

Note: Yield averages are reported for 2-yr (2008-09) and for 2009.

In addition, in each yield table, entries are sorted by the zone 2-year and then by the zone 2009 yield values.

### NORTHERN TEST ZONE

**SOUTH SHORE-** Conventional tillage, Northeast Research Farm  
**WARNER-** Minimum-tillage, Allen & Inel Ryckman Farm (farm cooperators)

**South Shore, Group-0 (Tables 1a & 1b):** The 2-year and 2009 test-yield averages were **49** and **53** bushels per acre, respectively, and the lodging score average was **1** (table 1a). Varieties had to average **44** and **52** bushels or higher to be in the top-yield group for 2 years and for 2009, respectively. Variety yield differences among the 2-year averages were not significant (NS), while the 2009 variety yield differences had to differ by **7** bushels to be significantly different. Variety lodging score value differences were not significant, so all entries were in the top performance group for lodging resistance. The 2009 protein and oil test averages were **38.1%** and **18.4%**, respectively (table 1b). Variety protein and oil values had to average **40.3%** and **19.2%** or higher, respectively, to be in the top groups for protein and oil in 2009. Variety protein and oil averages had to differ by **1.0%** and **0.6%**, respectively, to be significantly different.

**Warner, Group-0 (Tables 1a & 1b):** The 2-year and 2009 test-yield averages were **52** and **61** bushels per acre, respectively, and the lodging score average was **1** (table 1a). Varieties had to average **54** and **65** bushels or higher to be in the top yield group for 2 years and for 2009, respectively. Variety yield averages had to differ by **5** bushels for 2 years and **4** bushels for 2009 to be significantly different. Variety lodging score value differences were not significant, so all entries were in the top performance group for lodging resistance. The 2009 protein and oil test averages were **37.9** and **21.1%**, respectively (table 1b). Variety protein values had to average **38.4%** or higher to be in the top groups for protein in 2009. Differences in oil percentage among the varieties tested in 2009 were non-significant (NS). Variety protein averages had to differ by **1.0%** to be significantly different.

**Northern test zone, Group-0 (Tables 1a & 1b):** The 2-year and 2009 test-yield averages were **50** and **57** bushels per acre, respectively, and the lodging score average was **1** (table 1a). In

2009, the protein and oil averages were **37.9** and **19.7%**, respectively (table 1b). However, there were significant year-by-location interactions for the 2-year yield and the 2009 yield averages; this means variety performance differed by location and year for the 2-year yield and differed by location for the 2009 yield in the Northern zone. In addition, there were significant variety by location interactions for the zone protein and oil averages. Therefore, **soybean producers are encouraged to evaluate variety performance differences for yield, protein, and oil percentage by using the yield, protein, and oil columns listed under each location** and not use the column averages listed for the Northern zone.

**South Shore, Group-1 (Tables 2a & 2b):** The 2-year and 2009 test-yield averages were **51** and **56** bushels per acre, respectively, and the lodging score average was **1** (table 2a). Varieties had to average **52** bushels and **57** bushels or higher to be in the top yield group for 2 years and for 2009, respectively. Variety yield differences among the 2-year averages were not significant (NS), while the 2009 variety yield differences had to differ by **4** bushels to be significantly different. Variety lodging score value differences were not significant, so all entries were in the top performance group for lodging resistance. The 2009 protein and oil test averages were **35.6** and **17.6%**, respectively (Table 2b). Variety protein and oil values had to average **37.5** and **18.2%** or higher, respectively, to be in the top groups for protein and oil in 2009. Variety protein and oil averages had to differ by **0.9** and **0.7%**, respectively, to be significantly different.

**Warner, Group-1 (Tables 2a & 2b):** The 2-year and 2009 test-yield averages were **51** and **64** bushels per acre, respectively, and the lodging score average was **1** (Table 2a). Varieties had to average **51** and **66** bushels or higher to be in the top yield group for 2 years and for 2009, respectively. Variety yield averages had to differ by **5** bushels for 2 years and **4** bushels for 2009 to be significantly different. Variety lodging score values had to equal **1** to be in the top performance group for lodging resistance and had to differ by **1** to be significantly different. The 2009 protein and oil test averages were **36.4** and **20.6%**, respectively (table 2b). Variety

protein and oil values had to average 37.0 and 21.0% or higher, respectively, to be in the top groups for protein and oil in 2009. Variety protein and oil averages had to differ by 2.0 and 1.2%, respectively, to be significantly different.

**Northern test zone, Group-I (Tables 2a & 2b):** The 2-year and 2009 test-yield averages were 51 and 60 bushels per acre, respectively, and the lodging score average was 1 (table 2a). In 2009, the protein and oil averages were 35.9 and 19.1%, respectively (table 2b). However, there were significant year-by-location interactions for the 2-year yield and the 2009 yield averages; this means variety performance differed by location and year for the 2-year yield and differed by location for the 2009 yield in the Northern zone. In addition, there were significant variety by location interactions for the zone protein and oil averages. Therefore, **soybean producers are encouraged to evaluate variety performance differences for yield, protein, and oil percentage by using the yield, protein, and oil columns listed under each location** and not use the column averages listed for the Northern zone.

## CENTRAL TEST ZONE

**BROOKINGS**– Conventional tillage, SDSU Plant Science Research Farm

**BANCROFT**– No-till, E. Weerts, Inc. (farm cooperator)

**Brookings, Group-0 (Tables 3a & 3b):** The 2-year and 2009 test-yield averages were 50 and 58 bushels per acre, respectively, and the lodging score average was 1 (table 3a). Varieties had to average 47 bushels and 59 bushels or higher to be in the top yield group for 2 years and for 2009, respectively. Variety yield differences among the 2-year averages were not significant (NS), while the 2009 variety yield differences had to differ by 4 bushels to be significantly different. Variety lodging score values indicated there was no difference in lodging resistance in the varieties tested in 2009. The 2009 protein and oil test averages were 38.7 and 17.4%, respectively, (table 3b). Differences in protein percentage among the varieties tested in 2009 were non-significant (NS). Variety oil values had to average 18.1% or higher to be in the top groups for oil content in 2009. Variety oil averages had to differ by 0.7% to be significantly different.

**Bancroft, Group-0 (Tables 3a & 3b):** The 2-year and 2009 test-yield averages were 48 and 41 bushels per acre, respectively, and the lodging score average was 1 (table 3a). Varieties had to average 44 and 50 bushels or higher to be in the top yield group for 2 years and for 2009, respectively. Variety yield differences among the 2-year averages were not significant, while the 2009 variety yield differences had to differ by 8 bushels to be significantly different. Variety lodging score values indicated there was no difference in lodging resistance in the varieties tested in 2009. The 2009 protein and oil test averages were 35.8 and 19.3%, respectively (table 3b). Variety protein and oil values had to average 36.7 and 20.2% or higher, respectively, to be in the top groups for protein and oil in 2009. Variety protein and oil averages had to differ by 1.4 and 0.7%, respectively, to be significantly different.

**Central test zone, Group-0 (Tables 3a & 3b):** The 2-year and 2009 test-yield averages were 47 and 50 bushels per acre, respectively, and the lodging score average was 1 (table 3a). In 2009, the protein and oil averages were 37.3 and 18.3%, respectively (table 3b). However, there were significant year-by-location interactions for the 2-year yield and the 2009 yield averages; this means vari-

ety performance differed by location and year for the 2-year yield and differed by location for the 2009 yield in the Central zone. In addition, there were significant variety by location interactions for the zone protein and oil averages. Therefore, **soybean producers are encouraged to evaluate variety performance differences for yield, protein, and oil percentage by using the yield, protein, and oil columns listed under each location** and not use the column averages listed for the Central zone.

**Brookings, Group-I (Tables 4a & 4b):** The 2-year and 2009 test-yield averages were 52 and 61 bushels per acre, respectively, and the lodging score average was 1 (table 4a). Varieties had to average 51 and 64 bushels or higher to be in the top yield group for 2 years and for 2009, respectively. Variety yield averages had to differ by 4 bushels for both the 2-year and 2009 yield columns to be significantly different. Variety lodging score values indicated there was no difference in lodging resistance in the varieties tested in 2009. The 2009 protein and oil test averages were 36.0 and 17.8%, respectively (table 4b). Variety protein and oil values had to average 37.6 and 18.5% or higher, respectively, to be in the top groups for protein and oil in 2009. Variety protein and oil averages had to differ by 1.3 and 0.7%, respectively, to be significantly different.

**Bancroft, Group-I (Tables 4a & 4b):** The 2-year and 2009 test-yield averages were 48 and 46 bushels per acre, respectively, and the lodging score average was 1 (table 4a). Varieties had to average 46 and 52 bushels or higher to be in the top yield group for 2 years and for 2009, respectively. Variety yield averages had to differ by 12 bushels for 2 years and by 8 bushels for 2009 to be significantly different. Variety lodging score values indicated there was no difference in lodging resistance in the varieties tested in 2009. The 2009 protein and oil test averages were 34.9 and 19.6%, respectively (table 4b). Variety protein and oil values had to average 37.1 and 20.1% or higher, respectively, to be in the top groups for protein and oil in 2009. Variety protein and oil averages had to differ by 1.5 and 0.8%, respectively, to be significantly different.

**Central test zone, Group-I (Tables 4a & 4b):** The 2-year and 2009 test-yield averages were 50 and 54 bushels per acre, respectively, and the lodging score average was 1 (table 4a). In 2009, the protein and oil averages were 35.5 and 18.6%, respectively (table 4b). However, there were significant year-by-location interactions for the 2-year yield and the 2009 yield averages; this means variety performance differed by location and year for the 2-year yield and differed by location for the 2009 yield in the Central zone. In addition, there were significant variety by location interactions for the zone protein and oil averages. Therefore, **soybean producers are encouraged to evaluate variety performance differences for yield, protein, and oil percentage by using the yield, protein and oil columns listed under each location** and not use the column averages listed for the Central zone.

**Brookings, Group-II (Tables 5a & 5b):** The 2-year and 2009 test-yield averages were 54 and 59 bushels per acre, respectively, and the lodging score average was 1 (table 5a). Varieties had to average 50 and 60 bushels or higher to be in the top yield group for 2 years and for 2009, respectively. Variety yield differences among the 2-year averages were not significant (NS), while the 2009 variety yield differences had to differ by 4 bushels to be significantly different. Variety lodging score values indicated there was no difference in lodging resistance in the varieties tested in

2009. The 2009 protein and oil test averages were **37.1** and **17.9%**, respectively (table 5b). Variety protein and oil values had to average **39.2** and **18.8%** or higher, respectively, to be in the top groups for protein and oil in 2009. Variety protein and oil averages had to differ by **1.0** and **0.8%**, respectively, to be significantly different.

**Bancroft, Group-II (Tables 5a & 5b):** The 2-year and 2009 test-yield average were **47** and **44** bushels per acre, respectively, and the lodging score average was **1** (table 5a). Varieties had to average **45** and **54** bushels or higher to be in the top yield group for 2 years and for 2009, respectively. Variety yield averages had to differ by **6** bushels in both the 2-year and 2009 yield columns to be significantly different. Variety lodging score values indicated there was no difference in lodging resistance in the varieties tested in 2009. The 2009 protein and oil test averages were **35.5** and **19.6%**, respectively (table 5b). Variety protein and oil values had to average **36.2** and **19.9%** or higher, respectively, to be in the top groups for protein and oil in 2009. Variety protein and oil averages had to differ by **1.7** and **0.8%**, respectively, to be significantly different.

**Central test zone, Group-II (Tables 5a & 5b):** The 2-year and 2009 test-yield averages were **51** and **52** bushels per acre, respectively, and the lodging score average was **1** (table 5a). In 2009, the protein and oil averages were **36.3** and **18.8%**, respectively (table 5b). However, there were significant year-by-location interactions for the 2-year yield and the 2009 yield averages; this means variety performance differed by location and year for the 2-year yield and differed by location for the 2009 yield in the Central zone. In addition, there were significant variety by location interactions for the zone protein and oil averages. Therefore, **soybean producers are encouraged to evaluate variety performance differences for yield, protein, and oil percentage by using the yield, protein, and oil columns listed under each location** and not use the column averages listed for the Central zone.

## SOUTHERN TEST ZONE

BERESFORD— Conventional tillage, Southeast SD Agricultural Experiment Station.

GEDDES- No-till, Curtis Sybesma (farm cooperater)

**Beresford, Group-I (Tables 6a & 6b):** The 2-year and 2009 test-yield averages were **53** and **65** bushels per acre, respectively, and the lodging score average was **1** (table 6a). Varieties had to average **51** bushels and **68** bushels or higher to be in the top yield group for 2 years and for 2009, respectively. Variety yield averages had to differ by 7 bushels for 2 years and by 3 bushels for 2009 to be significantly different. Variety lodging score values indicated there was no difference in lodging resistance in the varieties tested in 2009. The 2009 protein and oil test averages were **37.4** and **20.7%**, respectively (table 6b). Variety protein and oil values had to average **38.0** and **21.2%** or higher, respectively, to be in the top groups for protein and oil in 2009. Variety protein and oil averages had to differ by **1.4** and **0.9%**, respectively, to be significantly different.

**Geddes, Group-I (Tables 6a & 6b):** The 2-year and 2009 test-yield averages were **50** and **51** bushels per acre, respectively, and the lodging score average was **1** (table 6a). Varieties had to average **48** and **53** bushels or higher to be in the top yield group for 2 years and for 2009, respectively. Variety yield averages had to differ by **6** bushels for 2 years and by **5** bushels for 2009 to be

significantly different. Variety lodging score values indicated there was no difference in lodging resistance in the varieties tested in 2009. The 2009 protein and oil test averages were **36.2** and **20.9%**, respectively (table 6b). Variety protein values had to average **36.0%** or higher to be in the top groups for oil content in 2009. Differences in oil percentage among the varieties tested in 2009 were non-significant (NS). Variety protein averages had to differ by **2.9%** to be significantly different.

**Southern test zone, Group-I (Tables 6a & 6b):** The 2-year and 2009 test-yield averages were **52** and **58** bushels per acre, respectively, and the lodging score average was **1** (table 6a). In 2009, the protein and oil averages were **36.8** and **20.8%**, respectively (table 6b). However, there were significant year-by-location interactions for the 2-year yield and the 2009 yield averages; this means variety performance differed by location and year for the 2-year yield and differed by location for the 2009 yield in the Southern zone. In addition, there were significant variety by location interactions for the zone protein and oil averages. Therefore, **soybean producers are encouraged to evaluate variety performance differences for yield, protein, and oil percentage by using the yield, protein, and oil columns listed under each location** and not use the column averages listed for the Southern zone.

**Beresford, Group-II (Tables 7a & 7b):** The 2-year and 2009 test-yield averages were **53** and **63** bushels per acre, respectively, and the lodging score average was **1** (table 7a). Varieties had to average **54** and **66** bushels or higher to be in the top yield group for 2 years and for 2009, respectively. Variety yield averages had to differ by **6** bushels for 2 years and by **5** bushels for 2009 to be significantly different. Variety lodging score values had to equal **1** to be in the top performance group for resisting lodging, and lodging values had to differ by **1** to be significantly different. The 2009 protein and oil test averages were **35.8** and **19.0%**, respectively (table 7b). Variety protein and oil values had to average **38.6** and **20.1%** or higher, respectively, to be in the top groups for protein and oil in 2009. Variety protein and oil averages had to differ by **1.0** and **0.7%**, respectively, to be significantly different.

**Geddes, Group-II (Tables 7a & 7b):** The 2-year and 2009 test-yield averages were **56** and **60** bushels per acre, respectively, and the lodging score average was **1** (table 7a). Varieties had to average **56** and **66** bushels or higher to be in the top yield group for 2 years and for 2009, respectively. Variety yield averages had to differ by **6** bushels for 2 years and by **5** bushels for 2009 to be significantly different. Variety lodging score values had to equal **1** to be in the top performance group for resisting lodging, and lodging values had to differ by **1** to be significantly different. The 2009 protein and oil test averages were **36.2** and **18.8%**, respectively (table 7b). Variety protein and oil values had to average **38.0** and **20.0%** or higher, respectively, to be in the top groups for protein and oil in 2009. Variety protein and oil averages had to differ by **2.0** and **1.1%**, respectively, to be significantly different.

**Southern test zone, Group-II (Tables 7a & 7b):** The 2-year and 2009 test-yield averages were **55** and **62** bushels per acre, respectively, and the lodging score average was **1** (table 7a). In 2009, the protein and oil averages were **35.9** and **18.9%**, respectively (table 7b). However, there were significant year-by-location interactions for the 2-year yield and the 2009 yield averages; this means variety performance differed by location and year for the 2-year yield and differed by location for the 2009 yield in the

Southern zone. In addition, there were significant variety by location interactions for the zone protein and oil averages. Therefore, **soybean producers are encouraged to evaluate variety performance differences for yield, protein, and oil percentage by using the yield, protein, and oil columns listed under each location** and not use the column averages listed for the Southern zone.

## NON-GLYPHOSATE-RESISTANT SOYBEAN VARIETY TRIAL RESULTS

Note: Yield averages are reported 2-yr (2008-09) or for 2009.

**SOUTH SHORE**– Conventional tillage, Northeast Research Farm

**South Shore, Group-0 (Tables 8a & 8b):** The 2-year and 2009 test-yield averages were **40** and **46** bushels per acre, respectively, and the lodging score average was **1** (table 8a). Varieties had to average **37** bushels or higher for 2 years and **49** bushels or higher for 2009 to be in the top yield group. Variety yield averages had to differ by **6** bushels for 2 years and by **4** bushels for 2009 to be significantly different. Variety lodging score values indicated there was no difference in lodging resistance in the varieties tested in 2009. The 2009 protein and oil test averages were **37.0** and **16.5%**, respectively (table 8b). Variety protein and oil values had to average **40.7** and **16.8%** or higher, respectively, to be in the top groups for protein and oil in 2009. Variety protein and oil averages had to differ by **1.1** and **0.8%**, respectively, to be significantly different.

**South Shore, Group-I (Tables 8a & 8b):** The 2-year and 2009 test-yield averages were **41** and **43** bushels per acre, respectively, and the lodging score average was **1** (table 8a). Varieties had to average **35** bushels or higher for 2 years and **43** bushels or higher for 2009 to be in the top yield group. Variety yield averages had to differ by **10** bushels for 2 years and by **4** bushels for 2009 to be significantly different. Variety lodging score values indicated there was no difference in lodging resistance in the varieties tested in 2009. The 2009 protein and oil test averages were **37.0** and **16.5%**, respectively (table 8b). Variety protein and oil values had to average **38.4** and **17.1%** or higher, respectively, to be in the top groups for protein and oil in 2009. Variety protein and oil averages had to differ by **0.7** and **0.6%**, respectively, to be significantly different.

**BROOKINGS**– Conventional tillage, SDSU Agronomy Farm

**Brookings, Group-0 (Tables 9a & 9b):** The 2009 test-yield average was **48** bushels per acre, and the lodging score average was **1** (table 9a). Varieties had to average **54** bushels or higher for 2009 to be in the top yield group. Variety yield averages had to differ by **5** bushels for 2009 to be significantly different. Variety lodging score values indicated there was no difference in lodging resistance in the varieties tested in 2009. The 2009 protein and oil test averages were **39.1** and **17.6%**, respectively (table 9b). Variety protein and oil values had to average **42.1** and **18.1%** or higher, respectively, to be in the top groups for protein and oil in 2009. Variety protein and oil averages had to differ by **0.8** and **0.3%**, respectively, to be significantly different.

**Brookings, Group-I (Tables 9a & 9b):** The 2009 test-yield average was **58** bushels per acre, and the lodging score average was **1** (table 9a). Varieties had to average **60** bushels or higher for 2009 to be in the top yield group. Variety yield averages had to differ by **4** bushels for 2009 to be significantly different. Variety lodging score values indicated there was no difference in lodging

resistance in the varieties tested in 2009. The 2009 protein and oil test averages were **37.4** and **17.8%**, respectively (table 9b). Variety protein and oil values had to average **39.1** and **18.3%** or higher, respectively, to be in the top groups for protein and oil in 2009. Variety protein and oil averages had to differ by **0.8** and **0.7%**, respectively, to be significantly different.

**Brookings, Group-II (Tables 9a & 9b):** The 2009 test-yield average was **50** bushels per acre, and the lodging score average was **1** (table 9a). Varieties had to average **52** bushels or higher for 2009 to be in the top yield group. Variety yield averages had to differ by **4** bushels for 2009 to be significantly different. Variety lodging score values indicated there was no difference in lodging resistance in the varieties tested in 2009. The 2009 protein and oil test averages were **37.4** and **18.4%**, respectively (table 9b). Variety protein and oil values had to average **37.4** and **18.3%** or higher, respectively, to be in the top groups for protein and oil in 2009. Variety protein and oil averages had to differ by **0.9** and **1.0%**, respectively, to be significantly different.

**BERESFORD**– Conventional tillage, Southeast Agricultural Experiment Station

**Beresford, Group-I (Tables 10a & 10b):** The 2009 test-yield average was **50** bushels per acre, and the lodging score average was **2** (table 10a). Varieties had to average **48** bushels or higher for 2009 to be in the top yield group. Variety yield averages had to differ by **6** bushels for 2009 to be significantly different. Variety lodging score values indicated there was no difference in lodging resistance in the varieties tested in 2009. The 2009 protein and oil test averages were **37.3** and **18.3%**, respectively (table 10b). Variety protein and oil values had to average **38.7** and **18.7%** or higher, respectively, to be in the top groups for protein and oil in 2009. Variety protein and oil averages had to differ by **1.4** and **0.4%**, respectively, to be significantly different.

**Beresford, Group-II (Tables 10a & 10b):** The 2009 test-yield average was **55** bushels per acre, and the lodging score average was **2** (table 10a). Varieties had to average **55** bushels or higher for 2009 to be in the top yield group. Variety yield averages had to differ by **5** bushels for 2009 to be significantly different. Variety lodging scores had to differ by **1** to be significantly different in lodging resistance. The 2009 protein and oil test averages were **36.2** and **18.8%**, respectively (table 10b). Variety protein and oil values had to average **36.6** and **19.3%** or higher, respectively, to be in the top groups for protein and oil in 2009. Variety protein and oil averages had to differ by **0.8** and **0.6%**, respectively, to be significantly different.

**Table A. Nearest weather station precipitation accumulation and average daily temperatures for each growing season month in 2009 and departures from average (DFA), SD Office of Climate and Weather.**

Station (Test site)	Variable	Monthly data - April 1 to October 31							Sum or Average
		April	May	June	July	Aug	Sept	Oct	
Aberdeen Airport (Warner)	Precip.- inches '09	1.90	0.47	3.87	2.46	2.83	4.41	4.00	19.94
	1971-2000 avg.	1.83	2.69	3.49	2.92	2.42	1.81	1.63	16.79
	DFA*	0.07	-2.22	0.38	-0.46	0.41	2.60	2.37	3.15
	Avg.Temp. -°F '09	43.0	56.4	64.0	68.0	66.5	63.5	41.4	57.54
1971-2000 avg.	45.4	57.9	66.8	72.2	70.5	59.8	46.8	59.91	
	DFA	-2.4	-1.5	-2.8	-4.2	-4.0	3.7	-5.4	-2.37
South Shore, Northeast Research Farm	Precip.- inches '09	1.09	1.73	2.70	3.97	3.60	1.62	6.53	21.24
	1971-2000 avg.	1.96	2.61	4.01	2.91	2.85	2.03	1.92	18.29
	DFA	-0.87	-0.88	-1.31	1.06	0.75	-0.41	4.61	2.95
	Avg.Temp. -°F '09	40.7	54.3	61.9	64.0	63.9	61.1	38.1	54.86
1971-2000 avg.	43.2	56.0	65.3	70.4	67.8	57.8	45.0	57.93	
	DFA	-2.5	-1.7	-3.4	-6.4	-3.9	3.3	-6.9	-3.07
Huron (Bancroft)	Precip.- inches '09	1.68	2.08	4.45	2.95	1.57	2.54	3.87	19.14
	1971-2000 avg.	2.29	3.00	3.28	2.86	2.07	1.80	1.59	16.89
	DFA	-0.61	-0.92	1.17	0.09	-0.50	0.74	2.28	2.25
	Avg.Temp. -°F '09	44.5	58.5	65.0	69.0	68.5	64.5	42.0	58.86
1971-2000 avg.	46.1	58.2	67.9	73.4	71.5	61.0	47.9	60.86	
	DFA	-1.6	0.3	-2.9	-4.4	-3.0	3.5	-5.9	-2.00
Brookings, SDSU Plant Science Farm	Precip.- inches '09	0.86	2.23	3.32	3.78	1.37	1.25	5.33	18.14
	1971-2000 avg.	2.03	2.95	4.23	3.11	2.94	2.48	1.78	19.52
	DFA	-1.17	-0.72	-0.91	0.67	-1.57	-1.23	3.55	-1.38
	Avg.Temp. -°F '09	44.4	56.9	66.2	70.7	68.5	58.9	46.0	58.80
1971-2000 avg.	44.2	56.7	66.1	70.7	68.6	59.1	46.3	58.81	
	DFA	0.2	0.2	0.1	0.0	-0.1	-0.2	-0.3	-0.01
Centerville, 6 SE, Southeast Experiment Station	Precip.- inches '09	1.60	0.94	4.64	4.82	2.08	2.16	4.72	20.96
	1971-2000 avg.	2.47	3.65	3.95	3.35	2.83	2.26	1.80	20.31
	DFA	-0.87	-2.71	0.69	1.47	-0.75	-0.10	2.92	0.65
	Avg.Temp. -°F '09	47.4	59.7	69.5	73.7	71.4	62.6	49.4	61.96
1971-2000 avg.	47.2	59.5	69.4	73.7	71.5	62.3	49.7	61.90	
	DFA	0.2	0.2	0.1	0.0	-0.1	0.3	-0.3	0.06
White Lake (Geddes)	Precip.- inches '09	0.96	1.18	3.11	3.4	2.63	1.72	3.68	16.68
	1971-2000 avg.	2.49	3.6	3.19	2.88	2.21	2.09	1.59	18.05
	DFA	-1.53	-2.42	-0.08	0.52	0.42	-0.37	2.09	-1.37
	Avg.Temp. -°F '09	43.7	58.0	65.1	68.0	67.5	62.7	49.5	59.21
1971-2000 avg.	47.9	59.7	69.0	74.5	72.7	62.8	49.8	62.34	
	DFA	-4.2	-1.7	-3.9	-6.5	-5.2	-0.1	-0.3	-3.13

\* DFA - departure from normal, difference current year is greater or less (-) than the long-term average.

**Table B. Description of trial locations- soil type, tillage, prior crop, herbicides and inoculants, and seeding dates.**

Location (County)	Soils & Management		Prior crop	Herbicides Applied at label rates				Insecticides	Date seeded
	Type	Tillage Method		Glyphosate Trials		Non- glyphosate Trials			
				Pre	Post	Pre	Post		
Warner (Brown)	Harmony-Aberdeen silty clay loam, 0-2% slope	No-till	Corn	None	Roundup once	-	-	Asana (ground)	May 21
South Shore (Codington)	Kranzburg silty clay loam, 3-6% slope	Conventional	Spring wheat	2 pt, Dual II Magnum	Roundup once	2 pt, Dual II Magnum	Harmony	Warrior (aerial)	May 22
Bancroft (Kingsbury)	Houdek-Stickney- Tetonka loam, 0-3% slope	No-till	Corn	None	Roundup once	-	-	Asana (ground)	May 20
Brookings (Brookings)	Barnes clay loam, 0-2% slope	Conventional	Spring wheat	None	Roundup twice	None	Harmony/ Poast	Asana (ground)	May 19
Geddes (Chas. Mix)	Highmore-Walke silt loam, 0-2% slope	No-till	Corn	None	Roundup once	-	-	None	June 1
Beresford (Clay)	Egan-Clarno-Trent silty clay loam, 0-2% slope	Conventional	Corn	None	Roundup once/ Select		Harmony/ Classic	None	26-May

\* Nitragin Soybean Soil Implant was applied down the seed tube at label rates at planting.

**Table C. *Phytophthora* root rot race resistance by gene.**

Gene	Gene Code	Race Resistance
rps1	0	None
Rps1, Rps1a	1A	1-2,10-11,13,15-18,24
Rps1b	1B	1,3-9,13-15,18,21-22
Rps1c	1C	1-3,6-11,13,15,17,21,23-24
Rps1k	1K	1-11,13-15,17-18,21-22,24
Rps2	2	1-5,9-20
Rps3	3	1-5,8-9,11,13-14,16,18,23,25
Rps4	4	1-4,10,12-16,18-21,25
Rps5	5	1-5,8-9,11-14,18,20,25
Rps6	6	1-4,10,12,14-16,18-21,25
Rsp7	7	16,18,19
Rps1k, Rps6	K6	1-22,24-25
Rps1c, Rps3	C3	1-10,13-18,22-25
Rps1b	B3	1-9,13-16,18,21-23,25
MIX	MIX	Resistant & Susceptible Plants
NR	NR	Not Reported

**Table D. Index to 2009 Glyphosate-resistant soybean entries by brand/variety, maturity group, seed trt., gene code for *Phytophthora* root rot (PRR) resistance as reported by entrants, and performance table no.(s). Use table C to determine entry PRR strain resistance.**

Brand / Variety	Mat. Grp.	Seed Trt.	Gene Code*	Table No.(s)	Brand / Variety	Mat. Grp.	Seed Trt.	Gene Code*	Table No.(s)
ASGROW/ AG0803	0.8	Cruiser Maxx	1K	1	GOLD COUNTRY/ EXP 1940	1.9	Acceleron	NR	4
ASGROW/ AG0808	0.8	Cruiser Maxx	1K	1	HEFTY/ 089R	0.8	Not reported	1K	1
ASGROW/ AG1102	1.1	Cruiser Maxx	1K	2	HEFTY/ 108	1	Not reported	1K	2
ASGROW/ AG1403	1.4	Cruiser Maxx	0	2,4	HEFTY/ 117R	1.1	Not reported	0	2
ASGROW/ AG1506	1.5	Cruiser Maxx	1K	2,4	HEFTY/ 139R	1.3	Not reported	0	2
ASGROW/ AG1702	1.7	Cruiser Maxx	1K	2,4	HEFTY/ 159R	1.5	Not reported	1K	2,4
ASGROW/ AG1703	1.7	Cruiser Maxx	1K	2,4	HEFTY/ 168R	1.6	Not reported	0	2,4
ASGROW/ AG2108	2.1	Cruiser Maxx	0	5	HEFTY/ 179R	1.7	Not reported	0	4
ASGROW/ AG2839	2.8	Acceleron+Insecticide	1C	7	HEFTY/ 199R	1.9	Not reported	0	4
ASGROW/ AG2939	2.9	Acceleron+Insecticide	1K	7	HEFTY/ 218RN	2.1	Not reported	1C	5,7
ASGROW/ DKB22-52	2.2	Cruiser Maxx	0	5	HEFTY/ 229R	2.2	Not reported	0	5,7
ASGROW/ DKB27-52	2.7	Cruiser Maxx	1C	7	HEFTY/ 248R	2.4	Not reported	3	7
ASGROW/ RY0809	0.8	Acceleron+Insecticide	1C	1	HEFTY/ 259R	2.5	Not reported	1K	7
ASGROW/ RY0819	0.8	Acceleron+Insecticide	1C	1	HEFTY/ 279R	2.7	Not reported	1C	7
ASGROW/ RY1709	1.7	Acceleron+Insecticide	1K	2,4	HEFTY/ EXP070R	0.7	Not reported	0	1
ASGROW/ RY1719	1.7	Acceleron+Insecticide	0	2,4	HEFTY/ EXP200R	2	Not reported	1K	5,7
ASGROW/ RY2119	2.1	Acceleron+Insecticide	MX	5	KALTENBERG/ EXP 2010	2	Trilex 2000+CelGard	1K	5
ASGROW/ RY2409	2.4	Acceleron+Insecticide	1C	7	KALTENBERG/ EXP 2510	2.5	Trilex 2000+CelGard	NR	7
ASGROW/ RY2419	2.4	Acceleron+Insecticide	1K	7	KALTENBERG/ EXP 2710	2.7	Trilex 2000+CelGard	NR	7
ASGROW/ RY2809	2.8	Acceleron+Insecticide	1C	7	KALTENBERG/ KB1809RR	1.8	Trilex 2000+CelGard	0	4
ASGROW/ RY2929	2.9	Acceleron+Insecticide	MX	7	KALTENBERG/ KB249RR	2.4	Trilex 2000+CelGard	0	7
CHANNEL BRAND/ 2551R2	2.5	Apron Max	1K	7	KALTENBERG/ KB2609RR	2.6	Trilex 2000+CelGard	0	7
CHANNEL BRAND/ 1651R	1.6	Apron Max	1K	2,4	KRUGER/ EXPK2X05A9	0.5	Acceleron	1K	1,3
CHANNEL BRAND/ 2151R	2.1	Apron Max	1K	5	KRUGER/ EXPK2X06A9	0.6	Acceleron	NR	1,3
CHANNEL BRAND/ 2200R2	2.2	Acceleron	1C	5,7	KRUGER/ EXPK2X09A9	0.9	Acceleron	1C	1,3
CHANNEL BRAND/ 2400R2	2.4	Acceleron	1C	7	KRUGER/ EXPK2X10A9	1	Acceleron	1C	2,4
DAIRYLAND/ DSR-0747/R2Y	0.9	Not reported	1C	1	KRUGER/ EXPK2X11B9	1.1	Acceleron	NR	2,4
DAIRYLAND/ DSR-1100/RR	1.1	Not reported	NR	2	KRUGER/ EXPK2X14A9	1.4	Acceleron	1C	2,4,6
DAIRYLAND/ DSR-1200/R2Y	1.2	Not reported	1K	2	KRUGER/ EXPK2X15B9	1.5	Acceleron	C	2,4,6
DAIRYLAND/ DSR-1807/R2Y	1.8	Not reported	1C	4	KRUGER/ EXPK2X16A9	1.6	Acceleron	1K	6
DAIRYLAND/ DSR-2132/R2Y	2.1	Not reported	1C	7	KRUGER/ EXPK2X19B9	1.9	Acceleron	1C	2,4,6
DAIRYLAND/ DSR-2200/RR	2.2	Not reported	NR	7	KRUGER/ EXPK2X21A9	2.1	Acceleron	NR	5,7
DAIRYLAND/ DSR-2440/R2Y	2.4	Not reported	1C	7	KRUGER/ K-042RR	0.4	Cruiser Maxx	1A	1,3
DAIRYLAND/ DSR-2525RRAP	2.5	Not reported	NR	7	KRUGER/ K-058RR	0.5	Cruiser Maxx	1K	1,3
DAIRYLAND/ DSR-2560/RR	2.5	Not reported	NR	7	KRUGER/ K-072+RR	0.8	Cruiser Maxx	1A	1,3
DAIRYLAND/ DSR-2770/RR	2.7	Not reported	1K	7	KRUGER/ K-091RR	0.9	Cruiser Maxx	0	1,3
DAIRYLAND/ DSR1423RRSTS	1.4	Not reported	NR	2,4	KRUGER/ K-129RR	1.2	Cruiser Maxx	0	2,4
DAIRYLAND/ DST11-001R2Y	1.1	Not reported	NR	2	KRUGER/ K-163RR	1.6	Cruiser Maxx	MX	4
DAIRYLAND/ DST14-003R2Y	1.4	Not reported	NR	2,4	KRUGER/ K-167RR/SCN	1.6	Cruiser Maxx	1K	2,4,6
DAIRYLAND/ DST20-002/RR	2	Not reported	NR	7	KRUGER/ K-189RR/SCN	1.8	Cruiser Maxx	1K	2,4,6
DAIRYLAND/ DST22-006R2Y	2.2	Not reported	1K	7	KRUGER/ K-204RR/SCN	2	Cruiser Maxx	1K	5,7
DAIRYLAND/ DST25-003R2Y	2.5	Not reported	NR	7	KRUGER/ K-228RR/SCN	2.2	Cruiser Maxx	1K	7
G-2 GENETICS/ 6088	0.8	Cruiser Maxx	NR	1,3	KRUGER/ K-239RR	2.3	Cruiser Maxx	0	7
G-2 GENETICS/ 6098	0.9	Cruiser Maxx	1K	1,3	KRUGER/ K-249RR/SCN	2.4	Cruiser Maxx	0	5,7
G-2 GENETICS/ 6159	1.5	Cruiser Maxx	1K	2,4,6	KRUGER/ K-271RR	2.7	Cruiser Maxx	1K	7
G-2 GENETICS/ 6247	2.4	Cruiser Maxx	1K	5	KRUGER/ K-274RR/SCN	2.7	Cruiser Maxx	0	7
G-2 GENETICS/ 6279	2.7	Cruiser Maxx	1K	7	KRUGER/ K2-1901	1.9	Acceleron	1K	2,4,6
G-2 GENETICS/ 7129	1.2	Cruiser Maxx	1K	2,4	KRUGER/ K2-2701	2.7	Acceleron	0	5,7
G-2 GENETICS/ 7186	1.7	Cruiser Maxx	1K	4,6	KRUGER/ K2-2801	2.8	Acceleron	1C	7
G-2 GENETICS/ 7208	2	Cruiser Maxx	1C	5,7	MUSTANG/ M-09330	0.9	Trilex 6000	1C	1,3
G-2 GENETICS/ 7212	2.1	Cruiser Maxx	1K	5,7	MUSTANG/ M-09920	0.9	Trilex 6000	1C	1,3
G-2 GENETICS/ 7226	2.2	Cruiser Maxx	1K	5,7	MUSTANG/ M-13320	1.3	Trilex 6000	1C	2,4
G-2 GENETICS/ 7255	2.5	Cruiser Maxx	1K	5	MUSTANG/ M-159NRR	1.5	Trilex 6000	1K	2,4
G-2 GENETICS/ 7288	2.8	Cruiser Maxx	1K	7	MUSTANG/ M-168RR	1.6	Trilex 6000	0	2,4
GOLD COUNTRY/ 1915NRR	1.5	Not reported	1K	2,4	MUSTANG/ M-177NRR	1.7	Trilex 6000	1K	4
GOLD COUNTRY/ 2509RR	0.9	Not reported	0	1	MUSTANG/ M-190NRR	1.9	Trilex 6000	1C	4
GOLD COUNTRY/ 2713RR	1.3	Not reported	1K	2,4	MUSTANG/ M-19990	1.9	Trilex 6000	1C	4
GOLD COUNTRY/ 2815RR	1.5	Not reported	0	2,4	MUSTANG/ M-20420	2	Trilex 6000	1K	5
GOLD COUNTRY/ 8820NRR	2.1	Not reported	1K	5,7	MUSTANG/ M-209NRR	2	Trilex 6000	0	5

**Table D. Index to 2009 Glyphosate-resistant soybean entries (Continued).**

Brand / Variety	Mat. Grp.	Seed Trt.	Gene Code*	Table No.(s)	Brand / Variety	Mat. Grp.	Seed Trt.	Gene Code*	Table No.(s)
MUSTANG/ M-21320	2.1	Trilex 6000	1C	5	PRAIRIE BR./ PB-1999NRR2	1.9	Acceleron	1K	6
MUSTANG/ M-219RR	2.1	Trilex 6000	0	5	PRAIRIE BR./ PB-2058NRR	1.9	Trilex 6000	1K	4,6
MUSTANG/ M-23530	2.3	Trilex 6000	0	5,7	PRAIRIE BR./ PB-2099NRR2	2	Acceleron	1C	5,7
MUSTANG/ M-24620	2.4	Trilex 6000	1C	5,7	PRAIRIE BR./ PB-2117NRR	2.1	Trilex 6000	0	5
MUSTANG/ M-259NRR	2.4	Trilex 6000	1K	7	PRAIRIE BR./ PB-2147RR	2.1	Trilex 6000	0	5
MUSTANG/ M-270NRR	2.7	Trilex 6000	1C	7	PRAIRIE BR./ PB-2207NRR	2.2	Trilex 6000	1K	5,7
MUSTANG/ M-28929	2.8	Trilex 6000	1C	7	PRAIRIE BR./ PB-2243RR	2.2	Trilex 6000	1K	5
MUSTANG/ M-318RR	2.9	Trilex 6000	1C	7	PRAIRIE BR./ PB-2278RR	1.9	Trilex 6000	0	4,6
NUTECH/ 0886RR	0.8	Cruiser Maxx	NR	1,3	PRAIRIE BR./ PB-2419RR2	2.4	Acceleron	0	5,7
NUTECH/ 0889RR	0.8	Cruiser Maxx	NR	1	PRAIRIE BR./ PB-2439NRR2	2.4	Acceleron	1C	5,7
NUTECH/ 0990RR	0.9	Cruiser Maxx	NR	1,3	PRAIRIE BR./ PB-2515RR	2.5	Trilex 6000	1K	7
NUTECH/ 1808RN	1.8	Cruiser Maxx	1C	4,6	PRAIRIE BR./ PB-2558NRR	2.4	Trilex 6000	0	5,7
NUTECH/ 2324+RN	2.3	Cruiser Maxx	NR	7	PRAIRIE BR./ PB-2667NRR	2.6	Trilex 6000	1C	7
NUTECH/ 2660RN	2.6	Cruiser Maxx	1C	7	PRAIRIE BR./ PB-2828NRR2	2.8	Acceleron	1C	7
NUTECH/ 2707RR	2.7	Cruiser Maxx	NR	7	PROSEED/ 61-00	1	Cruiser Maxx	0	2
NUTECH/ 6122	0.9	Cruiser Maxx	1K	1,3	PROSEED/ 80-90	0.9	Cruiser Maxx	0	1
NUTECH/ 6145	1.4	Cruiser Maxx	NR	2,4	PROSEED/ 81-30	1.3	Cruiser Maxx	0	2,4
NUTECH/ 6156	1.5	Cruiser Maxx	NR	2,4	PROSEED/ 81-50	1.3	Cruiser Maxx	1K	2,4
NUTECH/ 6166	1.6	Cruiser Maxx	1K	2	PROSEED/ 81-90	1.9	Cruiser Maxx	1C	6
NUTECH/ 6191	1.9	Cruiser Maxx	NR	4	PROSEED/ 82-00N	2	Cruiser Maxx	1K	7
NUTECH/ 6193	1.9	Cruiser Maxx	NR	2,4,6	REA/ EXP-1054	1.4	Not reported	1C	2,4
NUTECH/ 6205+RR	1.9	Cruiser Maxx	1K	2,4,6	REA/ EXP-1056	1.6	Not reported	1K	2,4
NUTECH/ 6211	2.1	Cruiser Maxx	NR	5,7	REA/ EXP-1059	1.9	Not reported	1C	2,4
NUTECH/ 6234RR	2.3	Cruiser Maxx	1K	5	REA/ EXP-1062	2.2	Not reported	1C	5
NUTECH/ 6244	2.4	Cruiser Maxx	NR	5,7	REA/ EXP-1064	2.4	Not reported	1C	5
NUTECH/ 7199	1.9	Cruiser Maxx	1C	4	REA/ EXP-1068	2.8	Not reported	1C	5
NUTECH/ 7203	2	Cruiser Maxx	1K	5	RENK/ RS110R2	1.1	Acceleron	1C	4
NUTECH/ 7222	2.2	Cruiser Maxx	1K	5,7	RENK/ RS140NR2	1.4	Acceleron	1C	4
NUTECH/ 7269	2.6	Cruiser Maxx	1C	7	RENK/ RS160NR2	1.6	Acceleron	1K	4
NUTECH/ 7274	2.7	Cruiser Maxx	1K	7	RENK/ RS179NRR	1.7	Not reported	NR	4
PIONEER/ 90Y50	0.5	Cruiser Maxx	1K	1	RENK/ RS180R2	1.8	Acceleron	1C	4
PIONEER/ 90Y80	0.8	Cruiser Maxx	0	1	RENK/ RS200NR2	2	Acceleron	1K	5
PIONEER/ 91Y90	1.9	Cruiser Maxx	0	2,4	RENK/ RS210NR2	2	Acceleron	1C	5
PIONEER/ 92Y10	2.1	Cruiser Maxx	1K	5	RENK/ RS259NRR	2.5	Not reported	NR	7
PIONEER/ 92Y30	2.3	Cruiser Maxx	1K	5,7	RENK/ RS270NR2	2.7	Acceleron	1C	7
PIONEER/ 92Y80	2.8	Cruiser Maxx	1K	7	RENK/ RS277NRR	2.7	Not reported	NR	7
PIONEER/ 93M11	3.1	Cruiser Maxx	1K	7	SEEDS 2000/ 2081RR	0.8	Not reported	1K	1
PRAIRIE BR./ PB-3039NRR2	2.9	Acceleron	1C	7	SEEDS 2000/ 2120RR	1.2	Not reported	1K	2
PRAIRIE BR./ EXP 109	0.9	Acceleron	1C	1,3	SODAK GEN./ SD1093RR	0.9	Not reported	0	1,3
PRAIRIE BR./ EXP 119	0.9	Acceleron	1C	1,3	SODAK GEN./ SD1161RR/SCN	1.6	Not reported	1A	2,4,6
PRAIRIE BR./ EXP 129	0.9	Acceleron	1C	1	SODAK GEN./ SD2081RR	0.8	Not reported	0	1,3
PRAIRIE BR./ EXP 141	1.4	Acceleron	1C	2,4	SODAK GEN./ SD2121RR	1.2	Not reported	1K	2,4,6
PRAIRIE BR./ EXP 158	1.5	Acceleron	0	2,4	STINE/ 1008-4	1	Trilex 6000	0	2
PRAIRIE BR./ EXP 179	1.6	Acceleron	1K	2,4	STINE/ 1108-4	1.1	Trilex 6000	0	2
PRAIRIE BR./ EXP 195	2	Acceleron	1K	5	STINE/ 1423-4	1.4	Trilex 6000	1K	4
PRAIRIE BR./ EXP 199	1.9	Acceleron	1C	2,4,6	STINE/ 1568-4	1.5	Trilex 6000	1K	4
PRAIRIE BR./ EXP 201	1.9	Acceleron	1C	4,6	STINE/ 2062-4	2	Trilex 6000	1K	5
PRAIRIE BR./ EXP 207	2	Acceleron	0	5,7	STINE/ 2420-4	2.4	Trilex 6000	0	7
PRAIRIE BR./ EXP 215	1.9	Acceleron	0	4,6	STINE/ 2538-4	2.5	Trilex 6000	1K	7
PRAIRIE BR./ EXP 217	1.9	Trilex 6000	0	6	STINE/ 3132-4	2.9	Trilex 6000	1C	7
PRAIRIE BR./ EXP 220	1.9	Trilex 6000	1K	6	STINE/ EXP 2482-4	2.4	Trilex 6000	1K	7
PRAIRIE BR./ PB-0779RR	0.7	Trilex 6000	0	1	WENSMAN/ W 2079RR	0.7	Cruiser Maxx	0	1
PRAIRIE BR./ PB-0954RR	0.9	Trilex 6000	0	1	WENSMAN/ W 2112RR	1.1	Cruiser Maxx	NR	2,4
PRAIRIE BR./ PB-0999RR	0.9	Trilex 6000	0	1	WENSMAN/ W 2166RR	1.6	Cruiser Maxx	0	2,4
PRAIRIE BR./ PB-1337RR	1.3	Trilex 6000	0	2	WENSMAN/ W 2222NRR	2.2	Cruiser Maxx	1K	5,7
PRAIRIE BR./ PB-1597RR	1.5	Trilex 6000	0	2,4	WENSMAN/ W 3186R2	1.8	Cruiser Maxx	1C	4,6
PRAIRIE BR./ PB-1918RR	1.9	Trilex 6000	0	2,4,6	WENSMAN/ W 3192NR2	1.9	Cruiser Maxx	1C	4,6
PRAIRIE BR./ PB-1956RR	1.9	Trilex 6000	1C	6	WENSMAN/ W 3280NR2	2.8	Cruiser Maxx	1C	7

NR indicates gene code was not reported by seed entrant.

**Table E. Index of 2009 Conventional soybean entries by brand/variety, maturity group, seed trt., and gene code for *Phytophthora* root rot resistance as reported by entrants; and performance table no.(s) Strain or race resistance by gene type is reported in table C.**

Brand / Variety	Mat. Grp.	Seed Trt.	Gene Code*	Table No.(s)
MUSTANG/ ML-0979	0.9	Not reported	Rps1k	8,9
MUSTANG/ ML-1520	1.5	Not reported	Rps1k	8,9
MUSTANG/ ML-1889	1.8	Not reported	Rps1c	9
MUSTANG/ ML-2269	2.2	Not reported	rps1 - None	9,10
MUSTANG/ ML-2670	2.6	Not reported	Rps1k	10
PROSEED/ LL81-60	1.6	Cruiser Maxx	Rps1k	9
PROSEED/ LL91-12	1.1	Cruiser Maxx	Rps1k	9
PUBLIC/DAVISON	2.2	Not reported	Rps1 (Rps1a)	9,10
PUBLIC/DEUEL	1.1	Not reported	Rps1k	8,9,10
PUBLIC/HAMLIN	0.9	Not reported	Rps1k	8,9
PUBLIC/MN0806CN	0.8	Not reported	NR	8,9
PUBLIC/MN0908CN	0.9	Not reported	NR	8,9
PUBLIC/MN1410	1.4	Not reported	NR	8,9,10
PUBLIC/MN1505SP	1.5	Not reported	NR	8,9,10
PUBLIC/MN1701CN	1.7	Not reported	NR	10-Aug
PUBLIC/SD00-1501	0	Not reported	NR	8,9
PUBLIC/SD05-240	1	Not reported	NR	8,9
PUBLIC/SD05-248	2	Not reported	NR	9,10
PUBLIC/SD05-273	2	Not reported	NR	9,10
PUBLIC/SD05-274	2	Not reported	NR	9,10
PUBLIC/SD05-767	0	Not reported	NR	8,9
PUBLIC/SURGE	0.7	Not reported	NR	8,9
RICHLAND ORG./ MK0508	0.5	Not reported	rps1 - None	8
RICHLAND ORG./ MK0649	0.6	Not reported	rps1 - None	8
RICHLAND ORG./ MK1016	1	Not reported	rps1 - None	8

\* NR indicates gene code was not reported by seed entrant.

**Table F. Explanation of performance table footnotes.**

No.	Explanation of footnotes
[1]	Days to maturity (DTM) – the number of days to maturity from seeding to 95% brown pod.
[2]	Lodging scores: 0 = all plants erect, 3 = 50% of plants lodged at 45°-angle, 5 = all plants flat.
[3]	Least Significant Difference (LSD 0.05) – the difference two values within a column must equal or exceed to be significantly different from one another at the 0.05 level of probability. If the difference is less than the LSD value, the difference between the values is nonsignificant (NS).
[4]	TPG-avg. – the minimum value within a column that entry yield values must equal or exceed to qualify for the top-performance group (TPG).
[5]	TPG-avg. – the maximum value within a column that lodging score values must equal or be less than to qualify for the TPG.
[6]	Coefficient of variation (C.V.) – the percent of experimental error associated with a test trial. Ideally, the CV value for yield is less than 15%. Values less than 5% tend to be less common, while values of 6 to 15% are more common. Occasionally, values exceed 15%; this means the trial contained too much experimental error to be a valid test; thus, no data for that table column is reported.

**Table G. Mailing addresses of entrants in the 2009 soybean trials.**

<b>Entrant name (brand name) &amp; Mailing address</b>
Dairyland Seed Co., Inc. (Dairyland), PO Box 958, West Bend, WI 53095
Gold Country Seed Inc. (Gold Country Seed), 16506 Hwy 15 N., PO Box 604, Hutchinson, MN 55350
G2 Genetics (G2), 36131 Hwy 69N, Forest City, IA 50436
Hefty Seed Co. (Hefty), 47504 252nd St., Baltic, SD 57003
Kaltenberg Seeds (Kaltenberg), 5506 State Rd 19, PO Box 278, Waunakee, WI 53597-0278
Kruger Seed Co. (Kruger), 33938 160th Ave., PO Box A, Dike, IA 50624
Channel Bio. Corp. (Channel), 1551 Hwy 210, Huxley, IA 50124
Monsanto (Asgrow), 102 West Carol Ave., Cortland, IL 60112
Mustang Seeds (Mustang), PO Box 466, Madison, SD 57042
Nutech Seed, LLC (Nutech), 36131 Hwy 69N, Forest City, IA 50436
Pioneer Hi-Bred Intl. (Pioneer), 151 St. Andrews Ct., Mankato, MN 56001
Prairie Brand Seed Co. (Prairie Brand), 15 X Ave., Story City, IA 50248
Proseed (Proseed), 705 East Brewster St., Harvey, ND 58341
REA Hybrids, (REA), 537 Ave. S, Moorhead, MN 56560
Renk Seed Co. (Renk), 6809 Wilburn Rd., Sun Prairie, WI 53590
Richland Organics, Inc. (Richland Organics), 100 Tenth St. North, Breckenridge, MN 56520
Seeds 2000 (Seeds 2000), PO Box 200, Breckenridge, MN 56520
Sodak Genetics (Sodak), 1200 North Campus Dr., Brookings, SD 57007
Stine Seed Co.(Stine), 14605 University Ave., Waukee, IA 50263
Wensman Seed Co.(Wensman), 67784 330th St., Watkins, MN 55389

**Table 1a. Glyphosate-resistant maturity group-0 soybean variety yield and lodging averages- northern South Dakota locations, 2008-2009. Entries are sorted by 2-Yr then by 2009 zone yield.**

Brand/Variety	DTM [1]	Northern Averages by Location						Northern Zone Averages			
		South Shore			Warner			Yield-bu/a		2009 Lodg.	
		Yield-bu/a		2009 Lodg.	Yield-bu/a		2009 Lodg.	Yield-bu/a		2009 Lodg.	
		2-Yr	2009	(1-5) [2]	2-Yr	2009	(1-5) [2]	2-Yr	2009	(1-5) [2]	[2]
NUTECH/ NT-0886	126	<b>51</b>	50	1	<b>59</b>	<b>69</b>	<b>1</b>	55	60	1	
NUTECH/ NT-0990	127	<b>52</b>	<b>53</b>	1	51	63	<b>1</b>	52	58	1	
PRAIRIE BR./ PB-0954RR	124	<b>47</b>	<b>52</b>	1	52	60	<b>1</b>	50	56	1	
ASGROW/ AG0808	124	<b>46</b>	49	1	53	61	<b>1</b>	50	55	1	
HEFTY/ EXP089R	124	<b>48</b>	<b>53</b>	1	49	60	<b>1</b>	49	57	1	
SODAK GEN./ SD1093RR	124	<b>44</b>	49	1	48	60	<b>1</b>	46	55	1	
MUSTANG/ M-09330	129	.	<b>57</b>	<b>1</b>	.	<b>65</b>	<b>1</b>	.	61	1	
PRAIRIE BR./ EXP 109	126	.	<b>56</b>	<b>1</b>	.	<b>65</b>	<b>1</b>	.	61	1	
SEEDS 2000/ 2081RR	126	.	<b>57</b>	<b>1</b>	.	62	<b>1</b>	.	60	1	
DAIRYLAND/ DSR-0747/R2Y	123	.	<b>55</b>	<b>1</b>	.	62	<b>1</b>	.	59	1	
PRAIRIE BR./ PB-0999RR	126	.	<b>53</b>	<b>1</b>	.	64	<b>1</b>	.	59	1	
PIONEER/ 90Y80	120	.	<b>53</b>	<b>1</b>	.	63	<b>1</b>	.	58	1	
NUTECH/ 0889RR	124	.	<b>55</b>	<b>1</b>	.	61	<b>1</b>	.	58	1	
NUTECH/ 6122	130	.	50	<b>1</b>	.	<b>65</b>	<b>1</b>	.	58	1	
ASGROW/ RY0809	124	.	<b>54</b>	<b>1</b>	.	59	<b>1</b>	.	57	1	
KRUGER/ EXPK2X09A9	129	.	52	<b>1</b>	.	61	<b>1</b>	.	57	1	
G-2 GENETICS/ 6098	124	.	52	<b>1</b>	.	61	<b>1</b>	.	57	1	
PRAIRIE BR./ PB-0779RR	122	.	<b>54</b>	<b>1</b>	.	59	<b>1</b>	.	57	1	
PRAIRIE BR./ EXP 119	124	.	<b>52</b>	<b>1</b>	.	62	<b>1</b>	.	57	1	
ASGROW/ RY0819	125	.	50	<b>1</b>	.	61	<b>1</b>	.	56	1	
KRUGER/ EXPK2X05A9	124	.	<b>52</b>	<b>1</b>	.	59	<b>1</b>	.	56	1	
PRAIRIE BR./ EXP 129	123	.	51	<b>1</b>	.	60	<b>1</b>	.	56	1	
WENSMAN/ W 2079RR	120	.	<b>53</b>	<b>1</b>	.	59	<b>1</b>	.	56	1	
SODAK GEN./ SD2081RR	123	.	49	<b>1</b>	.	60	<b>1</b>	.	55	1	
ASGROW/ AG0803	125	.	50	<b>1</b>	.	58	<b>1</b>	.	54	1	
KRUGER/ EXPK2X06A9	125	.	50	<b>1</b>	.	55	<b>1</b>	.	53	1	
HEFTY/ EXP070R	120	.	45	<b>1</b>	.	58	<b>1</b>	.	52	1	
MUSTANG/ M-09920	133	.	<b>59</b>	<b>1</b>	.	.	.	.	.	.	
PIONEER/ 90Y50	128	.	<b>52</b>	<b>1</b>	.	.	.	.	.	.	
KRUGER/ K-042RR	119	.	.	.	49	59	<b>1</b>	.	.	.	
KRUGER/ K-072+RR	124	.	.	.	<b>58</b>	<b>67</b>	<b>1</b>	.	.	.	
KRUGER/ K-091RR	133	<b>53</b>	<b>59</b>	<b>1</b>	.	.	.	.	.	.	
KRUGER/ K-058RR	118	<b>48</b>	51	<b>1</b>	.	.	.	.	.	.	
GOLD COUNTRY/ 2509RR	131	<b>50</b>	58	<b>1</b>	.	.	.	.	.	.	
G-2 GENETICS/ 6088	125	.	.	.	.	<b>66</b>	<b>1</b>	.	.	.	
PROSEED/ 80-90	129	<b>47</b>	<b>52</b>	<b>1</b>	.	.	.	.	.	.	
Test avg. :	125	49	53	1	52	61	1	50	57	1	
High avg. :	133	53	59	1	59	69	1	55	61	1	
Low avg. :	118	44	45	1	48	55	1	46	52	1	
[3] Test LSD (.05):		NS**	7	NS	5	4	NS	***	***		
[4] Min.TPG-avg. :		44	52	.	54	65	.	.	.	.	
[5] Max.TPG-avg. :		.	.	1	.	.	1	.	.	.	
[6] Test Coef. Var.:		7	8	0	4	4	0	.	.	.	
No. Entries:		10	33	33	8	30	30	.	.	.	

[1] DTM= days to maturity from seeding dates of May 22 at South Shore and May 21 at Warner.

Note that additional table footnotes are explained in Table F.

\* Values in **bold type** within a column are included in the top performance group.

\*\* Indicates differences between values within a column were non-significant (NS).

\*\*\* There was a significant variety by location interaction for yield. Therefore, evaluate yield by using the yield columns for each location.

**Table 1b. Glyphosate-resistant maturity group-0 soybean variety protein and oil averages-northern South Dakota locations, 2009. Entries are sorted by 2009 zone protein.**

Brand/Variety	DTM [1]	Northern Averages by Location*				Northern Zone Averages	
		South Shore		Warner		Protein %	Oil %
		Protein %	Oil %	Protein %	Oil %		
PRAIRIE BR./ EXP 109	126	40.0	18.2	<b>39.1</b>	<b>21.1</b>	39.6	19.6
PRAIRIE BR./ EXP 119	124	39.1	17.9	<b>39.3</b>	<b>21.1</b>	39.2	19.5
MUSTANG/ M-09330	129	39.3	17.7	<b>38.7</b>	<b>20.9</b>	39.0	19.3
PRAIRIE BR./ EXP 129	123	39.0	17.5	<b>38.8</b>	<b>20.6</b>	38.9	19.0
KRUGER/ EXPK2X06A9	125	39.6	17.6	37.7	<b>20.4</b>	38.7	19.0
WENSMAN/ W 2079RR	120	38.7	18.2	<b>38.4</b>	<b>21.2</b>	38.5	19.7
NUTECH/ 0889RR	124	38.9	<b>19.5</b>	38.1	<b>21.3</b>	38.5	20.4
PRAIRIE BR./ PB-0999RR	126	38.6	18.0	38.3	<b>21.1</b>	38.5	19.6
ASGROW/ RY0809	124	38.7	17.3	38.1	<b>21.0</b>	38.4	19.1
SODAK GEN./ SD1093RR	124	38.4	18.6	38.3	<b>21.2</b>	38.4	19.9
DAIRYLAND/ DSR-0747/R2Y	123	38.7	18.2	38.0	<b>20.7</b>	38.3	19.4
HEFTY/ EXP070R	120	38.5	18.5	38.0	<b>21.2</b>	38.3	19.8
KRUGER/ EXPK2X05A9	124	38.4	18.6	38.1	<b>21.4</b>	38.3	20.0
NUTECH/ 6122	130	38.4	17.7	37.9	<b>20.6</b>	38.2	19.1
PRAIRIE BR./ PB-0779RR	122	37.9	18.6	38.3	<b>21.4</b>	38.1	20.0
NUTECH/ NT-0990	127	38.0	18.4	37.9	<b>21.3</b>	38.0	19.8
PRAIRIE BR./ PB-0954RR	124	38.0	<b>19.3</b>	38.0	<b>21.1</b>	38.0	20.2
KRUGER/ EXPK2X09A9	129	38.0	19.1	37.7	<b>20.9</b>	37.9	20.0
NUTECH/ NT-0886	126	38.2	17.7	37.2	<b>20.2</b>	37.7	19.0
SODAK GEN./ SD2081RR	123	37.6	17.5	37.0	<b>20.7</b>	37.3	19.1
ASGROW/ RY0819	125	36.9	18.2	37.5	<b>21.0</b>	37.2	19.6
G-2 GENETICS/ 6098	124	36.8	18.5	37.6	<b>21.4</b>	37.2	20.0
ASGROW/ AG0803	125	36.4	<b>19.4</b>	37.7	<b>21.4</b>	37.0	20.4
PIONEER/ 90Y80	120	35.5	<b>19.7</b>	37.2	<b>21.8</b>	36.4	20.8
HEFTY/ EXP089R	124	35.9	19.0	36.7	<b>20.8</b>	36.3	19.9
ASGROW/ AG0808	124	35.7	18.8	36.9	<b>21.1</b>	36.3	20.0
SEEDS 2000/ 2081RR	126	35.2	19.0	37.3	<b>21.4</b>	36.3	20.2
MUSTANG/ M-09920	133	37.4	19.1	.	.	.	.
PIONEER/ 90Y50	128	37.5	18.3	.	.	.	.
KRUGER/ K-042RR	119	.	.	37.5	<b>21.4</b>	.	.
KRUGER/ K-072+RR	124	.	.	38.2	<b>21.2</b>	.	.
KRUGER/ K-091RR	133	38.6	18.4	.	.	.	.
KRUGER/ K-058RR	118	<b>41.2</b>	17.3	.	.	.	.
GOLD COUNTRY/ 2509RR	131	38.8	<b>19.3</b>	.	.	.	.
G-2 GENETICS/ 6088	125	.	.	<b>38.5</b>	<b>21.4</b>	.	.
PROSEED/ 80-90	129	38.8	19.1	.	.	.	.
Test avg. :	125	38.1	18.4	37.9	21.1	37.9	19.7
High avg. :	133	41.2	19.7	39.3	21.8	***	***
Low avg. :		35.2	17.3	36.7	20.2		
[3] LSD(.05) :		1.0	0.6	1.0	NS**		
[4] Min.TPG-avg. :		40.3	19.2	38.4	20.2		
[6] Coef. Var. :		2	2	2	3		
No. Entries :		33	33	30	30		

[1] DTM= days to maturity from seeding dates of May 22 at South Shore and May 21 at Warner.

Note that additional table footnotes are explained in Table F.

\* Values in bold type within a column are included in the top-performance group.

\*\* Indicates differences between values within a column were non-significant (NS).

\*\*\* There were significant variety by location interactions for protein and oil. Therefore, evaluate yield by using the protein and oil columns for each location.

**Table 2a. Glyphosate-resistant maturity group-I soybean variety yield and lodging averages- northern South Dakota locations, 2008-2009. Entries are sorted by 2-Yr then by 2009 zone yield.**

Brand/Variety	DTM [1]	Northern Averages by Location						Northern Zone Averages		
		South Shore			Warner			Yield-bu/a		2009 Lodg.
		Yield-bu/a		2009 Lodg.	Yield-bu/a		2009 Lodg.	Yield-bu/a		2009 Lodg.
		2-Yr	2009	(1-5) [2]	2-Yr	2009	(1-5) [2]	2-Yr	2009	(1-5) [2]
WENSMAN/ W 2166RR	128	55	61	1	53	67	1	54	64	1
HEFTY/ 168R	128	53	57	1	54	68	1	54	63	1
STINE/ 1108-4	126	53	61	1	54	65	1	54	63	1
NUTECH/ 6156	127	52	55	1	56	68	1	54	62	1
MUSTANG/ M-168RR	128	53	59	1	53	67	1	53	63	1
PRAIRIE BR./ PB-1597RR	129	53	59	1	53	67	1	53	63	1
HEFTY/ 117R	127	51	56	1	55	67	1	53	62	1
STINE/ 1008-4	128	50	52	1	56	70	1	53	61	1
PRAIRIE BR./ PB-1337RR	128	52	58	1	51	65	1	52	62	1
NUTECH/ NT-6205+RR	133	52	56	1	52	66	1	52	61	1
ASGROW/ AG1403	130	50	53	1	51	66	1	51	60	1
SEEDS 2000/ 2120RR	128	49	52	1	52	65	1	51	59	1
HEFTY/ EXP159RN	131	49	55	1	50	66	1	50	61	1
ASGROW/ AG1102	127	49	56	1	51	63	1	50	60	1
ASGROW/ AG1702	127	51	55	1	49	63	1	50	59	1
PRAIRIE BR./ PB-1918RR	132	50	54	1	49	61	1	50	58	1
PROSEED/ 81-30	129	49	50	1	51	59	1	50	55	1
HEFTY/ EXP139R	126	50	53	1	48	61	1	49	57	1
KRUGER/ K-129RR	126	49	51	1	48	62	1	49	57	1
SODAK GEN./ SD1161RR/SCN	131	47	52	1	48	61	1	48	57	1
KRUGER/ K-189RR/SCN	133	45	48	1	46	59	1	46	54	1
ASGROW/ RY1719	133	.	61	1	.	68	1	.	65	1
PRAIRIE BR./ EXP 141	130	.	60	1	.	69	1	.	65	1
KRUGER/ EXPK2X11B9	126	.	60	1	.	65	2	.	63	2
KRUGER/ EXPK2X14A9	129	.	59	1	.	67	1	.	63	1
PRAIRIE BR./ EXP 179	133	.	58	1	.	67	1	.	63	1
MUSTANG/ M-159NRR	133	.	60	1	.	63	1	.	62	1
NUTECH/ 6145	132	.	59	1	.	64	1	.	62	1
KRUGER/ EXPK2X10A9	126	.	59	1	.	64	1	.	62	1
DAIRYLAND/ DST11-001R2Y	129	.	57	1	.	66	1	.	62	1
PRAIRIE BR./ EXP 158	132	.	59	1	.	65	2	.	62	1
ASGROW/ AG1506	132	.	58	1	.	64	1	.	61	1
ASGROW/ AG1703	134	.	57	1	.	64	1	.	61	1
ASGROW/ RY1709	132	.	56	1	.	66	1	.	61	1
NUTECH/ 6166	131	.	55	1	.	66	1	.	61	1
DAIRYLAND/ DSR-1100/RR	126	.	57	1	.	65	1	.	61	1
PRAIRIE BR./ EXP 199	129	.	58	1	.	64	1	.	61	1
CHANNEL BRAND/ 1651R	133	.	57	1	.	64	1	.	61	1
PROSEED/ 81-50	132	.	56	1	.	65	1	.	61	1
HEFTY/ 108	127	.	56	1	.	64	1	.	60	1
KRUGER/ EXPK2X15B9	130	.	58	1	.	61	1	.	60	1
KRUGER/ K2-1901	131	.	57	1	.	62	1	.	60	1
KRUGER/ EXPK2X19B9	133	.	57	1	.	62	1	.	60	1
WENSMAN/ W 2112RR	123	.	57	1	.	62	1	.	60	1
SODAK GEN./ SD2121RR	126	.	56	1	.	62	1	.	59	1
DAIRYLAND/ DSR-1200/R2Y	127	.	54	1	.	62	1	.	58	1
G-2 GENETICS/ 6159	128	.	54	1	.	62	1	.	58	1
NUTECH/ 6193	132	.	53	1	.	60	1	.	57	1
G-2 GENETICS/ 7129	126	.	49	1	.	55	1	.	52	1
MUSTANG/ M-13320	137	.	60	1	.	.	.	.	.	.

**Table 2a. Glyphosate-resistant maturity group-I soybean variety yield and lodging averages- northern South Dakota locations, 2008-2009 (continued).**

Brand/Variety	DTM [1]	Northern Averages by Location						Northern Zone Averages		
		South Shore			Warner					
		Yield-bu/a		2009 Lodg.	Yield-bu/a		2009 Lodg.	Yield-bu/a		2009 Lodg.
		2-Yr	2009	(1-5) [2]	2-Yr	2009	(1-5) [2]	2-Yr	2009	(1-5) [2]
PIONEER/ 91Y90	130	.	.	.	<b>51</b>	<b>66</b>	2	.	.	.
KRUGER/ K-167RR/SCN	135	51	55	<b>1</b>	.	.	.	.	.	.
GOLD COUNTRY/ 2713RR	133	50	53	<b>1</b>	.	.	.	.	.	.
GOLD COUNTRY/ 2815RR	132	<b>54</b>	<b>59</b>	<b>1</b>	.	.	.	.	.	.
GOLD COUNTRY/ 1915NRR	135	<b>52</b>	<b>61</b>	<b>1</b>	.	.	.	.	.	.
DAIRYLAND/ DSR1423RRSTS	130	.	.	.	.	57	2	.	.	.
DAIRYLAND/ DST14-003R2Y	135	.	.	.	.	<b>67</b>	2	.	.	.
REA/ EXP-1054	126	.	.	.	.	<b>67</b>	<b>1</b>	.	.	.
REA/ EXP-1056	127	.	.	.	.	65	<b>1</b>	.	.	.
REA/ EXP-1059	126	.	.	.	.	64	<b>1</b>	.	.	.
PROSEED/ 61-00	121	.	.	.	<b>53</b>	65	<b>1</b>	.	.	.
Test avg.:	129	51	56	1	51	64	1	51	60	1
High avg.:	137	55	61	1	56	70	2	54	65	2
Low avg.:	121	45	48	1	46	55	1	46	52	1
[3] Test LSD (.05):		NS**	4	NS	5	4	1	***	***	
[4] Min.TPG-avg.:		52	57	.	51	66	.			
[5] Max.TPG-avg.:		.	.	1	.	.	1			
[6] Test Coef. Var.:		4	4	0	6	4	10			
No. Entries:		25	54	54	23	56	56			

[1] DTM= days to maturity from seeding dates of May 22 at South Shore and May 21 at Warner.

Note that additional table footnotes are explained in Table F.

\* Values in **bold type** within a column are included in the top performance group.

\*\* Indicates differences between values within a column were non-significant (NS).

\*\*\* There was a significant variety by location interaction for yield. Therefore, evaluate yield by using the yield columns for each location.

**Table 2b. Glyphosate-resistant maturity group-I soybean variety protein and oil averages-northern South Dakota locations, 2009. Entries are sorted by 2009 zone protein.**

Brand/Variety	DTM [1]	Northern Averages by Location*				Northern Zone Averages	
		South Shore		Warner		Protein %	Oil %
		Protein %	Oil %	Protein %	Oil %		
KRUGER/ EXPK2X15B9	130	<b>38.3</b>	17.9	<b>38.9</b>	19.6	38.6	18.8
KRUGER/ EXPK2X10A9	126	37.3	17.0	<b>38.7</b>	19.7	38.0	18.4
KRUGER/ K-189RR/SCN	133	<b>37.8</b>	<b>18.5</b>	<b>37.0</b>	<b>21.2</b>	37.4	19.8
HEFTY/ 108	127	37.3	16.3	<b>37.3</b>	20.2	37.3	18.3
KRUGER/ EXPK2X19B9	133	36.9	17.9	<b>37.6</b>	<b>21.0</b>	37.3	19.5
HEFTY/ EXP139R	126	36.5	17.1	<b>37.8</b>	20.8	37.2	19.0
STINE/ 1008-4	128	<b>37.5</b>	17.1	36.5	20.2	37.0	18.7
WENSMAN/ W 2112RR	123	36.5	16.5	<b>37.4</b>	19.7	36.9	18.1
KRUGER/ K-129RR	126	36.8	17.1	36.8	20.5	36.8	18.8
SODAK GEN./ SD1161RR/SCN	131	36.1	16.9	<b>37.5</b>	19.1	36.8	18.0
DAIRYLAND/ DSR-1100/RR	126	36.3	17.7	<b>37.2</b>	20.1	36.8	18.9
SEEDS 2000/ 2120RR	128	36.6	16.3	36.8	19.6	36.7	17.9
PRAIRIE BR./ EXP 179	133	36.2	<b>18.5</b>	<b>37.1</b>	<b>21.0</b>	36.7	19.7
ASGROW/ RY1719	133	36.2	16.6	<b>37.0</b>	20.6	36.6	18.6
NUTECH/ 6145	132	36.5	17.3	36.7	20.6	36.6	18.9
NUTECH/ 6166	131	35.9	17.5	<b>37.3</b>	20.7	36.6	19.1
ASGROW/ RY1709	132	36.5	18.3	36.5	<b>21.4</b>	36.5	19.9
KRUGER/ EXPK2X14A9	129	36.0	17.4	<b>37.0</b>	20.8	36.5	19.1
DAIRYLAND/ DST11-001R2Y	129	35.8	17.2	<b>37.2</b>	20.1	36.5	18.7
PRAIRIE BR./ EXP 141	130	35.7	17.5	<b>37.2</b>	20.7	36.5	19.1
STINE/ 1108-4	126	36.4	17.0	36.5	19.7	36.5	18.4
ASGROW/ AG1702	127	35.8	<b>18.3</b>	36.9	20.2	36.4	19.2
PROSEED/ 81-30	129	36.4	17.1	36.4	20.5	36.4	18.8
DAIRYLAND/ DSR-1200/R2Y	127	35.8	17.5	36.9	19.6	36.4	18.6
NUTECH/ 6193	132	35.6	16.8	<b>37.1</b>	<b>21.1</b>	36.4	18.9
HEFTY/ 117R	127	36.0	17.3	36.7	19.6	36.4	18.5
SODAK GEN./ SD2121RR	126	35.9	17.4	36.3	19.4	36.1	18.4
PRAIRIE BR./ EXP 199	129	35.9	16.8	36.1	19.3	36.0	18.1
KRUGER/ EXPK2X11B9	126	34.7	17.1	36.9	20.1	35.8	18.6
ASGROW/ AG1403	130	34.8	17.1	36.6	20.7	35.7	18.9
PRAIRIE BR./ PB-1918RR	132	36.6	17.9	34.8	19.8	35.7	18.8
PRAIRIE BR./ PB-1337RR	128	35.3	16.7	36.1	19.7	35.7	18.2
NUTECH/ NT-6205+RR	133	34.4	17.4	36.5	<b>21.7</b>	35.5	19.5
ASGROW/ AG1506	132	34.8	<b>18.3</b>	36.1	<b>22.1</b>	35.4	20.2
CHANNEL BRAND/ 1651R	133	34.9	18.0	35.3	<b>21.8</b>	35.1	19.9
G-2 GENETICS/ 6159	128	35.5	18.0	34.7	<b>21.3</b>	35.1	19.7
PROSEED/ 81-50	132	34.2	<b>18.2</b>	36.0	<b>22.1</b>	35.1	20.2
KRUGER/ K2-1901	131	35.1	17.5	34.9	20.6	35.0	19.1
PRAIRIE BR./ PB-1597RR	129	34.5	17.8	35.5	<b>21.6</b>	35.0	19.7
PRAIRIE BR./ EXP 158	132	34.7	16.6	35.2	<b>21.1</b>	35.0	18.8
NUTECH/ 6156	127	35.0	17.8	34.7	<b>21.3</b>	34.8	19.6
HEFTY/ EXP159RN	131	34.5	<b>18.5</b>	34.4	<b>21.5</b>	34.5	20.0
HEFTY/ 168R	128	34.7	17.8	33.8	20.8	34.3	19.3
ASGROW/ AG1703	134	33.0	<b>18.5</b>	35.5	<b>21.8</b>	34.3	20.2
MUSTANG/ M-168RR	128	34.9	18.0	33.6	20.3	34.2	19.2
MUSTANG/ M-159NRR	133	33.7	<b>18.2</b>	34.8	<b>22.0</b>	34.2	20.1
G-2 GENETICS/ 7129	126	33.8	<b>18.8</b>	34.5	<b>21.0</b>	34.1	19.9
WENSMAN/ W 2166RR	128	34.1	<b>18.3</b>	33.6	20.7	33.9	19.5
ASGROW/ AG1102	127	32.9	16.9	33.8	19.6	33.4	18.3
MUSTANG/ M-13320	137	35.9	17.8	.	.	.	.

**Table 2b. Glyphosate-resistant maturity group-I soybean variety protein and oil averages-northern South Dakota locations, 2009 (continued).**

Brand/Variety	DTM [1]	Northern Averages by Location*				Northern Zone Averages	
		South Shore		Warner		Protein %	Oil %
		Protein %	Oil %	Protein %	Oil %		
PIONEER/ 91Y90	130	.	.	<b>37.4</b>	20.5	.	.
KRUGER/ K-167RR/SCN	135	35.0	<b>18.5</b>	.	.	.	.
GOLD COUNTRY/ 2713RR	133	36.1	17.6	.	.	.	.
GOLD COUNTRY/ 2815RR	132	34.4	<b>18.4</b>	.	.	.	.
GOLD COUNTRY/ 1915NRR	135	34.0	<b>18.2</b>	.	.	.	.
DAIRYLAND/ DSR1423RRSTS	130	.	.	36.6	20.5	.	.
DAIRYLAND/ DST14-003R2Y	135	.	.	<b>37.8</b>	<b>22.1</b>	.	.
REA/ EXP-1054	126	.	.	<b>37.0</b>	20.9	.	.
REA/ EXP-1056	127	.	.	<b>37.5</b>	<b>21.4</b>	.	.
REA/ EXP-1059	126	.	.	<b>38.3</b>	20.4	.	.
PROSEED/ 61-00	121	.	.	36.8	20.1	.	.
Test avg. :	129	35.6	17.6	36.4	20.6	35.9	19.1
High avg. :	137	38.3	18.8	38.9	22.1	**	**
Low avg. :	121	32.9	16.3	33.6	19.1		
[3] LSD(.05) :		0.9	0.7	2.0	1.2		
[4] Min.TPG-avg. :		37.5	18.2	37.0	21.0		
[6] Coef. Var. :		2.0	2.0	3.0	4.0		
No. Entries :		54.0	54.0	56.0	56.0		

[1] DTM= days to maturity from seeding dates of May 22 at South Shore and May 21 at Warner.  
Note that additional table footnotes are explained in Table F.

\* Values in bold type within a column are included in the top-performance group.

\*\* There were significant variety by location interactions for protein and oil. Therefore, evaluate yield by using the protein and oil columns for each location.

**Table 3a. Glyphosate-resistant maturity group-0 soybean variety yield and lodging averages- central South Dakota locations, 2008-2009. Entries are sorted by 2-Yr then by 2009 zone yield.**

Brand/Variety	DTM [1]	Central Averages by Location						Central Zone Averages		
		Brookings			Bancroft					
		Yield-bu/a		2009 Lodg.	Yield-bu/a		2009 Lodg.	Yield-bu/a		2009 Lodg.
		2-Yr	2009	(1-5) [2]	2-Yr	2009	(1-5) [2]	2-Yr	2009	(1-5) [2]
NUTECH/ 0990RR	131	<b>51*</b>	55	<b>1</b>	<b>44</b>	35	<b>1</b>	48	45	1
SODAK GEN./ SD1093RR	126	<b>47</b>	57	<b>1</b>	<b>45</b>	42	<b>1</b>	46	50	1
G-2 GENETICS/ 6088	126	.	<b>63</b>	<b>1</b>	.	<b>56</b>	<b>1</b>	.	60	1
NUTECH/ 0886RR	127	.	<b>63</b>	<b>1</b>	.	<b>54</b>	<b>1</b>	.	59	1
MUSTANG/ M-09920	126	.	<b>59</b>	<b>1</b>	.	<b>56</b>	<b>1</b>	.	58	1
KRUGER/ EXPK2X09A9	130	.	58	<b>1</b>	.	<b>58</b>	<b>1</b>	.	58	1
PRAIRIE BR./ EXP 119	126	.	<b>61</b>	<b>1</b>	.	49	<b>1</b>	.	55	1
MUSTANG/ M-09330	127	.	<b>61</b>	<b>1</b>	.	46	<b>1</b>	.	54	1
PRAIRIE BR./ EXP 109	126	.	<b>61</b>	<b>1</b>	.	42	<b>1</b>	.	52	1
NUTECH/ 6122	127	.	58	<b>1</b>	.	33	<b>1</b>	.	46	1
KRUGER/ EXPK2X06A9	119	.	56	<b>1</b>	.	32	<b>1</b>	.	44	1
SODAK GEN./ SD2081RR	125	.	55	<b>1</b>	.	25	<b>1</b>	.	40	1
KRUGER/ EXPK2X05A9	122	.	56	<b>1</b>	.	19	<b>1</b>	.	38	1
G-2 GENETICS/ 6098	125	.	57	<b>1</b>	.	16	<b>1</b>	.	37	1
KRUGER/ K-042RR	126	.	.	.	<b>48</b>	47	<b>1</b>	.	.	.
KRUGER/ K-072+RR	132	.	.	.	<b>54</b>	49	<b>1</b>	.	.	.
KRUGER/ K-091RR	123	<b>53</b>	<b>59</b>	<b>1</b>	.	.	.	.	.	.
KRUGER/ K-058RR	115	<b>50</b>	55	<b>1</b>	.	.	.	.	.	.
Test avg.:	126	50	58	1	48	41	1	47	50	1
High avg.:	132	53	63	1	54	58	1	48	60	1
Low avg.:	115	47	55	1	44	16	1	46	37	1
[3] Test LSD (.05):		NS**	4	0	NS**	8	0	***	***	
[4] Min.TPG-avg.:		47	59	.	44	50	.			
[5] Max.TPG-avg.:		.	.	1	.	.	1			
[6] Test Coef. Var.:		5	4	0	7	11	0			
No. Entries:	32	4	16	16	4	16	16	4	28	28

[1] DTM= days to maturity from seeding dates of May 19 at Brookings and May 20 at Bancroft.

\* Values in **bold type** within a column are included in the top-performance group.

Note that additional table footnotes are explained in Table F.

\*\* Indicates differences between values within a column were non-significant (NS).

\*\*\* There was a significant variety by location interaction for yield. Therefore, evaluate yield by using the yield columns for each location.

**Table 3b. Glyphosate-resistant maturity group-0 soybean variety protein and oil averages-central South Dakota locations, 2009. Entries are sorted by 2009 zone protein.**

Brand/Variety	DTM [1]	Central Averages by Location*				Northern Zone Averages	
		Brookings		Bancroft		Protein %	Oil %
		Protein %	Oil %	Protein %	Oil %		
MUSTANG/ M-09330	127	<b>40.0</b>	17.1	<b>38.0</b>	18.9	39.0	18.0
PRAIRIE BR./ EXP 109	126	<b>39.6</b>	17.7	<b>37.4</b>	18.5	38.5	18.1
PRAIRIE BR./ EXP 119	126	<b>39.8</b>	17.4	<b>37.0</b>	18.7	38.4	18.1
NUTECH/ 0886RR	127	<b>38.9</b>	17.6	36.4	20.0	37.7	18.8
G-2 GENETICS/ 6088	126	<b>38.7</b>	17.8	36.5	19.6	37.6	18.7
KRUGER/ EXPK2X06A9	119	<b>38.5</b>	16.4	36.4	18.4	37.5	17.4
SODAK GEN./ SD1093RR	126	<b>38.3</b>	18.0	36.3	19.9	37.3	19.0
KRUGER/ EXPK2X05A9	122	<b>38.7</b>	17.6	35.6	19.3	37.2	18.5
KRUGER/ EXPK2X09A9	130	<b>38.4</b>	17.6	35.8	19.2	37.1	18.4
NUTECH/ 0990RR	131	<b>38.2</b>	17.2	35.6	18.9	36.9	18.1
MUSTANG/ M-09920	126	<b>37.8</b>	<b>18.7</b>	35.4	19.1	36.6	18.9
NUTECH/ 6122	127	<b>38.7</b>	16.4	34.2	18.5	36.5	17.4
G-2 GENETICS/ 6098	125	<b>37.3</b>	17.3	35.2	19.3	36.3	18.3
SODAK GEN./ SD2081RR	125	<b>37.7</b>	16.8	33.0	19.9	35.3	18.4
KRUGER/ K-042RR	126	.	.	33.9	<b>20.8</b>	.	.
KRUGER/ K-072+RR	132	.	.	35.9	19.7	.	.
KRUGER/ K-091RR	123	<b>38.8</b>	17.3	.	.	.	.
KRUGER/ K-058RR	115	<b>39.1</b>	17.0	.	.	.	.
Test avg. :	126	38.7	17.4	35.8	19.3	37.3	18.3
High avg. :	132	40.0	18.7	38.0	20.8	***	***
Low avg. :	115	37.3	16.4	33.0	18.4		
[3] LSD(.05) :		NS**	0.7	1.4	0.7		
[4] Min.TPG-avg. :		37.3	18.1	36.7	20.2		
[6] Coef. Var. :		3	2	2	2		
No. Entries :		16	16	16	16		

[1] DTM= days to maturity from seeding dates of May 19 at Brookings and May 20 at Bancroft.

Note that additional table footnotes are explained in Table F.

\* Values in bold type within a column are included in the top-performance group.

\*\* Indicates differences between values within a column were non-significant (NS).

\*\*\* There were significant variety by location interactions for protein and oil. Therefore, evaluate yield by using the protein and oil columns for each location.

**Table 4a. Glyphosate-resistant maturity group-I soybean variety yield and lodging averages- central South Dakota locations, 2008-2009. Entries are sorted by 2-Yr then by 2009 zone yield.**

Brand/Variety	DTM [1]	Central Averages by Location						Central Zone Averages		
		Brookings			Bancroft					
		Yield-bu/a		2009 Lodg.	Yield-bu/a		2009 Lodg.	Yield-bu/a		2009 Lodg.
		2-Yr	2009	(1-5) [2]	2-Yr	2009	(1-5) [2]	2-Yr	2009	(1-5) [2]
PRAIRIE BR./ PB-2278RR	141	53*	63	1	58	60	1	56	62	1
NUTECH/ 6156	131	54	61	1	53	52	1	54	57	1
ASGROW/ AG1403	128	53	59	1	53	50	1	53	55	1
HEFTY/ 168R	134	53	60	1	52	49	1	53	55	1
WENSMAN/ W 2166RR	134	54	61	1	51	47	1	53	54	1
PIONEER/ 91Y90	137	51	60	1	53	54	1	52	57	1
HEFTY/ 179R	140	51	59	1	53	55	1	52	57	1
NUTECH/ 6193	139	51	60	1	52	48	1	52	54	1
PRAIRIE BR./ PB-1597RR	133	52	61	1	51	47	1	52	54	1
MUSTANG/ M-168RR	133	52	57	1	52	49	1	52	53	1
PRAIRIE BR./ PB-1918RR	140	51	59	1	50	49	1	51	54	1
PRAIRIE BR./ PB-2058NRR	141	55	63	1	47	43	1	51	53	1
MUSTANG/ M-177NRR	138	53	63	1	47	41	1	50	52	1
NUTECH/ 6205+RR	139	55	63	1	45	41	1	50	52	1
MUSTANG/ M-159NRR	136	55	64	1	44	36	1	50	50	1
MUSTANG/ M-190NRR	140	51	60	1	47	49	1	49	55	1
ASGROW/ AG1702	130	51	59	1	46	45	1	49	52	1
HEFTY/ 199R	140	51	59	1	47	45	1	49	52	1
HEFTY/ 159R	136	54	62	1	43	35	1	49	49	1
NUTECH/ 1808RN	142	50	58	1	46	49	1	48	54	1
KRUGER/ K-189RR/SCN	140	52	61	1	43	36	1	48	49	1
PROSEED/ 81-50	138	55	64	1	39	25	1	47	45	1
SODAK GEN./ SD1161RR/SCN	133	49	55	1	38	28	1	44	42	1
PROSEED/ 81-30	132	47	53	1	40	29	1	44	41	1
REA/ EXP-1056	130	.	65	1	.	.	.	.	65	.
RENK/ RS160NR2	128	.	65	1	.	.	.	.	65	.
STINE/ 1423-4	131	.	64	1	.	.	.	.	64	.
GOLD COUNTRY/ 1915NRR	131	54	63	1	.	.	.	.	63	.
REA/ EXP-1054	129	.	63	1	.	.	.	.	63	.
REA/ EXP-1059	128	.	63	1	.	.	.	.	63	.
KRUGER/ K-167RR/SCN	124	54	62	1	.	.	.	.	62	.
RENK/ RS179NRR	135	53	62	1	.	.	.	.	62	.
RENK/ RS140NR2	134	.	62	1	.	.	.	.	62	.
RENK/ RS180R2	130	.	61	1	.	.	.	.	61	.
GOLD COUNTRY/ 2815RR	126	54	60	1	.	.	.	.	60	.
MUSTANG/ M-19990	131	.	63	1	.	54	1	.	59	1
PRAIRIE BR./ EXP 141	137	.	63	1	.	55	1	.	59	1
KRUGER/ EXPK2X14A9	134	.	63	1	.	52	1	.	58	1
KRUGER/ K2-1901	134	.	61	1	.	54	1	.	58	1
GOLD COUNTRY/ EXP 1940	132	.	63	1	.	52	1	.	58	1
DAIRYLAND/ DST14-003R2Y	139	.	61	1	.	54	1	.	58	1
PRAIRIE BR./ EXP 158	134	.	61	1	.	55	1	.	58	1
PRAIRIE BR./ EXP 199	131	.	63	1	.	53	1	.	58	1
CHANNEL BRAND/ 1651R	131	.	63	1	.	52	1	.	58	1
KRUGER/ EXPK2X11B9	132	.	65	1	.	49	1	.	57	1
KALTENBERG/ KB1809RR	133	50	57	1	.	.	.	.	57	.
STINE/ 1568-4	127	51	57	1	.	.	.	.	57	.
PRAIRIE BR./ EXP 179	133	.	68	1	.	46	1	.	57	1
WENSMAN/ W 3192NR2	137	.	63	1	.	51	1	.	57	1
ASGROW/ RY1719	134	.	61	1	.	50	1	.	56	1

**Table 4a. Glyphosate-resistant maturity group-I soybean variety yield and lodging averages- central South Dakota locations, 2008-2009 (continued).**

Brand/Variety	DTM [1]	Central Averages by Location						Central Zone Averages		
		Brookings			Bancroft					
		Yield-bu/a		2009 Lodg.	Yield-bu/a		2009 Lodg.	Yield-bu/a		2009 Lodg.
		2-Yr	2009	(1-5) [2]	2-Yr	2009	(1-5) [2]	2-Yr	2009	(1-5) [2]
MUSTANG/ M-13320	133	.	59	<b>1</b>	.	<b>52</b>	<b>1</b>	.	56	1
KRUGER/ EXPK2X15B9	130	.	59	<b>1</b>	.	<b>52</b>	<b>1</b>	.	56	1
WENSMAN/ W 3186R2	131	.	61	<b>1</b>	.	50	<b>1</b>	.	56	1
ASGROW/ RY1709	136	.	61	<b>1</b>	.	49	<b>1</b>	.	55	1
NUTECH/ 7199	141	.	59	<b>1</b>	.	51	<b>1</b>	.	55	1
KRUGER/ EXPK2X10A9	128	.	62	<b>1</b>	.	48	<b>1</b>	.	55	1
KRUGER/ EXPK2X19B9	136	.	59	<b>1</b>	.	50	<b>1</b>	.	55	1
PRAIRIE BR./ EXP 201	140	.	<b>64</b>	<b>1</b>	.	45	<b>1</b>	.	55	1
RENK/ RS110R2	127	.	55	<b>1</b>	.	.	.	.	55	.
GOLD COUNTRY/ 2713RR	134	.	54	<b>1</b>	.	.	.	.	54	.
DAIRYLAND/ DSR1423RRSTS	133	.	57	<b>1</b>	.	51	<b>1</b>	.	54	1
DAIRYLAND/ DSR-1807/R2Y	136	.	59	<b>1</b>	.	48	<b>1</b>	.	54	1
PRAIRIE BR./ EXP 215	141	.	62	<b>1</b>	.	45	<b>1</b>	.	54	1
SODAK GEN./ SD2121RR	129	.	60	<b>1</b>	.	48	<b>1</b>	.	54	1
WENSMAN/ W 2112RR	123	.	60	<b>1</b>	.	43	<b>1</b>	.	52	1
ASGROW/ AG1703	138	.	62	<b>1</b>	.	39	<b>1</b>	.	51	1
NUTECH/ 6191	139	.	63	<b>1</b>	.	39	<b>1</b>	.	51	1
ASGROW/ AG1506	135	.	57	<b>1</b>	.	43	<b>1</b>	.	50	1
NUTECH/ 6145	137	.	61	<b>1</b>	.	39	<b>1</b>	.	50	1
G-2 GENETICS/ 7186	137	.	58	<b>1</b>	.	42	<b>1</b>	.	50	1
G-2 GENETICS/ 6159	131	.	58	<b>1</b>	.	40	<b>1</b>	.	49	1
G-2 GENETICS/ 7129	129	.	55	<b>1</b>	.	36	<b>1</b>	.	46	1
KRUGER/ K-129RR	135	.	.	.	<b>49</b>	45	<b>1</b>	.	45	.
KRUGER/ K-163RR	144	.	.	.	45	38	<b>1</b>	.	38	.
Test avg. :	135	52	61	1	48	46	1	50	54	1
High avg. :	144	55	68	1	58	60	1	56	65	1
Low avg. :	123	47	53	1	38	25	1	44	38	1
[3] Test LSD (.05):		4	4	0	12	8	0	**	**	
[4] Min.TPG-avg. :		51	64	.	46	52	.			
[5] Max.TPG-avg. :		.	.	1	.	.	1			
[6] Test Coef. Var.:		5	4	0	9	11	0			
No. Entries:		30	72	72	26	59	59			

[1] DTM= days to maturity from seeding dates of May 19 at Brookings and May 20 at Bancroft.

Note that additional table footnotes are explained in Table F.

\* Values in **bold type** within a column are included in the top-performance group.

\*\* There was a significant variety by location interaction for yield. Therefore, evaluate yield by using the yield columns for each location.

**Table 4b. Glyphosate-resistant maturity group-I soybean variety protein and oil averages- central South Dakota locations, 2009. Entries are sorted by 2009 zone protein.**

Brand/Variety	DTM [1]	Central Averages by Location*				Central Zone Averages	
		Brookings		Bancroft		Protein (%)	Oil (%)
		Protein (%)	Oil (%)	Protein (%)	Oil (%)		
PRAIRIE BR./ EXP 215	141	<b>38.8</b>	17.0	<b>38.5</b>	19.0	38.6	18.0
KRUGER/ EXPK2X10A9	128	<b>38.6</b>	17.1	<b>37.5</b>	18.7	38.1	17.9
HEFTY/ 179R	140	<b>38.2</b>	17.2	36.9	18.8	37.5	18.0
KRUGER/ EXPK2X15B9	130	<b>37.8</b>	17.4	<b>37.2</b>	18.3	37.5	17.9
KRUGER/ EXPK2X19B9	136	37.3	17.9	<b>37.1</b>	19.9	37.2	18.9
DAIRYLAND/ DSR-1807/R2Y	136	37.2	16.8	36.3	19.5	36.8	18.2
PRAIRIE BR./ EXP 201	140	36.7	17.5	36.9	18.8	36.8	18.2
WENSMAN/ W 3192NR2	137	36.9	17.8	36.5	19.3	36.7	18.6
NUTECH/ 7199	141	37.0	18.0	36.4	19.7	36.7	18.9
MUSTANG/ M-19990	131	37.1	16.7	36.1	18.9	36.6	17.8
MUSTANG/ M-190NRR	140	<b>37.6</b>	18.3	35.5	19.9	36.6	19.1
WENSMAN/ W 2112RR	123	<b>38.2</b>	16.4	34.9	19.1	36.5	17.8
SODAK GEN./ SD2121RR	129	36.4	17.4	36.6	19.2	36.5	18.3
KRUGER/ K-189RR/SCN	140	36.8	17.8	36.0	19.7	36.4	18.8
PROSEED/ 81-30	132	37.5	17.5	35.3	19.6	36.4	18.5
WENSMAN/ W 3186R2	131	36.7	16.9	36.0	18.1	36.3	17.5
PRAIRIE BR./ PB-1918RR	140	36.4	17.1	36.0	19.7	36.2	18.4
ASGROW/ AG1702	130	37.3	17.3	35.1	19.4	36.2	18.4
HEFTY/ 199R	140	35.8	17.1	36.5	19.9	36.2	18.5
PIONEER/ 91Y90	137	36.5	17.3	35.6	19.2	36.1	18.3
PRAIRIE BR./ EXP 199	131	36.9	16.7	35.0	18.5	36.0	17.6
GOLD COUNTRY/ EXP 1940	132	37.1	17.0	34.7	18.7	35.9	17.9
ASGROW/ RY1719	134	36.2	17.1	35.6	19.8	35.9	18.4
SODAK GEN./ SD1161RR/SCN	133	36.2	17.6	35.4	18.6	35.8	18.1
PRAIRIE BR./ PB-2058NRR	141	36.2	18.2	35.3	<b>20.2</b>	35.7	19.2
NUTECH/ 1808RN	142	36.0	17.9	35.4	19.5	35.7	18.7
NUTECH/ 6193	139	36.1	17.2	35.2	19.6	35.6	18.4
ASGROW/ RY1709	136	36.0	17.9	34.9	19.8	35.5	18.8
G-2 GENETICS/ 7129	129	35.0	<b>18.9</b>	35.6	<b>20.6</b>	35.3	19.8
PRAIRIE BR./ EXP 179	133	36.2	18.0	34.0	19.4	35.1	18.7
PRAIRIE BR./ EXP 141	137	35.3	18.1	34.8	19.2	35.1	18.6
NUTECH/ 6191	139	35.3	<b>18.7</b>	34.7	<b>20.3</b>	35.0	19.5
DAIRYLAND/ DSR1423RRSTS	133	35.4	17.2	34.6	19.7	35.0	18.5
ASGROW/ AG1403	128	35.8	16.9	34.1	19.1	35.0	18.0
KRUGER/ EXPK2X11B9	132	35.9	17.2	34.1	18.1	35.0	17.6
NUTECH/ 6145	137	36.2	18.2	33.6	19.8	34.9	19.0
PROSEED/ 81-50	138	35.1	<b>18.7</b>	34.7	<b>20.4</b>	34.9	19.6
MUSTANG/ M-159NRR	136	34.3	<b>18.6</b>	35.4	<b>20.8</b>	34.9	19.7
PRAIRIE BR./ PB-2278RR	141	35.2	17.5	34.3	18.8	34.8	18.1
G-2 GENETICS/ 7186	137	36.2	18.0	33.1	<b>20.7</b>	34.6	19.3
ASGROW/ AG1506	135	35.8	18.4	33.3	<b>20.2</b>	34.5	19.3
MUSTANG/ M-13320	133	34.8	17.8	34.2	19.4	34.5	18.6
KRUGER/ EXPK2X14A9	134	35.5	18.0	33.6	18.7	34.5	18.3
DAIRYLAND/ DST14-003R2Y	139	34.7	17.9	34.3	19.2	34.5	18.6
PRAIRIE BR./ EXP 158	134	35.0	17.6	34.0	19.5	34.5	18.5
G-2 GENETICS/ 6159	131	35.8	18.2	33.0	20.7	34.4	19.5
WENSMAN/ W 2166RR	134	34.5	17.9	34.2	20.5	34.3	19.2
NUTECH/ 6205+RR	139	34.1	18.1	34.4	19.8	34.2	19.0
HEFTY/ 168R	134	34.6	18.1	33.7	20.0	34.2	19.1
KRUGER/ K2-1901	134	34.0	18.0	34.2	19.4	34.1	18.7

**Table 4b. Glyphosate-resistant maturity group-I soybean variety protein and oil averages- central South Dakota locations, 2009 (continued).**

Brand/Variety	DTM [1]	Central Averages by Location*				Central Zone Averages	
		Brookings		Bancroft		Protein (%)	Oil (%)
		Protein (%)	Oil (%)	Protein (%)	Oil (%)		
MUSTANG/ M-168RR	133	34.8	18.3	33.2	<b>20.8</b>	34.0	19.6
PRAIRIE BR./ PB-1597RR	133	35.4	18.0	32.6	<b>20.2</b>	34.0	19.1
MUSTANG/ M-177NRR	138	34.2	<b>19.1</b>	33.6	<b>20.8</b>	33.9	20.0
NUTECH/ 6156	131	35.3	18.3	32.4	19.7	33.9	19.0
HEFTY/ 159R	136	34.3	<b>18.6</b>	33.4	<b>20.4</b>	33.9	19.5
ASGROW/ AG1703	138	34.6	18.8	32.9	20.0	33.8	19.4
CHANNEL BRAND/ 1651R	131	34.6	18.4	32.9	<b>20.1</b>	33.7	19.3
KRUGER/ K-129RR	135	.	.	35.5	19.8	.	.
KRUGER/ K-163RR	144	.	.	34.7	19.9	.	.
KRUGER/ K-167RR/SCN	124	36.2	18.1	.	.	.	.
GOLD COUNTRY/ 2713RR	134	36.0	17.8	.	.	.	.
GOLD COUNTRY/ 2815RR	126	36.1	18.0	.	.	.	.
GOLD COUNTRY/ 1915NRR	131	34.3	18.4	.	.	.	.
KALTENBERG/ KB1809RR	133	35.3	17.9	.	.	.	.
STINE/ 1568-4	127	35.8	17.9	.	.	.	.
STINE/ 1423-4	131	33.9	<b>18.5</b>	.	.	.	.
REA/ EXP-1054	129	35.0	18.0	.	.	.	.
REA/ EXP-1056	130	36.2	17.4	.	.	.	.
REA/ EXP-1059	128	37.0	16.9	.	.	.	.
RENK/ RS179NRR	135	<b>38.0</b>	17.4	.	.	.	.
RENK/ RS110R2	127	36.5	16.8	.	.	.	.
RENK/ RS140NR2	134	35.0	18.1	.	.	.	.
RENK/ RS160NR2	128	36.9	18.1	.	.	.	.
RENK/ RS180R2	130	36.6	17.2	.	.	.	.
Test avg. :	135	36.0	17.8	34.9	19.6	35.5	18.6
High avg. :	144	38.8	19.1	38.5	20.8	**	**
Low avg. :	123	33.9	16.4	32.4	18.1		
[3] LSD(.05) :		1.3	0.7	1.5	0.8		
[4] Min.TPG-avg. :		37.6	18.5	37.1	20.1		
[6] Coef. Var. :		2	2	3	3		
No. Entries :		72	72	59	59		

[1] DTM= days to maturity from seeding dates of May 19 at Brookings and May 20 at Bancroft.

Note that additional table footnotes are explained in Table F.

\* Values in bold type within a column are included in the top-performance group.

\*\* There were significant variety by location interactions for protein and oil. Therefore, evaluate yield by using the protein and oil columns for each location.

**Table 5a. Glyphosate-resistant maturity group-II soybean variety yield and lodging averages- central South Dakota locations, 2008-2009. Entries are sorted by 2-Yr then by 2009 zone yield.**

Brand/Variety	DTM [1]	Central Averages by Location						Central Zone Averages		
		Brookings			Bancroft			Yield-bu/a		2009 Lodg.
		Yield-bu/a		2009 Lodg.	Yield-bu/a		2009 Lodg.	Yield-bu/a		2009 Lodg.
		2-Yr	2009	(1-5) [2]	2-Yr	2009	(1-5) [2]	2-Yr	2009	(1-5) [2]
ASGROW/ AG2108	137	<b>54*</b>	58	<b>1</b>	<b>51</b>	50	<b>1</b>	53	54	<b>1</b>
KRUGER/ K-204RR/SCN	134	<b>55</b>	<b>60</b>	<b>1</b>	<b>50</b>	45	<b>1</b>	53	53	<b>1</b>
NUTECH/ 6234RR	139	<b>53</b>	59	<b>1</b>	<b>51</b>	47	<b>1</b>	52	53	<b>1</b>
ASGROW/ DKB22-52	131	<b>55</b>	<b>60</b>	<b>1</b>	<b>48</b>	42	<b>1</b>	52	51	<b>1</b>
PRAIRIE BR./ PB-2117NRR	139	<b>52</b>	56	<b>1</b>	<b>50</b>	45	<b>1</b>	51	51	<b>1</b>
MUSTANG/ M-219RR	133	<b>52</b>	56	<b>1</b>	<b>50</b>	43	<b>1</b>	51	50	<b>1</b>
KRUGER/ K-249RR/SCN	138	<b>56</b>	<b>61</b>	<b>1</b>	<b>45</b>	37	<b>1</b>	51	49	<b>1</b>
PRAIRIE BR./ PB-2243RR	133	<b>55</b>	58	<b>1</b>	<b>46</b>	37	<b>1</b>	51	48	<b>1</b>
PRAIRIE BR./ PB-2207NRR	134	<b>54</b>	<b>62</b>	<b>1</b>	<b>45</b>	41	<b>1</b>	50	52	<b>1</b>
NUTECH/ 6211	139	<b>54</b>	59	<b>1</b>	<b>46</b>	40	<b>1</b>	50	50	<b>1</b>
PRAIRIE BR./ PB-2558NRR	136	<b>53</b>	57	<b>1</b>	<b>47</b>	42	<b>1</b>	50	50	<b>1</b>
MUSTANG/ M-209NRR	138	<b>52</b>	55	<b>1</b>	<b>47</b>	39	<b>1</b>	50	47	<b>1</b>
HEFTY/ 218RN	134	<b>54</b>	58	<b>1</b>	43	38	<b>1</b>	49	48	<b>1</b>
PRAIRIE BR./ PB-2147RR	138	<b>50</b>	54	<b>1</b>	<b>48</b>	40	<b>1</b>	49	47	<b>1</b>
G-2 GENETICS/ 7226	137	<b>56</b>	<b>61</b>	<b>1</b>	40	32	<b>1</b>	48	47	<b>1</b>
PRAIRIE BR./ PB-2419RR2	137	.	<b>62</b>	<b>1</b>	.	<b>60</b>	<b>1</b>	.	61	<b>1</b>
ASGROW/ RY2119	135	.	<b>64</b>	<b>1</b>	.	<b>50</b>	<b>1</b>	.	57	<b>1</b>
MUSTANG/ M-21320	134	.	<b>60</b>	<b>1</b>	.	<b>54</b>	<b>1</b>	.	57	<b>1</b>
KRUGER/ EXPK2X21A9	134	.	58	<b>1</b>	.	<b>55</b>	<b>1</b>	.	57	<b>1</b>
PRAIRIE BR./ EXP 195	131	.	57	<b>1</b>	.	<b>55</b>	<b>1</b>	.	56	<b>1</b>
MUSTANG/ M-20420	138	.	59	<b>1</b>	.	51	<b>1</b>	.	55	<b>1</b>
G-2 GENETICS/ 6247	137	.	58	<b>1</b>	.	52	<b>1</b>	.	55	<b>1</b>
NUTECH/ 7203	133	.	<b>62</b>	<b>1</b>	.	45	<b>1</b>	.	54	<b>1</b>
G-2 GENETICS/ 7208	134	.	<b>61</b>	<b>1</b>	.	47	<b>1</b>	.	54	<b>1</b>
G-2 GENETICS/ 7212	141	.	<b>64</b>	<b>1</b>	.	44	<b>1</b>	.	54	<b>1</b>
PRAIRIE BR./ EXP 207	132	.	<b>61</b>	<b>1</b>	.	44	<b>1</b>	.	53	<b>1</b>
PIONEER/ 92Y10	132	.	57	<b>1</b>	.	46	<b>1</b>	.	52	<b>1</b>
KRUGER/ K2-2701	138	.	59	<b>1</b>	.	45	<b>1</b>	.	52	<b>1</b>
NUTECH/ 7222	133	.	<b>64</b>	<b>1</b>	.	38	<b>1</b>	.	51	<b>1</b>
NUTECH/ 6244	137	.	58	<b>1</b>	.	43	<b>1</b>	.	51	<b>1</b>
PRAIRIE BR./ PB-2099NRR2	134	.	<b>61</b>	<b>1</b>	.	41	<b>1</b>	.	51	<b>1</b>
WENSMAN/ W 2222NRR	133	.	<b>63</b>	<b>1</b>	.	38	<b>1</b>	.	51	<b>1</b>
PRAIRIE BR./ PB-2439NRR2	134	.	<b>61</b>	<b>1</b>	.	39	<b>1</b>	.	50	<b>1</b>
CHANNEL BRAND/ 2200R2	135	.	57	<b>1</b>	.	42	<b>1</b>	.	50	<b>1</b>
HEFTY/ EXP200R	133	.	<b>60</b>	<b>1</b>	.	37	<b>1</b>	.	49	<b>1</b>
CHANNEL BRAND/ 2151R	135	.	59	<b>1</b>	.	33	<b>1</b>	.	46	<b>1</b>
G-2 GENETICS/ 7255	134	.	48	<b>1</b>	.	40	<b>1</b>	.	44	<b>1</b>
MUSTANG/ M-24620	135	.	<b>61</b>	<b>1</b>	.	.	.	.	.	.
MUSTANG/ M-23530	141	.	<b>61</b>	<b>1</b>	.	.	.	.	.	.
PIONEER/ 92Y30	134	<b>55</b>	56	<b>1</b>	.	.	.	.	.	.
HEFTY/ 229R	132	<b>53</b>	58	<b>1</b>	.	.	.	.	.	.
GOLD COUNTRY/ 8820NRR	135	.	<b>60</b>	<b>1</b>	.	.	.	.	.	.
KALTENBERG/ EXP 2010	135	.	57	<b>1</b>	.	.	.	.	.	.
STINE/ 2062-4	133	.	<b>61</b>	<b>1</b>	.	.	.	.	.	.
REA/ EXP-1062	134	.	<b>61</b>	<b>1</b>	.	.	.	.	.	.
REA/ EXP-1064	135	.	<b>62</b>	<b>1</b>	.	.	.	.	.	.
REA/ EXP-1068	138	.	<b>60</b>	<b>1</b>	.	.	.	.	.	.
RENK/ RS210NR2	138	.	58	<b>1</b>	.	.	.	.	.	.
RENK/ RS200NR2	133	.	55	<b>1</b>	.	.	.	.	.	.
Test avg. :	135	54	59	1	47	44	1	51	52	1
High avg. :	141	56	64	1	51	60	1	53	61	1
Low avg. :	131	50	48	1	40	32	1	48	44	1
[3] Test LSD (.05):		NS**	4	0	6	6	0	***	***	
[4] Min.TPG-avg. :		50	60	.	45	54	.	.	.	.
[5] Max.TPG-avg. :		.	.	1	.	.	1	.	.	.
[6] Test Coef. Var.:		6	5	0	8	9	0	.	.	.
No. Entries:		17	49	49	15	37	37	.	.	.

[1] DTM= days to maturity from seeding dates of May 19 at Brookings and May 20 at Bancroft.

\* Values in **bold type** within a column are included in the top-performance group.

Note that additional table footnotes are explained in Table F.

\*\* Indicates differences between values within a column were non-significant (NS).

\*\*\* There was a significant variety by location interaction for yield. Therefore, evaluate yield by using the yield columns for each location.

**Table 5b. Glyphosate-resistant maturity group-II soybean variety protein and oil averages- central South Dakota locations, 2009. Entries are sorted by 2009 zone protein.**

Brand/Variety	DTM [1]	Central Averages by Location				Central Zone Averages	
		Brookings		Bancroft		Protein (%)	Oil (%)
		Protein (%)	Oil (%)	Protein (%)	Oil (%)		
KRUGER/ K-249RR/SCN	138	<b>40.1</b>	16.4	<b>37.8</b>	19.4	38.9	17.9
PRAIRIE BR./ PB-2558NRR	136	<b>39.6</b>	16.7	<b>37.6</b>	19.2	38.6	18.0
KRUGER/ K2-2701	138	39.0	16.8	<b>37.8</b>	18.0	38.4	17.4
G-2 GENETICS/ 7255	134	<b>39.2</b>	<b>19.5</b>	<b>36.7</b>	19.3	37.9	19.4
PRAIRIE BR./ PB-2419RR2	137	38.3	17.5	<b>37.0</b>	18.8	37.6	18.2
MUSTANG/ M-219RR	133	<b>39.4</b>	17.3	35.7	18.6	37.6	18.0
PRAIRIE BR./ EXP 207	132	37.7	17.7	<b>37.3</b>	19.0	37.5	18.4
ASGROW/ RY2119	135	38.4	16.3	<b>36.5</b>	19.5	37.5	17.9
NUTECH/ 6211	139	38.6	16.7	36.1	19.4	37.4	18.0
G-2 GENETICS/ 7226	137	37.6	17.9	<b>36.7</b>	<b>20.6</b>	37.2	19.2
G-2 GENETICS/ 6247	137	38.2	18.1	36.0	19.0	37.1	18.5
PRAIRIE BR./ PB-2147RR	138	38.5	17.1	35.5	19.0	37.0	18.1
PRAIRIE BR./ PB-2439NRR2	134	37.6	17.7	<b>36.4</b>	19.5	37.0	18.6
PIONEER/ 92Y10	132	37.8	17.4	35.7	19.2	36.8	18.3
KRUGER/ EXPK2X21A9	134	38.2	18.1	35.0	18.8	36.6	18.5
G-2 GENETICS/ 7208	134	38.2	18.2	34.8	19.8	36.5	19.0
NUTECH/ 6244	137	36.1	17.6	<b>36.6</b>	19.4	36.4	18.5
ASGROW/ AG2108	137	36.8	17.4	35.9	19.7	36.4	18.6
PRAIRIE BR./ PB-2099NRR2	134	36.8	<b>18.8</b>	35.9	<b>20.2</b>	36.4	19.5
NUTECH/ 7203	133	37.1	18.0	35.3	19.5	36.2	18.8
HEFTY/ EXP200R	133	37.0	17.7	35.2	19.4	36.1	18.5
CHANNEL BRAND/ 2200R2	135	35.8	18.3	<b>36.2</b>	<b>19.9</b>	36.0	19.1
PRAIRIE BR./ PB-2117NRR	139	37.2	17.6	34.5	<b>20.5</b>	35.9	19.0
MUSTANG/ M-21320	134	36.9	18.6	34.7	19.7	35.8	19.1
WENSMAN/ W 2222NRR	133	35.9	18.5	35.2	19.3	35.6	18.9
PRAIRIE BR./ EXP 195	131	35.3	17.9	35.6	19.5	35.5	18.7
MUSTANG/ M-209NRR	138	36.0	18.0	34.9	<b>20.3</b>	35.4	19.1
PRAIRIE BR./ PB-2207NRR	134	37.2	18.4	33.6	<b>20.2</b>	35.4	19.3
CHANNEL BRAND/ 2151R	135	35.9	18.6	34.7	<b>20.1</b>	35.3	19.4
NUTECH/ 7222	133	35.7	18.4	34.8	<b>20.2</b>	35.3	19.3
G-2 GENETICS/ 7212	141	35.5	18.6	34.7	<b>20.5</b>	35.1	19.6
ASGROW/ DKB22-52	131	35.5	18.5	34.4	19.6	35.0	19.0
NUTECH/ 6234RR	139	35.5	<b>19.0</b>	34.3	19.8	34.9	19.4
HEFTY/ 218RN	134	36.1	18.2	33.5	<b>20.3</b>	34.8	19.3
PRAIRIE BR./ PB-2243RR	133	35.3	18.7	33.9	<b>19.9</b>	34.6	19.3
KRUGER/ K-204RR/SCN	134	35.8	18.4	32.8	<b>20.5</b>	34.3	19.5
MUSTANG/ M-20420	138	34.5	18.2	33.5	19.7	34.0	18.9
MUSTANG/ M-24620	135	37.1	17.8	.	.	.	.
MUSTANG/ M-23530	141	38.2	17.8	.	.	.	.
PIONEER/ 92Y30	134	37.8	17.6	.	.	.	.
HEFTY/ 229R	132	36.8	18.1	.	.	.	.
GOLD COUNTRY/ 8820NRR	135	35.7	18.6	.	.	.	.
KALTENBERG/ EXP 2010	135	39.1	17.5	.	.	.	.
STINE/ 2062-4	133	36.0	18.5	.	.	.	.
REA/ EXP-1062	134	36.2	18.1	.	.	.	.
REA/ EXP-1064	135	37.3	17.7	.	.	.	.
REA/ EXP-1068	138	37.7	18.0	.	.	.	.
RENK/ RS210NR2	138	35.7	18.2	.	.	.	.
RENK/ RS200NR2	133	35.2	18.4	.	.	.	.
Test avg. :	135	37.1	17.9	35.5	19.6	36.3	18.8
High avg. :	141	40.1	19.5	37.8	20.6	**	**
Low avg. :	131	34.5	16.3	32.8	18.0		
[3] LSD(.05) :		1.0	0.8	1.7	0.8		
[4] Min.TPG-avg. :		39.2	18.8	36.2	19.9		
[6] Coef. Var. :		2	3	3	2		
No. Entries :		49	49	37	37		

[1] DTM= days to maturity from seeding dates of May 19 at Brookings and May 20 at Bancroft.

Note that additional table footnotes are explained in Table F.

\* Values in bold type within a column are included in the top-performance group.

\*\* There were significant variety by location interactions for protein and oil. Therefore, evaluate yield by using the protein and oil columns for each location.

**Table 6a. Glyphosate-resistant maturity group-I soybean variety yield and lodging averages- southern South Dakota locations, 2008-2009. Entries are sorted by 2-Yr then by 2009 zone yield.**

Brand/Variety	DTM [1]	Southern Averages by Location						Southern Zone Averages		
		Beresford			Geddes					
		Yield-bu/a		2009 Lodg.	Yield-bu/a		2009 Lodg.	Yield-bu/a		2009 Lodg.
		2-Yr	2009	(1-5) [2]	2-Yr	2009	(1-5) [2]	2-Yr	2009	(1-5) [2]
PRAIRIE BR./ PB-2278RR	125	<b>58*</b>	<b>68</b>	<b>1</b>	<b>54</b>	<b>55</b>	<b>1</b>	56	62	1
PRAIRIE BR./ EXP PB-2282	123	<b>57</b>	67	<b>1</b>	<b>54</b>	<b>54</b>	<b>1</b>	56	61	1
PRAIRIE BR./ PB-2058NRR	121	<b>57</b>	66	<b>1</b>	<b>52</b>	<b>52</b>	<b>1</b>	55	59	1
NUTECH/ NT-6205+RR	121	<b>54</b>	65	<b>1</b>	<b>51</b>	<b>53</b>	<b>1</b>	53	59	1
PRAIRIE BR./ EXP PB-1170	121	<b>56</b>	66	<b>1</b>	<b>48</b>	50	<b>1</b>	52	58	1
PRAIRIE BR./ PB-1956RR	124	<b>54</b>	61	<b>1</b>	<b>50</b>	52	<b>1</b>	52	57	1
NUTECH/ 6193	119	<b>54</b>	62	<b>1</b>	<b>49</b>	50	<b>1</b>	52	56	1
PROSEED/ 81-90	126	50	56	<b>1</b>	<b>49</b>	44	<b>1</b>	50	50	1
PRAIRIE BR./ PB-1918RR	121	<b>51</b>	60	<b>1</b>	47	48	<b>1</b>	49	54	1
SODAK GEN./ SD1161RR/SCN	120	49	59	<b>1</b>	45	42	<b>1</b>	47	51	1
KRUGER/ K-189RR/SCN	120	46	60	<b>1</b>	46	47	<b>1</b>	46	54	1
PRAIRIE BR./ EXP 215	122	.	<b>70</b>	<b>1</b>	.	<b>57</b>	<b>1</b>	.	64	1
KRUGER/ EXPK2X14A9	118	.	<b>70</b>	<b>1</b>	.	<b>55</b>	<b>1</b>	.	63	1
KRUGER/ EXPK2X15B9	117	.	67	<b>1</b>	.	<b>56</b>	<b>1</b>	.	62	1
KRUGER/ EXPK2X19B9	121	.	<b>71</b>	<b>1</b>	.	52	<b>1</b>	.	62	1
PRAIRIE BR./ EXP 201	122	.	<b>70</b>	<b>1</b>	.	<b>53</b>	<b>1</b>	.	62	1
PRAIRIE BR./ PB-1999NRR2	121	.	64	<b>1</b>	.	<b>58</b>	<b>1</b>	.	61	1
KRUGER/ EXPK2X16A9	121	.	<b>68</b>	<b>1</b>	.	52	<b>1</b>	.	60	1
WENSMAN/ W 3192NR2	121	.	<b>68</b>	<b>1</b>	.	52	<b>1</b>	.	60	1
PRAIRIE BR./ EXP 199	117	.	66	<b>1</b>	.	51	<b>1</b>	.	59	1
G-2 GENETICS/ 6159	115	.	63	<b>1</b>	.	52	<b>1</b>	.	58	1
WENSMAN/ W 3186R2	117	.	67	<b>1</b>	.	49	<b>1</b>	.	58	1
KRUGER/ K2-1901	121	.	63	<b>1</b>	.	51	<b>1</b>	.	57	1
G-2 GENETICS/ 7186	118	.	62	<b>1</b>	.	49	<b>1</b>	.	56	1
NUTECH/ 1808RN	123	.	61	<b>1</b>	.	48	<b>1</b>	.	55	1
SODAK GEN./ SD2121RR	113	.	61	<b>1</b>	.	47	<b>1</b>	.	54	1
KRUGER/ K-167RR/SCN	118	.	.	.	<b>50</b>	<b>53</b>	<b>1</b>	.	.	.
Test avg.:	120	53	65	1	50	51	1	52	58	1
High avg.:	126	58	71	1	54	58	1	56	64	1
Low avg.:	113	46	56	1	45	42	1	46	50	1
[3] Test LSD (.05):		7	3	0	6	5	0	**	**	
[4] Min.TPG-avg.:		51	68	.	48	53	.			
[5] Max.TPG-avg.:		.	.	1	.	.	1			
[6] Test Coef. Var.:		3	3	0	7	6	0			
No. Entries:		11	26	26	12	27	27			

[1] DTM= days to maturity from seeding dateS of May 22 at Beresford and June 1 at Geddes.

Note that additional table footnotes are explained in Table F.

\* Values in **bold type** within a column are included in the top-performance group.

\*\* There was a significant variety by location interaction for yield. Therefore, evaluate yield by using the yield and lodging columns for each location.

**Table 6b. Glyphosate-resistant maturity group-I soybean variety protein and oil averages- southern South Dakota locations, 2009. Entries are sorted by 2009 zone protein.**

Brand/Variety	DTM [1]	Southern Averages by Location*				Southern Zone Averages	
		Beresford		Geddes		Protein (%)	Oil (%)
		Protein (%)	Oil (%)	Protein (%)	Oil (%)		
KRUGER/ EXPK2X15B9	117	<b>39.3</b>	20.6	<b>38.8</b>	<b>20.5</b>	39.0	20.6
PRAIRIE BR./ EXP 215	122	<b>38.7</b>	19.7	<b>38.7</b>	<b>21.3</b>	38.7	20.5
KRUGER/ EXPK2X16A9	121	<b>38.0</b>	20.7	<b>37.9</b>	<b>21.1</b>	38.0	20.9
KRUGER/ EXPK2X19B9	121	<b>38.2</b>	20.5	<b>37.5</b>	<b>20.8</b>	37.9	20.7
PRAIRIE BR./ EXP 201	122	<b>38.4</b>	20.4	<b>37.3</b>	<b>20.7</b>	37.9	20.6
PRAIRIE BR./ EXP 199	117	37.4	19.3	<b>38.0</b>	<b>21.4</b>	37.7	20.4
PRAIRIE BR./ PB-1999NRR2	121	37.7	20.7	<b>37.7</b>	<b>21.5</b>	37.7	21.1
WENSMAN/ W 3192NR2	121	<b>38.0</b>	20.7	<b>37.2</b>	<b>20.6</b>	37.6	20.7
WENSMAN/ W 3186R2	117	<b>38.4</b>	20.6	<b>36.4</b>	<b>20.4</b>	37.4	20.5
KRUGER/ K-189RR/SCN	120	<b>38.1</b>	20.6	<b>36.5</b>	<b>21.3</b>	37.3	21.0
G-2 GENETICS/ 7186	118	37.2	<b>22.0</b>	<b>37.5</b>	<b>21.8</b>	37.3	21.9
SODAK GEN./ SD1161RR/SCN	120	37.7	19.6	<b>36.9</b>	<b>20.8</b>	37.3	20.2
PRAIRIE BR./ PB-2278RR	125	36.7	20.3	<b>37.3</b>	<b>21.7</b>	37.0	21.0
PRAIRIE BR./ PB-2058NRR	121	37.2	<b>21.3</b>	<b>36.5</b>	<b>21.6</b>	36.9	21.5
PRAIRIE BR./ EXP PB-1170	121	37.2	<b>21.6</b>	35.9	<b>22.0</b>	36.5	21.8
PROSEED/ 81-90	126	37.1	20.5	35.9	<b>19.2</b>	36.5	19.8
KRUGER/ K2-1901	121	36.9	20.4	35.1	<b>20.2</b>	36.0	20.3
NUTECH/ 6193	119	37.2	20.1	34.7	<b>20.5</b>	36.0	20.3
PRAIRIE BR./ PB-1918RR	121	36.8	20.6	34.9	<b>20.4</b>	35.9	20.5
KRUGER/ EXPK2X14A9	118	36.5	20.5	35.2	<b>20.2</b>	35.9	20.3
SODAK GEN./ SD2121RR	113	37.6	20.1	33.9	<b>19.3</b>	35.8	19.7
NUTECH/ 1808RN	123	37.0	20.8	34.3	<b>20.6</b>	35.7	20.7
G-2 GENETICS/ 6159	115	37.2	21.1	33.8	<b>20.9</b>	35.5	21.0
PRAIRIE BR./ EXP PB-2282	123	36.0	<b>21.9</b>	34.9	<b>21.6</b>	35.4	21.7
NUTECH/ NT-6205+RR	121	36.4	21.1	33.4	<b>20.6</b>	34.9	20.9
PRAIRIE BR./ PB-1956RR	124	34.9	<b>21.7</b>	34.8	<b>21.0</b>	34.8	21.4
KRUGER/ K-167RR/SCN	118	.	.	35.6	<b>21.9</b>	.	.
Test avg. :	120	37.4	20.7	36.2	20.9	36.8	20.8
High avg. :	126	39.3	22.0	38.8	22.0	***	***
Low avg. :	113	34.9	19.3	33.4	19.2		
[3] LSD(.05) :		1.4	0.9	2.9	NS**		
[4] Min.TPG-avg. :		38.0	21.2	36.0	19.2		
[6] Coef. Var. :		2	3	5	5		
No. Entries :		26	26	27	27		

[1] DTM= days to maturity from a seeding dates of May 22 at Beresford and June 1 at Geddes.

Note that additional table footnotes are explained in Table F.

\* Values in bold type within a column are included in the top-performance group.

\*\* Indicates differences between values within a column were non-significant (NS).

\*\*\* There were significant variety by location interactions for protein and oil. Therefore, evaluate yield by using the protein and oil columns for each location.

**Table 7a. Glyphosate-resistant maturity group-II soybean variety yield and lodging averages- southern South Dakota locations, 2008-2009. Entries are sorted by 2-Yr then by 2009 zone yield.**

Brand/Variety	DTM [1]	Southern Averages by Location						Southern Zone Averages		
		Beresford			Geddes					
		Yield-bu/a		2009 Lodg. (1-5) [2]	Yield-bu/a		2009 Lodg. (1-5) [2]	Yield-bu/a		2009 Lodg. (1-5) [2]
		2-Yr	2009		2-Yr	2009		2-Yr	2009	
ASGROW/ DKB27-52	127	60	71	1	59	65	1	60	68	1
PIONEER/ 92Y30	122	56	64	1	60	64	2	58	64	1
PIONEER/ 93M11	131	59	66	1	57	58	1	58	62	1
PRAIRIE BR./ PB-2558NRR	126	54	64	1	59	60	1	57	62	1
NUTECH/ 7274	127	53	67	1	58	64	1	56	66	1
HEFTY/ EXP229RN	121	53	61	1	58	62	1	56	62	1
KALTENBERG/ KB249RR	126	52	61	1	60	62	2	56	62	2
PRAIRIE BR./ PB-2207NRR	124	56	64	1	56	57	1	56	61	1
WENSMAN/ W 2222NRR	123	55	64	1	56	58	1	56	61	1
NUTECH/ NT-2324+RR/SCN	124	55	63	1	56	55	1	56	59	1
PRAIRIE BR./ PB-2515RR	126	51	62	1	58	64	2	55	63	2
PROSEED/ 82-00N	124	53	62	1	57	61	1	55	62	1
HEFTY/ 248R	129	54	62	1	55	60	1	55	61	1
HEFTY/ EXP259RN	125	52	62	1	57	60	1	55	61	1
DAIRYLAND/ DST25-002/RR	126	56	65	1	52	60	1	54	63	1
DAIRYLAND/ DSR-2770/RR	129	53	60	2	54	56	2	54	58	2
G-2 GENETICS/ 7226	124	50	62	1	55	58	1	53	60	1
NUTECH/ 6211	122	48	58	1	56	57	1	52	58	1
DAIRYLAND/ DSR-2200/RR	127	51	62	1	53	54	1	52	58	1
MUSTANG/ M-318RR	132	50	63	1	50	52	3	50	58	2
NUTECH/ 2660RN	126	.	67	1	.	71	1	.	69	1
PRAIRIE BR./ PB-2099NRR2	125	.	66	1	.	71	1	.	69	1
PIONEER/ 92Y80	126	.	66	1	.	67	2	.	67	2
ASGROW/ RY2409	123	.	67	1	.	65	1	.	66	1
CHANNEL BRAND/ 2400R2	126	.	64	1	.	67	1	.	66	1
GOLD COUNTRY/ 8820NRR	122	53	63	1	.	66	1	.	65	1
CHANNEL BRAND/ 2200R2	123	.	65	1	.	64	1	.	65	1
ASGROW/ AG2939	130	.	69	1	.	58	1	.	64	1
MUSTANG/ M-259NRR	125	.	63	1	.	65	1	.	64	1
G-2 GENETICS/ 7212	123	.	63	1	.	64	1	.	64	1
PRAIRIE BR./ EXP 207	125	.	63	1	.	65	1	.	64	1
PRAIRIE BR./ PB-2439NRR2	125	.	65	1	.	63	2	.	64	1
HEFTY/ EXP200R	122	.	62	1	.	64	1	.	63	1
DAIRYLAND/ DSR-2525RRAP	124	.	62	1	.	64	2	.	63	2
PRAIRIE BR./ PB-2419RR2	126	.	66	1	.	59	1	.	63	1
NUTECH/ 7222	123	.	63	1	.	61	1	.	62	1
KRUGER/ K2-2701	128	.	65	1	.	59	3	.	62	2
PRAIRIE BR / PB-3039NRR2	134	.	66	2	.	57	3	.	62	3
ASGROW/ RY2419	126	.	65	2	.	57	2	.	61	2
ASGROW/ AG2839	130	.	66	1	.	55	2	.	61	2
ASGROW/ RY2809	131	.	66	2	.	56	2	.	61	2
NUTECH/ 6244	127	.	63	1	.	59	1	.	61	1
DAIRYLAND/ DSR-2132/R2Y	124	.	64	1	.	58	1	.	61	1
PRAIRIE BR./ PB-2667NRR	126	.	64	1	.	57	1	.	61	1
CHANNEL BRAND/ 2551R2	124	.	62	1	.	60	1	.	61	1
ASGROW/ RY2929	131	.	66	2	.	53	1	.	60	1
MUSTANG/ M-28929	130	.	63	2	.	57	1	.	60	2
KRUGER/ EXPK2X21A9	122	.	60	1	.	60	1	.	60	1
G-2 GENETICS/ 6279	127	.	64	1	.	56	1	.	60	1
PRAIRIE BR./ PB-2828NRR2	129	.	63	2	.	57	2	.	60	2
WENSMAN/ W 3280NR2	128	.	63	1	.	56	1	.	60	1
MUSTANG/ M-270NRR	128	.	59	1	.	59	2	.	59	1
NUTECH/ 2707RR	130	.	62	2	.	55	3	.	59	3
G-2 GENETICS/ 7208	122	.	59	1	.	59	1	.	59	1
KRUGER/ K2-2801	130	.	58	1	.	58	2	.	58	2

**Table 7a. Glyphosate-resistant maturity group-II soybean variety yield and lodging averages- southern South Dakota locations, 2008-2009 (continued).**

Brand/Variety	DTM [1]	Southern Averages by Location						Southern Zone Averages		
		Beresford			Geddes			Yield-bu/a		2009 Lodg.
		Yield-bu/a		2009 Lodg. (1-5) [2]	Yield-bu/a		2009 Lodg. (1-5) [2]	2-Yr	2009	(1-5) [2]
		2-Yr	2009		2-Yr	2009				
G-2 GENETICS/ 7288	128	.	59	2	.	56	2	.	58	2
NUTECH/ 7269	129	.	60	2	.	53	<b>1</b>	.	57	2
MUSTANG/ M-24620	129	.	62	<b>1</b>	.	.	.	.	.	.
MUSTANG/ M-23530	128	.	68	<b>1</b>	.	.	.	.	.	.
HEFTY/ 218RN	122	51	60	<b>1</b>	.	.	.	.	.	.
HEFTY/ EXP279RN	129	53	59	<b>1</b>	.	.	.	.	.	.
KRUGER/ K-239RR	126	.	.	.	55	57	<b>1</b>	.	.	.
KRUGER/ K-271RR	127	.	.	.	53	53	<b>1</b>	.	.	.
KRUGER/ K-204RR/SCN	123	53	60	<b>1</b>	.	.	.	.	.	.
KRUGER/ K-228RR/SCN	121	.	.	.	<b>62</b>	<b>68</b>	<b>1</b>	.	.	.
KRUGER/ K-249RR/SCN	127	.	64	<b>1</b>	.	.	.	.	.	.
KRUGER/ K-274RR/SCN	128	53	63	<b>1</b>	.	.	.	.	.	.
DAIRYLAND/ DST20-002/RR	126	.	65	<b>1</b>	.	.	.	.	.	.
DAIRYLAND/ DST22-006R2Y	125	.	56	<b>1</b>	.	.	.	.	.	.
DAIRYLAND/ DSR-2440/R2Y	128	.	65	<b>1</b>	.	.	.	.	.	.
DAIRYLAND/ DST25-003R2Y	128	.	59	<b>1</b>	.	.	.	.	.	.
KALTENBERG/ KB2609RR	128	.	.	.	53	55	<b>1</b>	.	.	.
KALTENBERG/ EXP 2510	130	.	64	<b>1</b>	.	.	.	.	.	.
KALTENBERG/ EXP 2710	130	.	62	<b>1</b>	.	.	.	.	.	.
STINE/ 2420-4	126	.	59	<b>1</b>	.	.	.	.	.	.
STINE/ EXP 2482-4	129	.	63	<b>1</b>	.	.	.	.	.	.
STINE/ 2538-4	126	.	61	<b>1</b>	.	.	.	.	.	.
STINE/ 3132-4	137	.	65	3	.	.	.	.	.	.
RENK/ RS277NRR	131	56	64	2	.	.	.	.	.	.
RENK/ RS259NRR	128	52	58	<b>1</b>	.	.	.	.	.	.
RENK/ RS270NR2	127	.	64	<b>1</b>	.	.	.	.	.	.
Test avg. :	126	53	63	1	56	60	1	55	62	1
High avg. :	137	60	71	3	62	71	3	60	69	3
Low avg. :	121	48	56	1	50	52	1	50	57	1
[3] Test LSD (.05):		6	5	1	6	5	1	**	**	**
[4] Min.TPG-avg. :		54	66	.	56	66	.			
[5] Max.TPG-avg. :		.	.	1	.	.	1			
[6] Test Coef. Var.:		6	5	25	5	5	27			
No. Entries:		27	77	77	24	61	61			

[1] DTM= days to maturity from a seeding dated of May 22 at Beresford and June 1 at Geddes.

Note that additional table footnotes are explained in Table F.

\* Values in **bold type** within a column are included in the top-performance group.

\*\* There was a significant variety by location interaction for yield and lodging. Therefore, evaluate these variables by using the yield and lodging columns for each location.

**Table 7b. Glyphosate-resistant maturity group-II soybean variety protein and oil averages- southern South Dakota locations, 2009. Entries are sorted by 2009 zone protein.**

Brand/Variety	DTM [1]	Southern Averages by Location*				Southern Zone Averages	
		Beresford		Geddes		Protein (%)	Oil (%)
		Protein (%)	Oil (%)	Protein (%)	Oil (%)		
PRAIRIE BR./ PB-2558NRR	126	<b>38.8</b>	18.6	<b>39.3</b>	17.3	39.0	18.0
KRUGER/ K2-2701	128	38.1	17.7	<b>39.9</b>	16.8	39.0	17.3
PIONEER/ 92Y80	126	38.2	19.3	<b>39.7</b>	18.3	39.0	18.8
DAIRYLAND/ DSR-2770/RR	129	37.9	18.5	<b>39.6</b>	17.7	38.7	18.1
KALTENBERG/ KB249RR	126	37.6	18.2	<b>39.3</b>	17.5	38.5	17.8
PRAIRIE BR / PB-3039NRR2	134	37.1	16.9	<b>39.7</b>	16.3	38.4	16.6
MUSTANG/ M-318RR	132	37.2	18.7	<b>38.8</b>	17.6	38.0	18.2
NUTECH/ 2707RR	130	36.6	18.8	<b>39.2</b>	18.1	37.9	18.4
G-2 GENETICS/ 6279	127	37.4	19.0	37.6	18.3	37.5	18.7
ASGROW/ RY2929	131	37.6	19.1	37.4	17.8	37.5	18.4
ASGROW/ AG2939	130	36.6	18.3	<b>38.3</b>	17.7	37.4	18.0
DAIRYLAND/ DST25-002/RR	126	36.7	18.8	<b>38.1</b>	18.3	37.4	18.6
ASGROW/ RY2419	126	36.9	17.4	37.8	16.4	37.3	16.9
HEFTY/ 248R	129	36.7	18.5	<b>38.0</b>	17.3	37.3	17.9
ASGROW/ AG2839	130	36.3	18.8	37.8	17.4	37.0	18.1
G-2 GENETICS/ 7288	128	35.6	19.1	<b>38.1</b>	19.6	36.9	19.4
KRUGER/ EXPK2X21A9	122	36.6	19.7	37.0	18.8	36.8	19.3
PRAIRIE BR./ EXP 207	125	36.0	18.9	37.6	18.4	36.8	18.7
DAIRYLAND/ DSR-2200/RR	127	36.8	19.4	36.6	18.6	36.7	19.0
PIONEER/ 92Y30	122	36.1	<b>20.7</b>	37.1	19.8	36.6	20.3
DAIRYLAND/ DSR-2132/R2Y	124	37.0	18.9	36.2	17.7	36.6	18.3
PRAIRIE BR./ PB-2419RR2	126	36.1	19.2	36.6	19.0	36.4	19.1
PIONEER/ 93M11	131	36.0	19.3	36.3	18.8	36.2	19.1
CHANNEL BRAND/ 2400R2	126	36.1	19.0	36.2	18.4	36.2	18.7
G-2 GENETICS/ 7208	122	35.8	19.8	36.3	19.5	36.1	19.6
NUTECH/ 6211	122	36.3	19.1	35.8	19.2	36.1	19.2
NUTECH/ NT-2324+RR/SCN	124	35.9	19.5	36.0	<b>20.2</b>	36.0	19.8
PRAIRIE BR./ PB-2439NRR2	125	35.7	18.7	36.1	18.6	35.9	18.6
HEFTY/ EXP200R	122	35.1	19.7	36.2	<b>20.2</b>	35.6	19.9
ASGROW/ RY2809	131	34.9	18.6	35.8	17.9	35.4	18.2
NUTECH/ 6244	127	35.3	18.8	35.4	19.3	35.4	19.1
NUTECH/ 7274	127	34.9	19.2	35.8	18.2	35.3	18.7
WENSMAN/ W 3280NR2	128	35.3	18.7	35.2	18.4	35.3	18.5
MUSTANG/ M-270NRR	128	34.4	19.3	36.1	18.5	35.2	18.9
NUTECH/ 7269	129	36.0	20.0	34.4	19.5	35.2	19.8
MUSTANG/ M-28929	130	34.9	18.7	35.4	19.1	35.2	18.9
HEFTY/ EXP229RN	121	35.3	19.8	35.0	19.9	35.1	19.8
ASGROW/ RY2409	123	35.4	19.0	34.7	18.4	35.0	18.7
DAIRYLAND/ DSR-2525RRAP	124	34.0	19.1	36.0	18.3	35.0	18.7
PROSEED/ 82-00N	124	35.0	19.4	34.9	19.8	35.0	19.6
G-2 GENETICS/ 7226	124	34.8	19.9	35.1	19.8	34.9	19.9
KRUGER/ K2-2801	130	34.5	18.4	35.2	18.1	34.9	18.2
MUSTANG/ M-259NRR	125	35.0	19.0	34.6	19.2	34.8	19.1
CHANNEL BRAND/ 2551R2	124	35.3	19.2	34.3	19.1	34.8	19.2
PRAIRIE BR./ PB-2515RR	126	33.3	19.4	36.0	19.7	34.7	19.6
NUTECH/ 2660RN	126	34.5	19.5	34.8	19.0	34.7	19.2
PRAIRIE BR./ PB-2099NRR2	125	33.6	19.3	35.6	19.6	34.6	19.4
PRAIRIE BR./ PB-2828NRR2	129	34.9	18.2	34.1	19.1	34.5	18.6
HEFTY/ EXP259RN	125	34.4	18.9	34.2	19.6	34.3	19.2
CHANNEL BRAND/ 2200R2	123	34.5	20.0	34.0	19.8	34.2	19.9

**Table 7b. Glyphosate-resistant maturity group-II soybean variety protein and oil averages- southern South Dakota locations, 2009 (continued).**

Brand/Variety	DTM [1]	Southern Averages by Location*				Southern Zone Averages	
		Beresford		Geddes		Protein (%)	Oil (%)
		Protein (%)	Oil (%)	Protein (%)	Oil (%)		
G-2 GENETICS/ 7212	123	34.6	<b>20.2</b>	33.5	19.6	34.1	19.9
ASGROW/ DKB27-52	127	33.8	18.9	34.2	18.8	34.0	18.9
NUTECH/ 7222	123	34.0	<b>20.2</b>	33.4	<b>21.0</b>	33.7	20.6
GOLD COUNTRY/ 8820NRR	122	33.7	<b>20.2</b>	33.4	<b>20.4</b>	33.6	20.3
PRAIRIE BR./ PB-2667NRR	126	33.4	18.9	32.6	19.5	33.0	19.2
WENSMAN/ W 2222NRR	123	33.4	<b>20.2</b>	32.0	<b>20.9</b>	32.7	20.6
PRAIRIE BR./ PB-2207NRR	124	33.3	20.0	31.9	<b>20.6</b>	32.6	20.3
MUSTANG/ M-24620	129	36.5	19.2	.	.	.	.
MUSTANG/ M-23530	128	36.3	19.3	.	.	.	.
HEFTY/ 218RN	122	34.1	19.7	.	.	.	.
HEFTY/ EXP279RN	129	<b>39.5</b>	17.2	.	.	.	.
KRUGER/ K-239RR	126	.	.	<b>38.1</b>	18.2	.	.
KRUGER/ K-271RR	127	.	.	37.7	18.1	.	.
KRUGER/ K-204RR/SCN	123	33.9	<b>20.2</b>	.	.	.	.
KRUGER/ K-228RR/SCN	121	.	.	33.7	19.4	.	.
KRUGER/ K-249RR/SCN	127	37.3	18.0	.	.	.	.
KRUGER/ K-274RR/SCN	128	36.5	19.1	.	.	.	.
DAIRYLAND/ DST20-002/RR	126	36.0	19.3	.	.	.	.
DAIRYLAND/ DST22-006R2Y	125	37.2	18.0	.	.	.	.
DAIRYLAND/ DSR-2440/R2Y	128	35.8	18.7	.	.	.	.
DAIRYLAND/ DST25-003R2Y	128	34.8	17.6	.	.	.	.
KALTENBERG/ KB2609RR	128	.	.	36.7	18.0	.	.
KALTENBERG/ EXP 2510	130	37.1	18.8	.	.	.	.
KALTENBERG/ EXP 2710	130	35.1	19.3	.	.	.	.
STINE/ 2420-4	126	37.6	18.3	.	.	.	.
STINE/ EXP 2482-4	129	35.0	19.0	.	.	.	.
STINE/ 2538-4	126	34.9	19.1	.	.	.	.
STINE/ 3132-4	137	37.4	17.8	.	.	.	.
RENK/ RS277NRR	131	35.3	18.4	.	.	.	.
RENK/ RS259NRR	128	37.3	17.6	.	.	.	.
RENK/ RS270NR2	127	37.4	17.8	.	.	.	.
Test avg. :	126	35.8	19.0	36.2	18.8	35.9	18.9
High avg. :	137	39.5	20.7	39.9	21.0	**	**
Low avg. :	121	33.3	16.9	31.9	16.3		
[3] LSD(.05) :		1.0	0.7	2.0	1.1		
[4] Min.TPG-avg. :		38.6	20.1	38.0	20.0		
[6] Coef. Var. :		2	2	3	4		
No. Entries :		77	77	61	61		

[1] DTM= days to maturity from a seeding dates of May 22 at Beresford and June 1 at Geddes.

Note that additional table footnotes are explained in Table F.

\* Values in bold type within a column are included in the top-performance group.

\*\* There were significant variety by location interactions for protein and oil. Therefore, evaluate yield by using the protein and oil columns for each location.

**Table 8a. Non-glyphosate-resistant maturity group-0 and -I soybean variety yield and lodging averages- South Shore, 2008-09.**

BRAND/VARIETY	DTM [1]	Yield average (bu/a) by maturity group					
		MG-0			MG-I		
		Yield-bu/a		2009 Lodg.	Yield-bu/a		2009 Lodg.
		2-yr	2009	(1-5) [2]	2-yr	2009	(1-5) [2]
MUSTANG/ ML-0979	128	.	<b>53*</b>	<b>1</b>	.	.	.
PUBLIC/MN0908CN	133	.	48	<b>1</b>	.	.	.
PUBLIC/HAMLIN	131	<b>43</b>	47	<b>1</b>	.	.	.
PUBLIC/SURGE	130	<b>43</b>	47	<b>1</b>	.	.	.
RICHLAND ORG./ MK0508	130	<b>38</b>	44	<b>1</b>	.	.	.
PUBLIC/MN0806CN	128	.	44	<b>1</b>	.	.	.
PUBLIC/SD05-767	133	.	44	<b>1</b>	.	.	.
PUBLIC/SD00-1501	129	.	42	<b>1</b>	.	.	.
RICHLAND ORG./ MK0649	123	35	41	<b>1</b>	.	.	.
MUSTANG/ ML-1520	131	.	.	.	.	<b>47</b>	<b>1</b>
PUBLIC/MN1701CN	133	.	.	.	<b>45</b>	<b>46</b>	<b>1</b>
PUBLIC/DEUEL	129	.	.	.	<b>41</b>	<b>44</b>	<b>1</b>
PUBLIC/MN1410	130	.	.	.	<b>45</b>	42	<b>1</b>
PUBLIC/MN1505SP	131	.	.	.	.	41	<b>1</b>
RICHLAND ORG./ MK1016	126	.	.	.	34	37	<b>1</b>
Test avg.:	130	40	46	1	41	43	1
High avg.:	133	43	53	1	45	47	1
Low avg.:	123	35	41	1	34	37	1
[3] LSD (.05):		6	4	0	10	4	0
[4] Min. TPG avg.:		37	49	.	35	43	.
[5] Max. TPG avg.:		.	.	1	.	.	1
[6] Coef. Var.:		5	5	0	8	5	0

[1] DTM= days to maturity from seeding dates of May 22 at South Shore.

\* Values in **bold type** within a column are included in the top-performance group.

Note that additional table footnotes are explained in Table F.

**Table 8b. Non-glyphosate resistant maturity group-0 and -I soybean variety protein and oil averages- South Shore, 2009. Sorted by maturity group and protein average.**

BRAND/VARIETY	DTM [1]	Protein & oil percentages by maturity group in 2009*			
		MG-0		MG-I	
		Protein %	Oil %	Protein %	Oil %
PUBLIC/SD00-1501	129	<b>41.7</b>	14.9	.	.
PUBLIC/SD05-767	133	38.3	16.6	.	.
PUBLIC/HAMLIN	131	37.2	<b>16.9</b>	.	.
PUBLIC/SURGE	130	37.2	<b>16.8</b>	.	.
MUSTANG/ ML-0979	128	36.3	<b>17.5</b>	.	.
PUBLIC/MN0908CN	133	36.1	16.6	.	.
RICHLAND ORG./ MK0508	130	36.0	15.8	.	.
PUBLIC/MN0806CN	128	35.4	<b>17.4</b>	.	.
RICHLAND ORG./ MK0649	123	34.6	15.8	.	.
PUBLIC/MN1505SP	131	.	.	<b>39.0</b>	16.0
RICHLAND ORG./ MK1016	126	.	.	<b>38.8</b>	14.5
PUBLIC/MN1410	130	.	.	36.9	<b>17.3</b>
PUBLIC/MN1701CN	133	.	.	36.4	<b>17.6</b>
PUBLIC/DEUEL	129	.	.	36.1	16.7
MUSTANG/ ML-1520	131	.	.	35.0	16.7
Test avg. :	130	37.0	16.5	37.0	16.5
High avg. :	133	41.7	17.5	39.0	17.6
Low avg. :	123	34.6	14.9	35.0	14.5
[3] LSD(.05) :		1.1	0.8	0.7	0.6
[4] Min. TPG avg.:		40.7	16.8	38.4	17.1
[6] Coef. Var. :		2	3	1	2

[1] DTM= days to maturity from seeding dates of May 22 at South Shore.

Note that additional table footnotes are explained in Table F.

\* Values in bold type within a column are included in the top-performance group.

**Table 9a. Non-glyphosate-resistant maturity group-0, -I, and -II soybean variety yield and lodging averages- Brookings, 2008-09.**

BRAND/VARIETY	DTM [1]	Yield average (bu/a) by maturity group								
		MG-0			MG-I			MG-II		
		Yield-bu/a		2009 Lodg. (1-5) [2]	Yield-bu/a		2009 Lodg. (1-5) [2]	Yield-bu/a		2009 Lodg. (1-5) [2]
		2-yr	2009		2-yr	2009		2-yr	2009	
MUSTANG/ ML-0979	125	.	<b>59*</b>	<b>1</b>	.	.	.	.	.	.
PUBLIC/SURGE	129	.	51	<b>1</b>	.	.	.	.	.	.
PUBLIC/HAMLIN	133	.	48	<b>1</b>	.	.	.	.	.	.
PUBLIC/SD00-1501	128	.	48	<b>1</b>	.	.	.	.	.	.
PUBLIC/SD05-767	136	.	47	<b>1</b>	.	.	.	.	.	.
PUBLIC/MN0806CN	129	.	42	<b>1</b>	.	.	.	.	.	.
PUBLIC/MN0908CN	131	.	42	<b>1</b>	.	.	.	.	.	.
PUBLIC/SD05-240	136	.	.	.	.	<b>64</b>	<b>1</b>	.	.	.
MUSTANG/ ML-1520	137	.	.	.	.	<b>63</b>	<b>1</b>	.	.	.
PROSEED/ LL91-12	129	.	.	.	.	<b>61</b>	<b>1</b>	.	.	.
PROSEED/ LL81-60	138	.	.	.	.	<b>61</b>	<b>1</b>	.	.	.
MUSTANG/ ML-1889	146	.	.	.	.	57	<b>1</b>	.	.	.
PUBLIC/MN1701CN	136	.	.	.	.	56	<b>1</b>	.	.	.
PUBLIC/MN1410	136	.	.	.	.	54	<b>1</b>	.	.	.
PUBLIC/MN1505SP	135	.	.	.	.	53	<b>1</b>	.	.	.
PUBLIC/DEUEL	136	.	.	.	.	49	<b>1</b>	.	.	.
MUSTANG/ ML-2269	146	.	.	.	.	.	.	.	<b>56</b>	<b>1</b>
PUBLIC/DAVISON	139	.	.	.	.	.	.	.	<b>54</b>	<b>1</b>
PUBLIC/SD05-274	146	.	.	.	.	.	.	.	48	<b>1</b>
PUBLIC/SD05-273	148	.	.	.	.	.	.	.	46	<b>1</b>
PUBLIC/SD05-248	149	.	.	.	.	.	.	.	44	<b>1</b>
Test avg.:	136	.	48	1	.	58	1	.	50	1
High avg.:	149	.	59	1	.	64	1	.	56	1
Low avg.:	125	.	42	1	.	49	1	.	44	1
[3] LSD (.05):	.	.	5	0	.	4	0	.	4	0
[4] Min. TPG avg.:	.	.	54	.	.	60	.	.	52	.
[5] Max. TPG avg.:	.	.	.	1	.	.	1	.	.	1
[6] Coef. Var.:	.	.	6	0	.	4	0	.	5	0

[1] DTM= days to maturity from seeding dates of May 19 at Brookings.

\* Values in **bold type** within a column are included in the top-performance group.

Note that additional table footnotes are explained in Table F.

**Table 9b. Non-glyphosate resistant maturity group-0, group-I, and group-II soybean variety protein and oil averages- Brookings, 2009. Sorted by maturity group and protein average.**

BRAND/VARIETY	DTM [1]	Protein & oil averages by maturity group in 2009*					
		MG-0		MG-I		MG-II	
		Protein %	Oil %	Protein %	Oil %	Protein %	Oil %
PUBLIC/SD00-1501	128	<b>42.8</b>	15.9	.	.	.	.
PUBLIC/SD05-767	136	39.4	17.8	.	.	.	.
MUSTANG/ ML-0979	125	39.2	17.6	.	.	.	.
PUBLIC/HAMLIN	133	39.1	18.0	.	.	.	.
PUBLIC/SURGE	129	38.6	<b>18.1</b>	.	.	.	.
PUBLIC/MN0806CN	129	37.5	<b>18.3</b>	.	.	.	.
PUBLIC/MN0908CN	131	37.3	17.3	.	.	.	.
PUBLIC/MN1505SP	135	.	.	<b>39.8</b>	16.8	.	.
PROSEED/ LL91-12	129	.	.	<b>39.1</b>	17.6	.	.
MUSTANG/ ML-1889	146	.	.	38.3	<b>18.9</b>	.	.
PUBLIC/MN1701CN	136	.	.	37.2	18.1	.	.
PUBLIC/DEUEL	136	.	.	36.8	17.6	.	.
PUBLIC/SD05-240	136	.	.	36.6	18.2	.	.
PROSEED/ LL81-60	138	.	.	36.5	17.6	.	.
PUBLIC/MN1410	136	.	.	36.4	<b>18.3</b>	.	.
MUSTANG/ ML-1520	137	.	.	36.3	16.9	.	.
PUBLIC/SD05-248	149	.	.	.	.	<b>38.2</b>	<b>19.0</b>
MUSTANG/ ML-2269	146	.	.	.	.	<b>37.6</b>	<b>18.9</b>
PUBLIC/SD05-274	146	.	.	.	.	37.2	18.0
PUBLIC/SD05-273	148	.	.	.	.	37.1	<b>19.2</b>
PUBLIC/DAVISON	139	.	.	.	.	36.7	16.9
Test avg. :	136	39.1	17.6	37.4	17.8	37.4	18.4
High avg. :	149	42.8	18.3	39.8	18.9	38.2	19.2
Low avg. :	125	37.3	15.9	36.3	16.8	36.7	16.9
[3] LSD(.05) :		0.8	0.3	0.8	0.7	0.9	1.0
[4] Min. TPG avg.:		42.1	18.1	39.1	18.3	37.4	18.3
[6] Coef. Var. :		1	1	1	2	1	3

[1] DTM= days to maturity from seeding dates of May 19 at Brookings.

Note that additional table footnotes are explained in Table F.

\* Values in bold type within a column are included in the top-performance group.

**Table 10a. Non-glyphosate-resistant maturity group-I and -II soybean variety yield and lodging averages- Beresford, 2008-09.**

BRAND/VARIETY	DTM [1]	Yield average (bu/a) by maturity group					
		MG-I			MG-II		
		Yield-bu/a		2009 Lodg. (1-5) [2]	Yield-bu/a		2009 Lodg. (1-5) [2]
		2-yr	2009		2-yr	2009	
PUBLIC/MN1410	126	.	<b>54*</b>	<b>2</b>	.	.	.
PUBLIC/MN1701CN	127	.	<b>50</b>	<b>2</b>	.	.	.
PUBLIC/MN1505SP	125	.	<b>49</b>	<b>2</b>	.	.	.
PUBLIC/DEUEL	124	.	46	<b>3</b>	.	.	.
MUSTANG/ ML-2670	138	.	.	.	.	<b>60</b>	2
MUSTANG/ ML-2269	131	.	.	.	.	<b>58</b>	2
PUBLIC/DAVISON	124	.	.	.	.	<b>58</b>	<b>1</b>
PUBLIC/SD05-248	131	.	.	.	.	<b>57</b>	2
PUBLIC/SD05-274	131	.	.	.	.	53	3
PUBLIC/SD05-273	131	.	.	.	.	45	<b>1</b>
Test avg.:	129	.	50	2	.	55	2
High avg.:	138	.	54	3	.	60	3
Low avg. :	124	.	46	2	.	45	1
[3] LSD (.05):		.	6	NS**	.	5	1
[4] Min. TPG avg.:		.	48	.	.	55	.
[5] Max. TPG avg.:		.	.	3	.	.	1
[6] Coef. Var.:		.	6	21	.	5	30

[1] DTM= days to maturity from seeding dates of May 26 at Beresford.

\* Values in **bold type** within a column are included in the top-performance group.

\*\* Indicates differences between values within a column were non-significant (NS).

**Table 10b. Non-glyphosate resistant maturity group-I and -II soybean variety protein and oil averages- Beresford, 2009. Sorted by maturity group and protein average.**

BRAND/VARIETY	DTM [1]	Protein & oil percentages by maturity group in 2009*			
		MG-I		MG-II	
		Protein %	Oil %	Protein %	Oil %
PUBLIC/MN1505SP	125	<b>40.0</b>	17.7	.	.
PUBLIC/MN1701CN	127	36.6	17.9	.	.
PUBLIC/MN1410	126	36.5	<b>19.0</b>	.	.
PUBLIC/DEUEL	124	36.2	<b>18.7</b>	.	.
PUBLIC/SD05-248	131	.	.	<b>37.3</b>	18.6
PUBLIC/DAVISON	124	.	.	<b>36.9</b>	18.0
MUSTANG/ ML-2269	131	.	.	<b>36.8</b>	18.3
PUBLIC/SD05-274	131	.	.	35.8	19.2
MUSTANG/ ML-2670	138	.	.	35.6	18.5
PUBLIC/SD05-273	131	.	.	34.8	<b>19.8</b>
Test avg. :	129	37.3	18.3	36.2	18.8
High avg. :	138	40.0	19.0	37.3	19.8
Low avg. :	124	36.2	17.7	34.8	18.0
[3] LSD(.05) :		1.4	0.4	0.8	0.6
[4] Min. TPG avg.:		38.7	18.7	36.6	19.3
[6] Coef. Var. :		2	1	1	2

[1] DTM= days to maturity from seeding dates of May 26 at Beresford.

Note that additional table footnotes are explained in Table F.

\* Values in bold type within a column are included in the top-performance group.