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2003 Precision Planted Performance Trials: Corn

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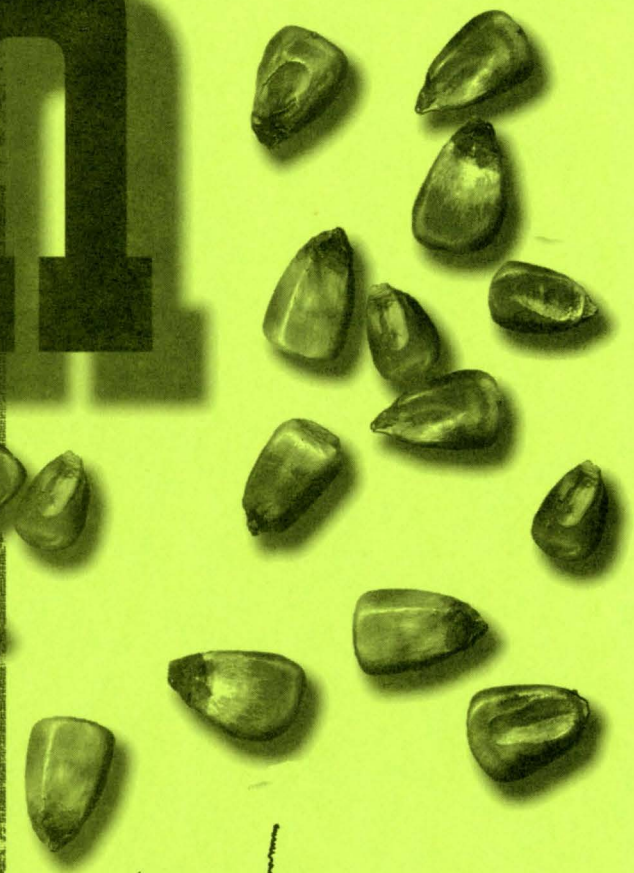

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Tables, 2003 corn performance trials

Conventional hybrid trial results

Roundup Ready™* hybrid trial results

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2003 Precision Planted Corn Performance Trials

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This publication reports the performance of entries in the 2003 South Dakota corn hybrid performance trials for both non-Roundup-Ready and Roundup-Ready hybrids. Information includes both the most recent 2-year and 1-year grain yields in bushels per acre; and 1-year bushel weight, moisture percentages of shelled corn at harvest, acre harvest population, and stalk lodging percentages. These performance trials are conducted by the South Dakota Crop Performance Testing (CPT) program at South Dakota State University.

Test Trial Locations

Trial locations, soil types, and seedbed preparation are shown in Table A; cooperators and seeding dates are shown in Table B. Seeding started May 1 and was completed May 13.

Weather Conditions

Weather data (Table C) for this year's growing season, April-September, was obtained from the 2003 USDA-South Dakota Crop-Weather reports and the South Dakota-Automatic Weather Data Network (SD-AWDN). Heat unit or growing degree-day accumulations are reported for the nearest test site, in place of temperatures. Corn hybrids typically express a certain thermal or heat unit requirement from emergence to black-layer formation (physiological maturity). The heat unit totals across test locations varied from a high of 2962 GDD at Armour to a low of 2219 GDD at Brookings. The GGD seasonal accumulations ranged from average at most locations to about 9% above average in the Huron area.

Precipitation accumulation varied greatly across test locations. Seasonal total precipitation from April 1 through the end of September was lowest at Watertown and next lowest at the NE Research Farm (South Shore). On average the seasonal precipitation accumulations were below average at Watertown (5.01 inches), Huron (1.85), and Brookings (1.35); but above average at the SE Research Farm at Centerville (4.3), Armour (3.5), and Aberdeen (1.39). At the Armour test location 8 miles south of Armour, the cooperator indicated the major rainfall events in the area occurred closer to Armour. Therefore, the rainfall levels reported at the Armour airport were higher than received at the test site south of Armour.

In summary, moisture totals and distribution in 2003 affected Armour, Yale (Huron), and South Shore (NE Research Farm) the most. At the other locations moisture was either plentiful (SE Research Farm at Centerville) or distributed in a timely pattern (Aberdeen and Brookings) that allowed hybrids to perform at higher agronomic levels than at Armour, Yale, or South Shore. The seasonal GDD totals across this region varied only slightly and were probably not a significant factor in test results this year.

The assistance of the following is appreciated: Glenda Piechowski at Brookings, Jim Smolik and Allen Heuer at the NE Research Farm, Todd Bortnem and the Brookings Agronomy Farm staff, and Bob Berg and the SE Research Farm staff; and farmer-cooperators Mark and Cletus Wiechmann (Armour), Kim Tschetter (Yale), and Allen and Inel Ryckman (Warner).

General Test Procedures

Participating companies pick the test locations where their entries are tested. Entries are placed into "early" or "late" maturity trials. The arbitrary relative maturity breaks between the early and late tests are as follows: 95 days for Warner and South Shore; 100 days for Yale and Brookings; 105 days for Armour; and 110 days for Beresford. A hybrid is assigned to a maturity trial based on its relative maturity rating reported by the participating seed company.

This testing program does not guarantee that all entries are placed in the proper maturity trial. In some trials, borderline entries with relative maturity ratings at or near the arbitrary break between the early and late trials may crossover at a given location. In some cases this may be indicated by exceptionally high or low grain moisture contents at harvest. A higher than average moisture content may indicate the hybrid is later in relative maturity than indicated. Likewise, a lower than average moisture

may indicate the hybrid is earlier in relative maturity than indicated.

Participating seed companies for 2003 are presented in Table F. A fee was charged for all entries at each location.

Experimental Procedures

Entries were seeded in three replications with each hybrid randomly located within a replication. Plots consisted of four 30-inch rows that were 20 feet long. A Monosem precision row crop planter was used at all locations. In 2003, this precision planter was calibrated to deliver 29,260 seeds per acre, regardless of seed quality and germination percentage. No seeding rate adjustment was made for low germination. Therefore, the acre harvest population is an indication of initial seed quality and the ability of the seed to cope with the production environment from seeding to harvest.

Soil type, land preparation, and previous crop at each test site are outlined in table A. Seedbed preparation was good at all locations. A starter fertilizer of 100 lb/A of 37-18-00 was applied 2 inches below and 2 inches to the side (2 x 2) of the seed row. Force insecticide was applied down the seed tube at label rates for corn rootworm control. In addition, Pounce granular was applied at labeled rates down the whorl with a tractor mounted granular applicator just prior to canopy closure.

The experimental procedures described above apply both to the non-Roundup Ready and the Roundup Ready hybrid corn trials with one exception: Weed control in the Roundup Ready trials consisted of two post emergence applications of Roundup Ultra (32 oz/A): first, when weeds were 2-4 inches tall; and second, when weed growth was again 2-4 inches tall. In non-Roundup Ready test trials, pre-emergence herbicides consisted of Harness Extra (1.0 qt/A) at Warner and Yale, Lasso (2.5 qt/A) at South Shore, Dual at Brookings, and banded Lasso at Armour. Post emergence herbicide applications included Accent/Buctril at Brookings and Armour, and a tank mix of Steadfast (0.75 oz/A)/Callisto (3.0 oz/A) at Beresford, according to label instructions. All rates were applied according to label instructions.

Measurements of Performance

Yield. Yields are an average of three replications and are expressed as bushels per acre, adjusted to 15.5% moisture on a dry-matter basis and a bushel weight of 56 pounds. Hybrids of equal potential may yield differently because of variations in slope, soil fertility, and stand. Statistical tests were conducted to determine whether differences obtained were caused by variations in environment or were true variety differences. In 2003, the coefficient of variation (CV) for yield was within reasonable limits across all locations.

The CV value in a given test trial is a measure of experimental error associated with the test trial. Ideally, this value should not exceed 15%. In cases where the CV value exceeds 15% it is recommended that the test data be used with caution in making hybrid selection decisions. Experimental error may be the result of several factors including test methods, environmental conditions such as moisture, temperature, or soil variations, or agronomic factors like seeding date, reseeding, or seed quality factors, all of which may or may not be controllable in a given year.

Grain moisture content. Moisture content is expressed as the percentage of moisture in the shelled corn at harvest. Moisture is inversely related to maturity.

Because maturity is of prime importance in South Dakota, moisture figures are of considerable importance in the evaluation of the trial entries. Hybrids that provide satisfactory yields and can be stored without additional drying are desirable. During harvest, random moisture values determined by the on-board moisture meter on the combine are checked with a Dickey-John GAC II to verify that the on-board moisture meter is within calibration limits.

Use of tables. Check for the "least significant difference" (LSD) value at the bottom of each column of data averages. The LSD value indicates how much a variable such as yield must differ between two hybrids before there is a real yield difference. An LSD value is given at the bottom of every column where there is significant difference among the averages within a given column. If there are no real differences among the averages within a given column a "non-significant" (NS) difference designation is indicated.

The LSD values reported in this publication can be used in two ways. In this publication the LSD value is used primarily to identify the top group for current year and 2-year yields, bushel weight, grain moisture at harvest, green snap percentage, and stalk lodging below the ear percentage for each test trial.

For example, at Warner (Table 1) the highest current-year yield was 214 bu/A for Dekalb/DKC44-42. To find whether it is the only top yielding hybrid at Warner, use the LSD value of 15 bu/A at the bottom of the 2003 yield column. For hybrids to be in the top-yield group they must yield 199 bu/A (214 - 15 = 199) or higher. Technically, a yield value of 200 bu/A is in the top yield group while a value of 199 bu/A is not in the top yield group. However, all yields and LSD values are rounded to the nearest whole number. We can say 199 bu/A, because of the rounding-off, is the more appropriate minimum value for top yield hybrids at the "early" maturity test at Warner in 2003.

The minimum top-group value is indicated for the 2-year (2002-03) average unless there were no significant yield differences. Top yield hybrids for 2003 are those hybrids that are equal or higher than the minimum top-group value indicated at the bottom of the 2003 yield column. **Where**

hybrid yield differences are not significant (NS), then, by definition, all hybrids in the test are in the top-yield group for the stated 1- or 2-year period.

Likewise, the top group for other performance factors like bushel weight, grain moisture at harvest, green snap percentage, and stalk lodging below the ear percentage can be determined.

For example, at Warner the minimum bushel weight value to qualify for the top performance group is 59 lb. Bushel weights of 59 lb or higher are in the top group for bushel weight. Note that yield and bushel weight values needed to qualify for the top group are reported as a minimum top-group value. In contrast, the grain moisture, green snap, and lodging below the ear percentage values needed to qualify for the top group are reported as a maximum top-group value. In other words, yield and bushel weight top-group values must be greater than a certain yield or bushel weight value while grain moisture, green snap, and lodging below ear percentages must be equal to or less than a certain percentage to qualify for the top group, depending on the performance factor being considered.

At Warner (Table 1, top-group values at bottom of table), current-year yield values must equal 199 bu/A or higher, bushel weight must equal 59 lb or higher, grain moisture must be 14% or lower, green snap must equal 0%, and stalk lodging below the ear must equal 8% or less to be in the top group for these performance factors. **Again, as with hybrid yields, if there are no hybrid differences for a given performance factor, then, by definition, all hybrids in the test are in the top group for that performance factor for the current year.**

In addition, the top-yield group LSD values can also be used to determine whether two hybrids differ in performance.

For example, in the early test at Warner, the LSD value of 15 bu/A can be used to compare the yields of any two hybrids in the early maturity trial. If hybrid A yields 210 bu/A and hybrid B yields 197 bu/A their yield difference is 13 bu/A (210 - 197 = 13). In this case the two hybrids do not differ in yield because their yield difference of 13 bu/A is less or equal to the reported LSD value of 15 bu/A. In contrast, if hybrid C yields 190 bu/A, the yield difference between hybrids A and C is 20 bu/A (210 - 190 = 20). In this case the yield difference of 20 bu/A is more than the reported LSD value of 15 bu/A, and hybrid A would have a significantly higher yield than hybrid C. Similarly, the LSD values for bushel weight, grain moisture, green snap, and stalk lodging below the ear percentages can be used to determine whether any two hybrids differ in regard to these performance factors.

Performance Trial Results: Conventional Hybrids

The performance trial results for two years (2002-03) and one year (2003) are summarized below.

Note: Green snap percentage differences among hybrids were nonsignificant (NS) at all locations in 2003.

WARNER, Allen and Inel Ryckman Farm:

Early Maturity Trial (Table 1), 17 hybrid entries. Performance data of hybrids at the former Frankfort test site were carried over to this location to obtain 2-year averages. The 2-year yield average was 188 bu/A but yield differences among hybrids were not significant. The 2003 average was 200 bu/A, hybrids had to average 199 bu/A or higher to be in the top-yield group; 11 hybrids qualified for the top-yield group, and hybrids had to differ by 15 bu/A to be significantly different in yield. Bushel weight had to equal 59 lb or higher (11 hybrids), grain moisture had to equal 14% or less (12 hybrids); and stalk lodging below the ear had to equal 8% or less (14 hybrids) to be in the top group for these factors. Hybrid differences for acre harvest population were not significant. The lowest population of 26,281 plants per acre, or 90% of the seeding population, was not significantly different from the highest harvest population of 28,895 plants per acre.

Late Maturity Trial (Table 2), 14 hybrid entries. The performance data of hybrids at the former Frankfort test site were carried over to this location to obtain 2-year averages. The 2-year average was 182 bu/A but yield differences among hybrids were not significant because only one hybrid was tested for 2 years. The 2003 average was 189 bu/A, but yield differences among the 14 hybrids tested were not significant. Therefore, the lowest yield of 170 bu/A was the minimum yield value needed to qualify for the top group for yield in 2003. Bushel weight had to equal 58 lb or higher (8 hybrids), grain moisture had to equal 16% or less (6 hybrids), and stalk lodging below the ear had to equal 8% or less (13 hybrids) to be in the top group for these factors. The acre harvest population had to equal 26,521 plants per acre, or 91% of the seeding population, to be in the top group (12 hybrids) for harvest population.

SOUTH SHORE, NE Research Farm:

Early Maturity Trial (Table 3), 24 hybrid entries. The 2-year yield average was 117 bu/A, but yield differences among hybrids were not significant. The 2003 average was 78 bu/A, but yield differences among the 24 hybrids tested were not significant. Therefore, the lowest yield of 71 bu/A was the minimum yield value needed to qualify for the top

group for yield in 2003. Bushel weight had to equal 59 lb or higher (6 hybrids), grain moisture had to equal 15% or less (2 hybrids), and stalk lodging below the ear had to equal 12% or less (14 hybrids) to be in the top group for these factors. The acre harvest population had to equal 28,137 plants per acre, or 96% of the seeding population, to be in the top group (13 hybrids) for harvest population.

Late Maturity Trial (Table 4), 23 hybrid entries. The 2-year average was 108 bu/A but yield differences among hybrids were not significant. The 2003 average was 65 bu/A, hybrids had to average 73 bu/A or higher to be in the top-yield group, 8 hybrids qualified for the top-yield group, and hybrids had to differ by 8 bu/A to be significantly different in yield. Bushel weight had to equal 56 lb or higher (10 hybrids), grain moisture had to equal 17% or less (9 hybrids), and stalk lodging below the ear had to equal 17% or less (17 hybrids) to be in the top group for these factors. The acre harvest population had to equal 27,565 plants per acre, or 94% of the seeding population, to be in the top group (16 hybrids) for harvest population.

YALE, NO-TILL TRIAL, Kim Tschetter Farm:

Early Maturity Trial (Table 5), 23 hybrid entries. This was the first year of testing at this location; therefore, there are no 2-year averages. The 2003 average was 87 bu/A, hybrids had to average 94 bu/A or higher to be in the top-yield group, 10 hybrids qualified for the top-yield group, and hybrids had to differ by 11 bu/A to be significantly different in yield. Bushel weight had to equal 57 lb or higher (6 hybrids), grain moisture had to equal 12% or less (18 hybrids), and stalk lodging below the ear had to equal 5% or less (22 hybrids) to be in the top group for these factors. The acre harvest population had to equal 26,206 plants per acre, or 90% of the seeding population, to be in the top group (14 hybrids) for harvest population.

Late Maturity Trial (Table 6), 18 hybrid entries. This was the first year of testing at this location; therefore, there are no 2-year averages. The 2003 average was 77 bu/A, hybrids had to average 79 bu/A or higher to be in the top-yield group, 6 hybrids qualified for the top-yield group, and hybrids had to differ by 13 bu/A to be significantly different in yield. Bushel weight had to equal 58 lb or higher (7 hybrids), grain moisture had to equal 12% or less (9 hybrids), and stalk lodging below the ear had to equal 2% or less (10 hybrids) to be in the top group for these factors. Hybrid differences for acre harvest population were not significant. The lowest population of 25,410 plants per acre, or 87% of the seeding population, was not significantly different from the highest harvest population of 28,605 plants per acre.

BROOKINGS, SDSU Agronomy Farm:

Early Maturity Trial (Table 7), 31 hybrid entries. The 2-year average was 155 bu/A and hybrid yield differences were not significant. The 2003 average was 174 bu/A, hybrids had to average 179 bu/A or higher to be in the top-yield group, 11 hybrids qualified for the top-yield group, and hybrids had to differ by 10 bu/A to be significantly different in yield. Bushel weight had to equal 59 lb or higher (6 hybrids), grain moisture had to equal 15% or less (26 hybrids), and stalk lodging below the ear had to equal 2% or less (31 hybrids) to be in the top group for these factors. Hybrid differences for acre harvest population were not significant. The lowest population of 26,572 plants per acre, or 91% of the seeding population, was not significantly different from the highest harvest population of 28,895 plants per acre.

Late Maturity Trial (Table 8), 33 hybrid entries. The 2-year average was 157 bu/A but hybrid yield differences were not significant. The 2003 average was 172 bu/A, hybrids had to average 175 bu/A or higher to be in the top-yield group, 15 hybrids qualified for the top-yield group, and hybrids had to differ by 15 bu/A to be significantly different in yield. Bushel weight had to equal 57 lb or higher (16 hybrids), and grain moisture had to equal 16% or less (10 hybrids) to be in the top group for these factors. Stalk lodging was nonsignificant. Hybrid differences for acre harvest population were not significant. The lowest population of 27,588 plants per acre, or 94% of the seeding population, was not significantly different from the highest harvest population of 29,040 plants per acre.

ARMOUR, NO-TILL TRIAL, Mark and Cletus Wiechmann Farms:

Early Maturity Trial (Table 9), 16 hybrid entries. A 2-year average was not reported this year because the coefficient of variation or level of experimental error in the 2002 data was extremely high. The 2003 average was 77 bu/A, hybrids had to average 82 bu/A or higher to be in the top-yield group, 5 hybrids qualified for the top-yield group, and hybrids had to differ by 10 bu/A to be significantly different in yield. Bushel weight had to equal 52 lb or higher (11 hybrids), grain moisture had to equal 12% or less (4 hybrids), and stalk lodging below the ear had to equal 7% or less (15 hybrids) to be in the top group for these factors. Hybrid differences for acre harvest population were not significant. The lowest population of 23,377 plants per acre, or 80% of the seeding population, was not significantly different from the highest harvest population of 26,862 plants per acre.

Late Maturity Trial (Table 10), 22 hybrid entries. A 2-year average was not reported this year because the coefficient of variation or level of experimental error in the 2002 data was extremely high. The 2003 average was 74 bu/A, hybrids had to average 75 bu/A or higher to be in the top-yield group, 14 hybrids qualified for the top-yield group, and hybrids had to differ by 16 bu/A to be significantly different in yield. Bushel weight had to equal 53 lb or higher (16 hybrids) and grain moisture had to equal 14% or less (19 hybrids) to be in the top group for these factors. Stalk lodging below the ear was not significant for the 22 hybrids

tested. Likewise, hybrid differences for acre harvest population were not significant. The lowest population of 21,780 plants per acre, or 74% of the seeding population, was not significantly different from the highest harvest population of 27,588 plants per acre.

BERESFORD, SE Research Farm:

Early Maturity Trial (Table 11), 42 hybrid entries. The 2-year average was 171 bu/A, but hybrid yield differences were not significant. The 2003 average was 172 bu/A, hybrids had to average 178 bu/A or higher to be in the top-yield group, 14 hybrids qualified for the top-yield group, and hybrids had to differ by 17 bu/A to be significantly different in yield. In addition, bushel weight had to equal 59 lb or higher (13 hybrids), grain moisture had to equal 14% or less (6 hybrids), and stalk lodging below the ear had to equal 2% or less (42 hybrids) to be in the top group for these factors. Hybrid differences for acre harvest population were not significant. The lowest population of 24,248 plants per acre, or 83% of the seeding population, was not significantly different from the highest harvest population of 29,040 plants per acre.

Late Maturity Trial (Table 12), 24 hybrid entries. The 2-year average was 172 bu/A, but yield differences among the hybrids tested were not significant. The 2003 average was 165 bu/A, but again the yield differences among the hybrids tested were not significant. Bushel weight had to equal 59 lb or higher (5 hybrids), grain moisture had to equal 17% or less (10 hybrids), and stalk lodging below the ear had to equal 1% or less (24 hybrids) to be in the top group for these factors. The acre harvest population had to equal 27,729 plants per acre, or 95% of the seeding population, to be in the top group (13 hybrids) for harvest population.

Performance Trial Results: Roundup Ready™ Hybrids

Note: Green snap percentage differences among hybrids were nonsignificant (NS) at all locations in 2003.

WARNER, Allen and Inel Ryckman Farm
Early Maturity Trial (Table 9), 21 hybrid entries.

Early Maturity Trial (Table 13), 28 hybrid entries. This was the first year for this test at Warner; however, the 2002 data from Frankfort was carried over to this location to obtain 2-year averages. The 2-year average was 184 bu/A, hybrids had to average 180 bu/A or higher to be in the top-yield group, 3 hybrids qualified for the top-yield group, and hybrids had to differ by 12 bu/A to be significantly different in yield. The 2003 average was 191 bu/A, hybrids had to average 191 bu/A or higher to be in the top-yield group, 18 hybrids qualified for the top-yield group, and hybrids had to differ by 14 bu/A to be significantly different in yield. Bushel weight had to equal 60 lb or higher (19 hybrids), grain moisture had to equal 14% or less (20 hybrids), and stalk lodging below the ear had to equal 6% or less (22 hybrids) to be in the top group for these factors. The acre harvest population had to equal 26,910 plants per acre, or 92% of the seeding population, to be in the top group (15 hybrids) for harvest population.

Late Maturity Trial (Table 14), 8 hybrid entries. This was the first year for this test at Warner; however, the 2002 data from Frankfort was carried over to this location in order to obtain 2-year averages. The 2-year average was 187 bu/A; but only one hybrid was tested for 2 years, hence there was no significant difference among hybrids. The 2003 average was 191 bu/A, hybrids had to average 188 bu/A or higher to be in the top-yield group, 4 hybrids qualified for the top-yield group, and hybrids had to differ by 14 bu/A to be significantly different in yield. Bushel weight had to equal 60 lb or higher (one hybrid), grain moisture had to equal 16% or less (2 hybrids), and stalk lodging had to equal 4% or less (5 hybrids) to be in the top group for these factors. Hybrid differences for acre harvest population were not significant. The lowest population of 26,862 plants per acre, or 92% of the seeding population, was not significantly different from the highest harvest population of 28,895 plants per acre.

SOUTH SHORE, NE Research Farm:

Early Maturity Trial (Table 15), 30 hybrid entries. The 2-year yield average was 116 bu/A, but yield differences among hybrids were not significant. The 2003 average was 78 bu/A, hybrids had to average 77 bu/A or higher to be in the top-yield group, 20 hybrids qualified for the top-yield group, and hybrids had to differ by 11 bu/A to be significantly different in yield. Bushel weight had to equal 57 lb or higher (18 hybrids), grain moisture had to equal 16% or less (26 hybrids), and stalk lodging below the ear had to equal 9% or less (23 hybrids) to be in the top group for these factors. The acre harvest population had to equal 27,404 plants per acre, or 94% of the seeding population, to be in the top group (10 hybrids) for harvest population.

Late Maturity Trial (Table 16), 14 hybrid entries. The 2-year average was 104 bu/A but yield differences among hybrids were not significant. The 2003 average was 69 bu/A, hybrids had to average 67 bu/A or higher to be in the top-yield group, 10 hybrids qualified for the top-yield group, and hybrids had to differ by 10 bu/A to be significantly different in yield. Bushel weight had to equal 58 lb or higher (4 hybrids), grain moisture had to equal 18% or less (5 hybrids), and stalk lodging below the ear had to equal

6% or less (10 hybrids) to be in the top group for these factors. The acre harvest population had to equal 26,769 plants per acre, or 91% of the seeding population, to be in the top group (6 hybrids) for harvest population.

YALE, NO-TILL TRIAL, Kim Tschetter Farm

Early Maturity Trial (Table 17), 21 hybrid entries. This was the first year for this test; hence, no 2-year averages are reported. The 2003 average was 91 bu/A, hybrids had to average 98 bu/A or higher to be in the top-yield group, 9 hybrids qualified for the top-yield group, and hybrids had to differ by 8 bu/A to be significantly different in yield. Bushel weight had to equal 57 lb or higher (8 hybrids), grain moisture had to equal 11% or less (5 hybrids), and stalk lodging below the ear had to equal 2% or less (14 hybrids) to be in the top group for these factors. The acre harvest population had to equal 27,395 plants per acre, or 94% of the seeding population, to be in the top group (14 hybrids) for harvest population.

Late Maturity Trial (Table 18), 20 hybrid entries. This was the first year for this test; hence, no 2-year averages are reported. The 2003 average was 80 bu/A, hybrids had to average 90 bu/A or higher to be in the top-yield group, 2 hybrids qualified for the top-yield group, and hybrids had to differ by 10 bu/A to be significantly different in yield. Bushel weight had to equal 55 lb or higher (16 hybrids), grain moisture had to equal 12% or less (10 hybrids), and stalk lodging below the ear had to equal 2% or less (16 hybrids) to be in the top group for these factors. The acre harvest population had to equal 26,165 plants per acre, or 89% of the seeding population, to be in the top group (18 hybrids) for harvest population.

BROOKINGS, SDSU Agronomy Farm:

Early Maturity Trial (Table 19), 23 hybrid entries. The 2-year average was 172 bu/A, but yield differences among the hybrids tested were not significant. Therefore, all 5 hybrids tested qualified for the top-yield group because their yield differences were not significant. The 2003 average was 181 bu/A, hybrids had to average 185 bu/A or higher to be in the top-yield group, 8 hybrids qualified for the top-yield group, and hybrids had to differ by 13 bu/A to be significantly different in yield. Bushel weight had to equal 59 lb or higher (14 hybrids) and grain moisture had to equal 16% or less (22 hybrids) to be in the top group for these factors. Stalk lodging below the ear was not significant for the 23 hybrids tested. The acre harvest population had to equal 28,392 plants per acre, or 97% of the seeding population, to be in the top group (10 hybrids) for harvest population.

Late Maturity Trial (Table 20), 20 hybrid entries. The 2-year average was 163 bu/A, but yield differences among hybrids were not significant because only one hybrid was tested for 2 years. The 2003 average was 166 bu/A, hybrids had to average 168 bu/A or higher to be in the top-yield group, 7 hybrids qualified for the top-yield group, and hybrids had to differ by 15 bu/A to be significantly different in yield. Bushel weight had to equal 59 lb or higher (2 hybrids) and grain moisture had to equal 17% or less (12 hybrids) to be in the top group for these factors. Stalk lodging was non-significant for the 20 hybrids tested. Hybrid differences for acre harvest population were not significant. The lowest population of 25,846 plants per acre, or 88% of the seeding population, was not significantly different from the highest harvest population of 28,604 plants per acre.

ARMOUR, NO-TILL TRIAL, Mark and Cletus Wiechmann Farms:

Early Maturity Trial (Table 21), 18 hybrid entries. A 2-year average was not reported this year because the coefficient of variation or level of experimental error in the 2002 data was extremely high. The 2003 average was 92 bu/A, hybrids had to average 88 bu/A or higher to be in the top-yield group, 4 hybrids qualified for the top-yield group, and hybrids had to differ by 13 bu/A to be significantly different in yield. In addition, bushel weight had to equal 53 lb or higher (10 hybrids) and grain moisture had to equal 13% or less (10 hybrids) to be in the top group for these factors. Stalk lodging was nonsignificant for the 18 hybrids tested. Hybrid differences for acre harvest population were not significant. The lowest population of 22,506 plants per acre, or 77% of the seeding population, was not significantly different from the highest harvest population of 26,571 plants per acre.

Late Maturity Trial (Table 22), 21 hybrid entries. A 2-year average was not reported this year because the coefficient of variation or level of experimental error in the 2002 data was extremely high. The 2003 average was 144 bu/A, hybrids had to average 83 bu/A or higher to be in the top-yield group, 9 hybrids qualified for the top-yield group, and hybrids had to differ by 12 bu/A to be significantly different in yield. Bushel weight had to equal 55 lb or higher (11 hybrids) and grain moisture had to equal 14% or less (16 hybrids) to be in the top group for these factors. Stalk lodging was nonsignificant. Hybrid differences for acre harvest population were not significant. The lowest population of 23,232 plants per acre, or 79% of the seeding population, was not significantly different from the highest harvest population of 26,717 plants per acre.

BBERESFORD, SE Research Farm:

Early Maturity Trial (Table 23), 20 hybrid entries. The 2-year average was 162 bu/A; but yield differences among the hybrids tested were not significant. Therefore, all 6 hybrids tested qualified for the top-yield group because their yield differences were not significant. The 2003 average was 169 bu/A, hybrids had to average 164 bu/A or higher to be in the top-yield group, 15 hybrids qualified for the top-yield group, and hybrids had to differ by 26 bu/A to be significantly different in yield. Bushel weight had to equal 59 lb or higher (10 hybrids) and grain moisture had to equal 16% or less (13 hybrids) to be in the top group for these factors. Stalk lodging was nonsignificant. The acre

harvest population had to equal 27,291 plants per acre, or 93% of the seeding population, to be in the top group (17 hybrids) for harvest population.

Late Maturity Trial (Table 24), 12 hybrid entries. None of the hybrids tested this year were tested last year; hence no 2-year averages are reported. The 2003 average was 163 bu/A, hybrids had to average 161 bu/A or higher to be in the top-yield group, 6 hybrids qualified for the top-yield group, and hybrids had to differ by 18 bu/A to be significantly different in yield. Bushel weight had to equal 58 lb or higher (10 hybrids) and grain moisture had to equal 17% or less (5 hybrids) to be in the top group for these factors. Stalk lodging was nonsignificant because there was no lodging in this test. Hybrid differences for acre harvest population were not significant. The lowest population of 25,846 plants per acre, or 88% of the seeding population, was not significantly different from the highest harvest population of 27,879 plants per acre.

Table A. Site Soil classification, percent slope, seedbed, and previous crop.

Site	Soil type	Seedbed, previous crop
Warner	Great Bend-Putney silt loams, 0-2% sl.	Min-till, s.wheat stubble
South Shore	Brookings sil.cl.loam, 0-3% sl.	Conventional, oat
Yale	Houdek-Prosper loams, 0-2% sl.	No-till, s.wheat stubble
Brookings	Brandt sil. cl., 0-2% sl.	Conventional, soybean
Armour	Highmore silt loam,0-2% sl.	No-till, soybean stubble
Beresford	Egan-Clarno-Trent complex, 0-2% sl.	Conventional, soybean

Table B. Year 2003 trial cooperators, locations, and dates seeded.

Cooperators	Location*	Seeded Date
Allen & Inel Ryckman	Warner	May 1
NE Research Farm	South Shore	May 8
Kim Tschetter	Yale	May 2
SDSU Agronomy Farm	Brookings	May 13
Mark & Cletus Wiechmann	Armour	May 5
SE Research Farm	Beresford	May 5

* Plots were all seeded at 29,260 seeds per acre.

Table C. Nearest weather station precipitation and growing degree day (GDD) accumulations for 2003 and their departures from normal (DFN).

Station	Variable		Data is accumulated from April 1 up to the week ending:					
			27-Apr	1-Jun	29-Jun	27-Jul	31-Aug	28-Sep
Aberdeen Airport	Precip.- in.	'03	1.34	4.19	10.76	12.68	14.33	15.59
		DFN*	-0.4	-0.26	3.35	2.74	1.94	1.39
	GDD's	'03	89	297	730	1359	2139	2479
		DFN	42	-21	-53	-54	-8	42
NE Res. Farm (S. Shore)	Precip.- in.	'03	1.4	5.04	6.22	7.95	9.56	11.23
		DFN	-0.35	0.35	-2.24	-1.67	-4.78	-5.01
	GDD's	'03	149	395	775	1315	2004	2309
		DFN	93	33	-13	-40	8	22
Huron Airport	Precip.- in.	'03	1.35	4.21	8.39	9.4	11.17	12.77
		DFN	-0.5	-0.86	0.18	-1.3	-1.78	-1.85
	GDD's	'03	128	377	841	1548	2438	2842
		DFN	77	43	5	34	148	228
Brookings 2NE	Precip.- in.	'03	1.82	4.96	8.26	10.4	13.23	16.68
		DFN	-0.01	-0.17	-0.94	-1.9	-2.24	-1.35
	GDD's	'03	85	259	677	1256	1968	2219
		DFN	55	-5	-24	-22	48	42
Centerville 6 SE	Precip.- in.	'03	2.03	5.72	10.79	15.87	17.18	23.1
		DFN	0.03	-0.12	0.99	2.96	0.94	4.3
	GDD's	'03	135	379	867	1514	2339	2665
		DFN	79	-10	-55	-70	16	11
Armour** Airport	Precip.- in.	'03	2.45	6.56	12.13	17.04	18.02	20.43
		DFN	0.38	0.92	1.49	3.48	3.34	3.51
	GDD's	'03	147	431	926	1638	2538	2962
		DFN	72	-6	-71	-79	-10	26

* DFN - how much a variable for year 2003 is greater or less (-) than the long-term average.

** Although the airport received above average rainfall the cooperator at this sight indicated rainfall levels were much lower than reported at the airport.

Source: USDA-SD-Crop-Weather report & SD Automatic Weather Data Network.

Table D. Conventional non-Roundup Ready entries by brand/hybrid, and yield table number(s).

Brand / Hybrid	Table No.	Brand / Hybrid	Table No.
AGSOURCE SEEDS/3933BT	5	AGSOURCE SEEDS/5713BT	10,11
AGSOURCE SEEDS/5983BT	10	AGSOURCE SEEDS/4123BT	5,9
AGSOURCE SEEDS/6163BT	10	AGSOURCE SEEDS/4403BT	5
AGSOURCE SEEDS/6183BT	12	AGSOURCE SEEDS/4663BT	6,9
AGSOURCE SEEDS/6203BT	12	AGSOURCE SEEDS/5153BT	6,9
ASGROW/RX702YG	11		
CROW'S/1695 B	1,3	CROW'S/438 B	10,11
CROW'S/1703 B	1,3,5,7	CROW'S/4911 B	10,11
CROW'S/2133	6,8,9	CROW'S/5202 B	12
CROW'S/3520 B	6,8,9	CROW'S/5366 B	12
DAIRYLAND/STEALTH-1497	2,4	DAIRYLAND/STEALTH-5194	1,3
DAIRYLAND/STEALTH-1606	10,11	DAIRYLAND/STEALTH-5497	2,4,5
DAIRYLAND/STEALTH-5104	6,8,9	DAIRYLAND/STEALTH1507BT	10,11
DAIRYLAND/STEALTH-5112	12		
DEKALB/DKC44-42 (YGCB)	1,3,5,7	DEKALB/DKC53-32 (YGCB)	2
DEKALB/DKC48-84 (YGCB)	2,4,7	DEKALB/DKC57-84 (YGCB)	6,10,11
DEKALB/DKC50-18 (YGCB)	2,4,5,7,9	DEKALB/DKC63-79 (YGCB)	12
DEKALB/DKC52-45 (YGCB)	4,6,8,9		
EPLEY/E1150BT	3,7	EPLEY/E2410BT	6,8,11
EPLEY/E1180BT	4,7	EPLEY/E2470	11
EPLEY/E1420BT	4,8,11	EPLEY/E2490BT	11
EPLEY/E1442	6,8,11	EPLEY/E3630BT	12
EPLEY/E1491	4,8	EPLEY/E3641	12
EPLEY/E1493	4,6,8		
GARST/8331YG1	12	GARST/8566YG1	11
GARST/8454YG1	12	GARST/8716	4,7
GARST/8545	11	GARST/8787YG1	4,8
GARST/8552YG1	11		
GOLD COUNTRY/100-01CL	7	GOLD COUNTRY/94-01CB	1,3
GOLD COUNTRY/1016BT	8	GOLD COUNTRY/96-04CB	2,4
GOLD COUNTRY/103-02CB	8		
HEINE/H640YGCB	1,3	HEINE/H810YGCB	11
HEINE/H728YGCB	2,5	HEINE/H824YGCB	12
HEINE/H745YGCB	11	HEINE/H827YGCB	12
HEINE/H763YGCB	11	HEINE/H838YGCB	12
HEINE/H790YGCB	11	HEINE/H851YGCB	12
HEINE/H792YGCB	11		
JACOBSEN/JS4339BT	8,11	JACOBSEN/JS4645BT	10,11
JACOBSEN/JS4440BT	11	JACOBSEN/JS4757BT	10,12
JACOBSEN/JS4637	11		
JUNG/6432BT	3	JUNG/6580BT	8

Table D. Conventional non-Roundup Ready entry yield table index (continued).

Brand / Hybrid	Table No.	Brand / Hybrid	Table No.
KALTENBERG/K4688BT	7		
KAYSTAR/KX-766	11	KAYSTAR/KX-890BT	12
KRUGER/EXP105 YGCB	6,8,9	KRUGER/K-9305 YGCB	8,9
KRUGER/EXP112 YGCB	11	KRUGER/K-9306 YGCB	8,9
KRUGER/EXP116 YGCB	12	KRUGER/K-9308 YGCB	8,10
KRUGER/EXP412 YGCB	10,11	KRUGER/K-9309 YGCB	8,10
KRUGER/EXP413 YGCB	10	KRUGER/K-9392 YGCB	1,3,7
KRUGER/K-9002 YGCB	2,7	KRUGER/K-9396 YGCB	1,3,5,7
KRUGER/K-9002+ YGCB	2,4,5,7	KRUGER/K-9403 YGCB	2,4,5,7,9
KRUGER/K-9111 YGCB	10,11	KRUGER/K-9404 YGCB	2,4,6,8,9
KRUGER/K-9114+ YGCB	12	KRUGER/K-9411 YGCB	10,11
KRUGER/K-9115 YGCB	12	KRUGER/K-9415	12
KRUGER/K-9203 YGCB	2,4,5,7	KRUGER/K-9492 YGCB	1,3,5,7
KRUGER/K-9206 YGCB	8	KRUGER/K-9496 YGCB	1,3,5,7
KRUGER/K-9208A	8	KRUGER/K-9910 YGCB	8,10
KRUGER/K-9212 YGCB	12		
MERSCHMAN/M-20108	11	MERSCHMAN/M-9104	11
MERSCHMAN/M-21104	11		
MIDWEST/G 6921 B	1,3	MIDWEST/G 7622 B	10,11
MIDWEST/G 6963 B	1,3,5,7	MIDWEST/G 7716 B	10,11
MIDWEST/G 7188	6,8,9	MIDWEST/G 8070 B	12
MIDWEST/G 7494 B	6,8,9	MIDWEST/G 8125 B	12
PFISTER/1680	5,7	PFISTER/EXP 1499BT	5,7
PFISTER/2656BT	11		
SABRE/3110BT	3	SABRE/4292BT	8
SABRE/3554BT	3,7	SABRE/4760	11
SABRE/3555CB	3,7	SABRE/4800BT	11
SABRE/4280BT	8		
SANDS/SOI 103YGCB	4,8	SANDS/SOI 9102	11
SANDS/SOI 9013	4,7	SANDS/SOI 9132	12
SANDS/SOI 9041	8	SANDS/SOI 9962	4,7
SEEDS 2000/2921BT	3	SEEDS 2000/2991	4,7
SEEDS 2000/2953BT	1,3,5,7	SEEDS 2000/3122BT	2,6,8
TOP FARM/EXP 3100C	4	TOP FARM/TFSX 2300	5
TOP FARM/EXP 3101B	8	TOP FARM/TFSX 2301	4,5
TOP FARM/EXP 3103D	6	TOP FARM/TFSX 2395	7
TOP FARM/EXP 3196	7		
WENSMAN/W 4212	1,3,5,7	WENSMAN/W 5117BT	1,3,5,7
WENSMAN/W 4418	10,11	WENSMAN/W 5212BT	1,3,5,7
WENSMAN/W 4437	10,11	WENSMAN/W 5314BT	2,4,6,8,9
WENSMAN/W 5081BT	1,3	WENSMAN/W 5417BT	6,8,10,11
WENSMAN/W 5085BT	3	WENSMAN/W 5437BT	11

Table 1. Warner, non-Roundup Ready, early corn hybrid results, 2002-2003. Allen and Inel Ryckman farm, test relative maturity is 95-day or less.

Brand / Hybrid	+Rel. Mat.	Yield- bu/a @15.5% mst. 2-yr	2003 Yield- bu/a @15.5% mst. 2003	2003 Bu. wt. lb	2003 Grain moist. pct	2003 Acre harvest pop.	2003 Green snap pct	2003 Lodged below ear pct
			Entries tested two years					
DEKALB/DKC44-42 (YGCB	94	194	214	57	14	28,314	0	0
WENSMAN/W 5212BT	95	192	203	58	14	27,443	0	4
KRUGER/K-9392 YGCB	89	191	209	59	14	27,297	0	0
SEEDS 2000/2953BT	95	190	196	57	15	27,733	0	11
GOLD COUNTRY/94-01CB	94	187	202	59	14	28,604	0	2
WENSMAN/W 4212	95	181	191	58	15	26,281	0	4
WENSMAN/W 5117BT	92	181	202	59	13	28,459	0	1
			Entries tested one year					
CROW'S/1703 B	95	.	212	59	15	28,895	0	1
MIDWEST/G 6963 B	95	.	210	59	15	28,749	0	1
DAIRYLAND/STEALTH-5194	94	.	205	59	14	28,024	0	2
MIDWEST/G 6921 B	92	.	203	59	14	27,297	0	3
HEINE/H640YGCB	94	.	203	60	15	27,443	0	6
CROW'S/1695 B	92	.	202	58	14	27,443	0	1
KRUGER/K-9496 YGCB	94	.	197	57	14	28,314	0	11
KRUGER/K-9492 YGCB	92	.	196	60	14	27,297	0	1
KRUGER/K-9396 YGCB	92	.	190	60	14	28,459	0	10
WENSMAN/W 5081BT	83	.	179	60	13	27,878	0	1
Test average:		188	200	59	14	27,854	0	4
LSD (5%) values:		NS	15	1	1	NS	.	8
Top group value*- Minimum:		181	199	59		26,281		
Maximum:					14		.	8
No. entries in top group:		7	11	11	12	17	.	14
Coef. of variation#:		4	5	1	5	3	.	.

\+ Relative maturity of hybrid as reported by seed company.
* Value is within one LSD value of the highest yield, bushel weight, or harvest population values; or the lowest grain moisture, green snap or lodging values.
NS indicates values within a column are not significantly different.
\# Measure of experimental error: values less than 15% are desired.

Table 2. Warner, non-Roundup Ready, late corn hybrid results, 2002-2003. Allen and Inel Ryckman farm, test relative maturity is 96-day or more.

Brand / Hybrid	+Rel. Mat.	Yield- bu/a @15.5% mst. 2-yr	2003	2003 Bu. wt. lb	2003 Grain moist. pct	2003 Acre harvest pop.	2003 Green snap pct	2003 Lodged below ear pct
			Entries tested two years					
DEKALB/DKC53-32 (YGCB	103	182	190	57	18	28,169	0	5
			Entries tested one year					
HEINE/H728YGCB	100	.	205	57	21	28,459	0	4
SEEDS 2000/3122BT	102	.	202	57	17	28,750	0	4
DEKALB/DKC50-18 (YGCB	100	.	198	60	17	28,169	0	7
DAIRYLAND/STEALTH-1497	96	.	195	58	14	27,733	0	4
DAIRYLAND/STEALTH-5497	97	.	193	58	14	27,007	0	7
DEKALB/DKC48-84 (YGCB	98	.	191	60	15	28,604	0	0
KRUGER/K-9203 YGCB	100	.	191	57	17	27,152	0	6
KRUGER/K-9403 YGCB	100	.	190	58	15	26,572	0	15
WENSMAN/W 5314BT	101	.	189	57	16	27,588	0	3
GOLD COUNTRY/96-04CB	96	.	180	58	19	24,103	0	5
KRUGER/K-9002 YGCB	100	.	175	59	15	28,023	0	6
KRUGER/K-9404 YGCB	101	.	174	60	18	26,862	0	1
KRUGER/K-9002+ YGCB	100	.	170	56	21	23,958	0	1
Test average:		182	189	58	17	27,225	0	5
LSD (5%) values:		.	NS	2	2	2,229	.	8
Top group value*- Minimum:		.	170	58		26,521		
Maximum:					16		.	8
No. entries in top group:		.	14	8	6	12	.	13
Coef. of variation#:		.	9	2	7	5	.	.

+ Relative maturity of hybrid as reported by seed company.
* Value is within one LSD value of the highest yield, bushel weight, or harvest population values; or the lowest grain moisture, green snap or lodging values.
NS indicates values within a column are not significantly different.
Measure of experimental error: values less than 15% are desired.

Table 3. South Shore, non-Roundup Ready, early corn hybrid results, 2002-2003. NE Research Farm, test relative maturity is 95-day or less.

Brand / Hybrid	+Rel. Mat.	Yield- bu/a @15.5% mst. 2-yr	2003	2003 Bu. wt. lb	2003 Grain moist. pct	2003 Acre harvest pop.	2003 Green snap pct	2003 Lodged below ear pct
			Entries tested two years					
KRUGER/K-9392 YGCB	89	125	95	58	16	28,023	0	4
WENSMAN/W 5212BT	95	125	83	57	16	27,878	0	19
SEEDS 2000/2953BT	95	124	84	57	16	27,443	0	21
WENSMAN/W 4212	95	121	78	58	16	27,733	0	12
DEKALB/DKC44-42 (YGCB	94	120	84	55	16	28,169	0	20
WENSMAN/W 5117BT	92	119	75	59	16	28,314	0	7
GOLD COUNTRY/94-01CB	94	117	73	57	16	28,024	0	20
SABRE/3555CB	95	111	71	58	16	28,750	0	21
KRUGER/K-9396 YGCB	92	95	68	59	17	28,459	0	2
			Entries tested one year					
JUNG/6432BT	95	.	87	57	17	28,314	0	21
CROW'S/1703 B	95	.	85	58	16	28,314	0	13
SABRE/3554BT	94	.	83	59	16	28,605	0	4
KRUGER/K-9496 YGCB	94	.	82	58	16	28,169	0	12
SEEDS 2000/2921BT	92	.	81	58	16	26,136	0	7
WENSMAN/W 5085BT	85	.	79	55	14	26,427	0	6
KRUGER/K-9492 YGCB	92	.	78	58	16	27,298	0	6
MIDWEST/G 6963 B	95	.	76	57	16	29,330	0	18
CROW'S/1695 B	92	.	75	58	16	28,750	0	8
MIDWEST/G 6921 B	92	.	75	58	16	27,443	0	9
EPLEY/E1150BT	95	.	74	61	17	29,621	0	5
HEINE/H640YGCB	94	.	73	60	17	28,459	0	3
SABRE/3110BT	91	.	71	60	17	26,427	0	3
WENSMAN/W 5081BT	83	.	71	57	15	29,040	0	15
DAIRYLAND/STEALTH-5194	94	.	71	58	16	27,153	0	14
Test average:		117	78	58	16	28,012	0	11
LSD (5%) values:		NS	NS	2	1	1,484	.	10
Top group value*- Minimum:		95	68	59		28,137		
Maximum:					15		.	12
No. entries in top group:		9	24	6	2	13	.	14
Coef. of variation#:		8	13	2	2	3	.	.

\+ Relative maturity of hybrid as reported by seed company.
* Value is within one LSD value of the highest yield, bushel weight, or harvest population values; or the lowest grain moisture, green snap or lodging values.
NS indicates values within a column are not significantly different.
\# Measure of experimental error: values less than 15% are desired.

Table 4. South Shore, non-Roundup Ready, late corn hybrid results, 2002-2003. NE Research Farm, test relative maturity is 96-day or more.

Brand / Hybrid	+Rel. Mat.	Yield- bu/a @15.5% mst. 2-yr	2003	2003 Bu. wt. lb	2003 Grain moist. pct	2003 Acre harvest pop.	2003 Green snap pct	2003 Lodged below ear pct
			Entries tested two years					
DAIRYLAND/STEALTH-1497	96	119	78	55	16	28,024	0	23
SANDS/SOI 9013	100	107	73	54	16	29,330	0	6
SANDS/SOI 9962	96	107	74	55	16	27,878	0	11
EPLEY/E1493	105	97	64	58	29	27,588	0	6
			Entries tested one year					
DEKALB/DKC50-18 (YGCB	100	.	81	56	19	28,314	0	4
DEKALB/DKC52-45 (YGCB	102	.	80	56	16	29,185	0	12
DEKALB/DKC48-84 (YGCB	98	.	79	56	19	28,459	0	6
DAIRYLAND/STEALTH-5497	97	.	74	55	16	26,862	0	14
SEEDS 2000/2991	99	.	73	56	20	27,152	0	45
WENSMAN/W 5314BT	101	.	69	53	19	27,878	0	21
GOLD COUNTRY/96-04CB	96	.	69	58	17	27,007	0	3
GARST/8787YG1	102	.	67	58	18	28,604	0	1
KRUGER/K-9203 YGCB	100	.	66	54	18	28,459	0	13
SANDS/SOI 103YGCB	103	.	65	55	19	29,040	0	4
TOP FARM/TFSX 2301	100	.	64	59	17	24,974	0	3
KRUGER/K-9002+ YGCB	100	.	64	55	23	24,829	0	1
EPLEY/E1180BT	100	.	62	54	25	29,476	0	80
KRUGER/K-9403 YGCB	100	.	61	57	22	25,991	0	6
GARST/8716	100	.	51	52	16	27,733	0	33
TOP FARM/EXP 3100C	96	.	49	55	21	28,459	0	3
EPLEY/E1491	105	.	49	55	26	27,152	0	9
KRUGER/K-9404 YGCB	101	.	47	54	16	28,895	0	6
EPLEY/E1420BT	101	.	45	57	25	28,314	0	24
Test average:		108	65	56	19	27,776	0	15
LSD (5%) values:		NS	8	3	1	1,911	.	16
Top group value*- Minimum:		97	73	56		27,565		
Maximum:					17		.	17
No. entries in top group:		4	8	10	9	16	.	17
Coef. of variation#:		7	7	3	4	4	.	.

+ Relative maturity of hybrid as reported by seed company.
* Value is within one LSD value of the highest yield, bushel weight, or harvest population values; or the lowest grain moisture, green snap or lodging values.
NS indicates values within a column are not significantly different.
Measure of experimental error: values less than 15% are desired.

Table 5. Yale, non-Roundup Ready, no-till early corn hybrid results, 2003. Kim Tschetter farm, test relative maturity is 100-day or less.

Brand / Hybrid	+Rel. Mat.	Yield- bu/a @15.5% mst. 2-yr	2003	Bu. wt. lb	Grain moist. pct	Acre harvest pop.	Green snap pct	Lodged below ear pct
				2003				
			Entries tested one year					
DEKALB/DKC44-42 (YGCB	94	.	105	53	11	28,169	0	2
WENSMAN/W 5117BT	92	.	102	55	12	27,152	0	2
AGSOURCE SEEDS/3933BT	96	.	100	55	12	26,717	0	3
KRUGER/K-9496 YGCB	94	.	99	54	12	27,298	0	1
DEKALB/DKC50-18 (YGCB	100	.	99	56	12	27,298	0	0
SEEDS 2000/2953BT	95	.	98	54	12	25,555	0	1
KRUGER/K-9492 YGCB	92	.	97	56	12	27,588	0	1
CROW'S/1703 B	95	.	96	55	12	26,136	0	3
MIDWEST/G 6963 B	95	.	95	54	12	26,717	0	4
WENSMAN/W 5212BT	95	.	94	54	12	26,862	0	1
DAIRYLAND/STEALTH-5497	97	.	91	55	12	25,265	0	1
WENSMAN/W 4212	95	.	89	54	12	25,410	0	4
AGSOURCE SEEDS/4123BT	98	.	89	57	13	27,443	0	20
TOP FARM/TFSX 2300	100	.	84	59	14	25,120	0	1
HEINE/H728YGCB	100	.	83	56	12	28,459	0	2
AGSOURCE SEEDS/4403BT	98	.	83	59	13	25,991	0	1
KRUGER/K-9403 YGCB	100	.	79	55	12	25,555	0	5
PFISTER/1680	99	.	77	57	13	28,314	0	0
TOP FARM/TFSX 2301	100	.	74	55	12	27,007	0	0
PFISTER/EXP 1499BT	98	.	73	57	12	25,700	0	3
KRUGER/K-9396 YGCB	92	.	71	56	12	26,426	0	4
KRUGER/K-9002+ YGCB	100	.	66	57	13	24,829	0	0
KRUGER/K-9203 YGCB	100	.	63	51	11	28,604	0	4
Test average:		.	87	55	12	26,679	0	3
LSD (5%) values:		.	11	2	1	2,398	.	5
Top group value*- Minimum:		.	94	57		26,206		
Maximum:					12		.	5
No. entries in top group:		.	10	6	18	14	.	22
Coef. of variation#:		.	8	2	5	5	.	.

\+ Relative maturity of hybrid as reported by seed company.
* Value is within one LSD value of the highest yield, bushel weight, or harvest population values; or the lowest grain moisture, green snap or lodging values.
NS indicates values within a column are not significantly different.
\# Measure of experimental error: values less than 15% are desired.

Table 6. Yale, non-Roundup Ready, no-till late corn hybrid results, 2003. Kim Tschetter farm, test relative maturity is 101-day or more.

Brand / Hybrid	+Rel. Mat.	Yield-bu/a @15.5% mst. 2-yr	Yield-bu/a @15.5% mst. 2003	2003 Bu. wt. lb	2003 Grain moist. pct	2003 Acre harvest pop.	2003 Green snap pct	2003 Lodged below ear pct
			Entries tested one year					
DEKALB/DKC52-45 (YGCB	102	.	92	54	11	28,169	0	0
EPLEY/E2410BT	107	.	89	60	13	27,588	0	3
EPLEY/E1442	104	.	85	57	12	28,459	0	2
DAIRYLAND/STEALTH-5104	104	.	85	57	12	28,605	0	2
DEKALB/DKC57-84 (YGCB	107	.	82	57	13	27,878	0	1
EPLEY/E1493	105	.	81	60	13	27,152	0	1
TOP FARM/EXP 3103D	103	.	78	54	11	27,298	0	4
AGSOURCE SEEDS/5153BT	105	.	78	57	12	26,427	0	1
MIDWEST/G 7188	102	.	77	54	11	27,733	0	5
KRUGER/EXP105 YGCB	103	.	76	58	13	28,459	0	3
WENSMAN/W 5417BT	107	.	74	59	14	25,410	0	2
CROW'S/2133	102	.	73	53	11	28,024	0	7
WENSMAN/W 5314BT	101	.	72	53	11	28,169	0	5
CROW'S/3520 B	104	.	71	60	13	28,314	0	0
SEEDS 2000/3122BT	102	.	70	53	11	27,733	0	2
AGSOURCE SEEDS/4663BT	103	.	67	57	13	28,604	0	4
MIDWEST/G 7494 B	103	.	66	59	13	28,314	0	0
KRUGER/K-9404 YGCB	101	.	62	58	13	27,733	0	3
Test average:		.	77	57	12	27,782	0	3
LSD (5%) values:		.	13	2	1	NS	.	2
Top group value*- Minimum:		.	79	58		25,410		
Maximum:					12		.	2
No. entries in top group:		.	6	7	9	18	.	10
Coef. of variation#:		.	6	2	2	4	.	.

\+ Relative maturity of hybrid as reported by seed company.
* Value is within one LSD value of the highest yield, bushel weight, or harvest population values; or the lowest grain moisture, green snap or lodging values.
NS indicates values within a column are not significantly different.
\# Measure of experimental error: values less than 15% are desired.

Table 7. Brookings, non-Roundup Ready, early corn hybrid results, 2002-2003. SDSU Agronomy Farm, test relative maturity is 100-day or less.

Brand / Hybrid	+Rel. Mat.	Yield- bu/a @15.5% mst. 2-yr	2003	2003 Bu. wt. lb	2003 Grain moist. pct	2003 Acre harvest pop.	2003 Green snap pct	2003 Lodged below ear pct
			Entries tested two years					
WENSMAN/W 5212BT	95	174	187	58	15	28,459	0	1
DEKALB/DKC44-42 (YGCB	94	174	180	57	14	28,169	0	1
SEEDS 2000/2953BT	95	168	178	57	15	27,298	0	1
WENSMAN/W 5117BT	92	166	178	59	14	28,459	0	0
SABRE/3555CB	95	160	184	58	15	28,895	0	0
SANDS/SOI 9962	96	160	177	58	15	27,298	0	0
WENSMAN/W 4212	95	158	170	57	14	27,878	0	1
PFISTER/1680	99	142	183	58	18	28,314	0	1
KRUGER/K-9002 YGCB	100	134	169	58	15	27,588	0	0
SEEDS 2000/2991	99	133	164	56	15	28,459	0	2
GOLD COUNTRY/100-01CL	100	133	152	60	18	27,298	0	0
			Entries tested one year					
CROW'S/1703 B	95	.	189	57	15	28,605	0	1
TOP FARM/TFSX 2395	94	.	189	58	15	27,879	0	0
DEKALB/DKC50-18 (YGCB	100	.	187	58	15	28,895	0	0
KRUGER/K-9496 YGCB	94	.	185	58	15	29,330	0	1
MIDWEST/G 6963 B	95	.	183	58	15	28,604	0	1
DEKALB/DKC48-84 (YGCB	98	.	180	58	15	28,459	0	1
SABRE/3554BT	94	.	179	59	14	28,459	0	0
KALTENBERG/K4688BT	96	.	176	58	15	27,298	0	2
KRUGER/K-9392 YGCB	89	.	176	58	14	27,878	0	0
KRUGER/K-9492 YGCB	92	.	174	57	14	28,314	0	0
EPLEY/E1180BT	100	.	173	57	18	28,024	0	2
KRUGER/K-9396 YGCB	92	.	170	59	15	28,314	0	1
SANDS/SOI 9013	100	.	169	56	15	28,459	0	2
KRUGER/K-9002+ YGCB	100	.	168	57	19	27,007	0	1
TOP FARM/EXP 3196	95	.	167	59	15	28,169	0	0
KRUGER/K-9403 YGCB	100	.	166	56	15	26,572	0	1
PFISTER/EXP 1499BT	98	.	165	58	15	27,588	0	1
EPLEY/E1150BT	95	.	164	58	15	27,878	0	1
GARST/8716	100	.	163	60	16	28,749	0	1
KRUGER/K-9203 YGCB	100	.	162	56	14	28,314	0	1
Test average:		155	174	58	15	28,094	0	1
LSD (5%) values:		NS	10	1	1	NS	.	NS
Top group value*- Minimum:		133	179	59		26,572		
Maximum:					15		.	2
No. entries in top group:		11	11	6	26	31	.	31
Coef. of variation#:		5	4	1	3	3	.	.

\+ Relative maturity of hybrid as reported by seed company.
* Value is within one LSD value of the highest yield, bushel weight, or harvest population values; or the lowest grain moisture, green snap or lodging values.
NS indicates values within a column are not significantly different.
\# Measure of experimental error: values less than 15% are desired.

Table 8. Brookings, non-Roundup Ready, late corn hybrid results, 2002-2003. SDSU Agronomy Farm, test relative maturity is 101-day or more.

Brand / Hybrid	+Rel. Mat.	Yield- bu/a @15.5% mst. 2-yr	2003	2003 Bu. wt. lb	2003 Grain moist. pct	2003 Acre harvest pop.	2003 Green snap pct	2003 Lodged below ear pct
			Entries tested two years					
KRUGER/K-9208A	106	172	187	55	17	28,750	0	0
EPLEY/E1493	105	166	180	57	19	28,314	0	1
WENSMAN/W 5417BT	107	164	180	55	20	28,459	0	1
KRUGER/K-9910 YGCB	108	161	170	54	21	28,169	0	1
SANDS/SOI 9041	104	157	172	59	20	27,878	0	1
KRUGER/K-9306 YGCB	104	153	182	55	18	28,169	0	0
GOLD COUNTRY/1016BT	104	144	176	55	15	28,750	0	1
KRUGER/K-9309 YGCB	108	142	163	55	21	28,895	0	1
			Entries tested one year					
DAIRYLAND/STEALTH-5104	104	.	190	57	20	28,750	0	1
GOLD COUNTRY/103-02CB	105	.	188	57	20	28,895	0	1
DEKALB/DKC52-45 (YGCB	102	.	186	57	14	28,750	0	0
TOP FARM/EXP 3101B	101	.	182	56	16	28,459	0	0
EPLEY/E1442	104	.	181	57	18	28,604	0	0
KRUGER/K-9206 YGCB	104	.	180	58	19	27,588	0	1
EPLEY/E2410BT	107	.	179	57	19	28,459	0	2
JACOBSEN/JS4339BT	106	.	179	57	18	28,024	0	1
EPLEY/E1491	105	.	179	57	20	29,040	0	2
SANDS/SOI 103YGCB	103	.	176	55	16	28,459	0	0
SEEDS 2000/3122BT	102	.	174	56	15	28,459	0	2
MIDWEST/G 7188	102	.	167	55	15	28,314	0	1
CROW'S/3520 B	104	.	166	56	22	28,750	0	0
MIDWEST/G 7494 B	103	.	166	57	21	28,169	0	0
KRUGER/K-9308 YGCB	109	.	166	52	20	27,733	0	1
EPLEY/E1420BT	101	.	166	57	16	29,040	0	2
GARST/8787YG1	102	.	164	58	17	28,459	0	0
KRUGER/K-9305 YGCB	105	.	164	56	17	27,733	0	1
CROW'S/2133	102	.	163	55	14	28,895	0	0
SABRE/4280BT	102	.	163	55	15	28,459	0	3
WENSMAN/W 5314BT	101	.	161	55	15	27,733	0	1
KRUGER/K-9404 YGCB	101	.	159	59	17	28,459	0	0
JUNG/6580BT	104	.	159	58	18	29,040	0	0
KRUGER/EXP105 YGCB	103	.	159	56	18	27,588	0	2
SABRE/4292BT	102	.	154	58	17	28,459	0	0
Test average:		157	172	56	18	28,415	0	1
LSD (5%) values:		NS	15	2	2	NS	.	NS
Top group value*- Minimum:		142	175	57		27,588		
Maximum:					16		.	3
No. entries in top group:		8	15	16	10	33	.	33
Coef. of variation#:		8	5	2	6	3	.	.

\+ Relative maturity of hybrid as reported by seed company.
* Value is within one LSD value of the highest yield, bushel weight, or harvest population values; or the lowest grain moisture, green snap or lodging values.
NS indicates values within a column are not significantly different.
\# Measure of experimental error: values less than 15% are desired.

Table 9. Armour, non-Roundup Ready, no-till early corn hybrid results, 2003. Mark and Cletus Wiechmann farm, test relative maturity is 105-day or less.

Brand / Hybrid	+Rel. Mat.	Yield- bu/a @15.5% mst. 2-yr	Yield- bu/a @15.5% mst. 2003	2003 Bu. wt. lb	2003 Grain moist. pct	2003 Acre harvest pop.	2003 Green snap pct	2003 Lodged below ear pct
			Entries tested one year					
DEKALB/DKC50-18 (YGCB	100	.	92	54	14	25,410	0	5
DEKALB/DKC52-45 (YGCB	102	.	92	52	13	26,281	0	3
AGSOURCE SEEDS/5153BT	105	.	89	54	13	25,265	0	1
KRUGER/K-9305 YGCB	105	.	88	54	13	24,974	0	0
KRUGER/K-9306 YGCB	104	.	87	50	13	26,862	0	0
DAIRYLAND/STEALTH-5104	104	.	81	52	13	25,991	0	2
MIDWEST/G 7188	102	.	75	50	12	25,701	0	6
KRUGER/K-9403 YGCB	100	.	74	50	12	23,377	0	5
CROW'S/2133	102	.	74	50	12	26,427	0	2
KRUGER/EXP105 YGCB	103	.	72	53	13	26,572	0	6
CROW'S/3520 B	104	.	71	54	14	24,829	0	0
MIDWEST/G 7494 B	103	.	71	54	14	25,265	0	1
AGSOURCE SEEDS/4123BT	98	.	70	52	13	26,281	0	7
WENSMAN/W 5314BT	101	.	69	49	12	24,829	0	10
AGSOURCE SEEDS/4663BT	103	.	66	52	13	25,410	0	5
KRUGER/K-9404 YGCB	101	.	57	52	14	26,281	0	0
Test average:		.	77	52	13	25,610	0	3
LSD (5%) values:		.	10	2	0	NS	.	7
Top group value*- Minimum:		.	82	52		23,377		
Maximum:					12		.	7
No. entries in top group:		.	5	11	4	16	.	15
Coef. of variation#:		.	8	3	2	6	.	.

+ Relative maturity of hybrid as reported by seed company.
* Value is within one LSD value of the highest yield, bushel weight, or harvest population values; or the lowest grain moisture, green snap or lodging values.
NS indicates values within a column are not significantly different.
Measure of experimental error: values less than 15% are desired.

Table 10. Armour, non-Roundup Ready, no-till late corn hybrid results, 2003. Mark and Cletus Wiechmann farm, test relative maturity is 106-day or more.

Brand / Hybrid	+Rel. Mat.	Yield- bu/a @15.5% mst. 2-yr	2003	2003 Bu. wt. lb	2003 Grain moist. pct	2003 Acre harvest pop.	2003 Green snap pct	2003 Lodged below ear pct
			Entries tested one year					
DEKALB/DKC57-84 (YGCB	107	.	91	54	14	27,297	0	0
DAIRYLAND/STEALTH-1606	106	.	82	52	14	27,588	0	0
KRUGER/K-9309 YGCB	108	.	81	54	14	25,119	0	1
KRUGER/K-9308 YGCB	109	.	80	54	14	24,829	0	1
KRUGER/EXP413 YGCB	111	.	79	54	14	22,796	0	1
MIDWEST/G 7716 B	110	.	79	55	14	25,265	0	1
AGSOURCE SEEDS/6163BT	111	.	79	56	14	26,427	0	0
KRUGER/K-9111 YGCB	110	.	78	54	14	24,974	0	0
DAIRYLAND/STEALTH1507BT	108	.	78	54	14	26,717	0	2
MIDWEST/G 7622 B	108	.	78	54	14	25,120	0	0
AGSOURCE SEEDS/5713BT	108	.	77	54	14	25,265	0	1
AGSOURCE SEEDS/5983BT	110	.	77	54	15	26,136	0	1
KRUGER/K-9411 YGCB	109	.	75	51	13	24,248	0	3
WENSMAN/W 4437	109	.	75	52	14	25,845	0	0
JACOBSEN/JS4645BT	110	.	74	55	15	26,136	0	0
WENSMAN/W 4418	106	.	72	53	14	21,780	0	1
WENSMAN/W 5417BT	107	.	72	53	14	25,555	0	0
KRUGER/EXP412 YGCB	110	.	68	55	14	24,394	0	0
CROW'S/438 B	108	.	63	53	13	23,958	0	3
KRUGER/K-9910 YGCB	108	.	60	51	14	24,248	0	3
JACOBSEN/JS4757BT	112	.	58	51	15	24,103	0	1
CROW'S/4911 B	110	.	56	50	14	26,717	0	0
Test average:		.	74	53	14	25,205	0	1
LSD (5%) values:		.	16	3	1	NS	.	NS
Top group value*- Minimum:		.	75	53		21,780		
Maximum:					14		.	3
No. entries in top group:		.	14	16	19	22	.	22
Coef. of variation#:		.	13	4	3	8	.	.

\+ Relative maturity of hybrid as reported by seed company.
* Value is within one LSD value of the highest yield, bushel weight, or harvest population values; or the lowest grain moisture, green snap or lodging values.
NS indicates values within a column are not significantly different.
\# Measure of experimental error: values less than 15% are desired.

Table 11. Beresford, non-Roundup Ready, early corn hybrid results, 2002-2003. SE Research Farm, test relative maturity is 110-day or less.

Brand / Hybrid	+Rel. Mat.	Yield- bu/a @15.5% mst. 2-yr	2003	2003 Bu. wt. lb	2003 Grain moist. pct	2003 Acre harvest pop.	2003 Green snap pct	2003 Lodged below ear pct
			Entries tested two years					
WENSMAN/W 4437	109	184	188	58	16	26,136	0	0
HEINE/H745YGCB	106	183	195	61	12	27,733	0	0
DAIRYLAND/STEALTH1507BT	108	182	191	58	17	28,895	0	0
WENSMAN/W 4418	106	174	178	58	15	24,539	0	1
WENSMAN/W 5417BT	107	172	176	57	15	27,152	0	0
MERSCHMAN/M-20108	108	169	177	58	16	28,169	0	0
JACOBSEN/JS4645BT	110	167	164	58	17	26,862	0	0
JACOBSEN/JS4637	110	167	166	58	15	27,733	0	1
SANDS/SOI 9102	110	164	175	59	16	28,459	0	1
HEINE/H790YGCB	108	163	155	58	17	28,048	0	1
EPLEY/E2470	110	160	156	58	14	27,878	0	1
			Entries tested one year					
KRUGER/K-9111 YGCB	110	.	195	58	18	27,152	0	0
KRUGER/K-9411 YGCB	109	.	190	59	18	24,248	0	1
CROW'S/438 B	108	.	190	58	17	27,878	0	0
SABRE/4800BT	108	.	189	58	16	27,298	0	0
GARST/8566YG1	109	.	187	58	16	27,443	0	0
ASGROW/RX702YG	110	.	186	60	18	26,862	0	1
EPLEY/E2490BT	110	.	184	57	16	27,879	0	1
DEKALB/DKC57-84 (YGCB	107	.	182	60	15	28,024	0	0
GARST/8552YG1	108	.	182	56	16	27,152	0	0
MIDWEST/G 7716 B	110	.	180	58	17	28,024	0	0
WENSMAN/W 5437BT	110	.	177	58	16	27,152	0	1
GARST/8545	109	.	177	59	16	27,588	0	1
EPLEY/E1420BT	101	.	173	59	15	29,040	0	2
SABRE/4760	107	.	171	58	16	27,007	0	0
EPLEY/E2410BT	107	.	171	61	17	28,605	0	1
KAYSTAR/KX-766	110	.	170	59	16	27,733	0	0
DAIRYLAND/STEALTH-1606	106	.	169	58	14	27,878	0	0
HEINE/H763YGCB	107	.	164	58	17	27,007	0	2
KRUGER/EXP112 YGCB	110	.	164	56	17	27,733	0	1
HEINE/H792YGCB	109	.	164	57	15	27,588	0	1

Table 11. Beresford, non-Roundup Ready, early hybrid results (continued).

Brand / Hybrid	+Rel. Mat.	Yield- bu/a @15.5% mst. 2-yr	2003	2003 Bu. wt. lb	2003 Grain moist. pct	2003 Acre harvest pop.	2003 Green snap pct	2003 Lodged below ear pct
		Entries tested one year						
AGSOURCE SEEDS/5713BT	108	.	163	59	16	26,572	0	0
MERSCHMAN/M-9104	104	.	162	58	14	28,895	0	1
EPLEY/E1442	104	.	160	58	14	28,459	0	0
JACOBSEN/JS4440BT	108	.	159	59	16	27,878	0	2
PFISTER/2656BT	110	.	159	58	15	26,862	0	1
MIDWEST/G 7622 B	108	.	159	56	16	28,017	0	0
MERSCHMAN/M-21104	104	.	157	59	15	26,862	0	1
JACOBSEN/JS4339BT	106	.	156	58	14	26,862	0	0
HEINE/H810YGCB	110	.	156	58	16	26,136	0	0
CROW'S/4911 B	110	.	152	58	15	28,023	0	0
KRUGER/EXP412 YGCB	110	.	150	59	18	25,846	0	0
Test average:		171	172	58	16	27,446	0	0
LSD (5%) values:		NS	17	2	2	NS	.	NS
Top group value*- Minimum:		160	178	59		24,248		
Maximum:					14		.	2
No. entries in top group:		11	14	13	6	42	.	42
Coef. of variation#:		8	6	2	9	6	.	.

\+ Relative maturity of hybrid as reported by seed company.
* Value is within one LSD value of the highest yield, bushel weight, or harvest population values; or the lowest grain moisture, green snap or lodging values.
NS indicates values within a column are not significantly different.
\# Measure of experimental error: values less than 15% are desired.

Table 12. Beresford, non-Roundup Ready, late corn hybrid results, 2002-2003. SE Research Farm, test relative maturity is 111-day or more.

Brand / Hybrid	+Rel. Mat.	Yield- bu/a @15.5% mst. 2-yr	2003	2003 Bu. wt. lb	2003 Grain moist. pct	2003 Acre harvest pop.	2003 Green snap pct	2003 Lodged below ear pct
			Entries tested two years					
AGSOURCE SEEDS/6183BT	111	183	176	57	20	27,152	0	1
SANDS/SOI 9132	113	175	168	59	16	24,394	0	1
EPLEY/E3630BT	113	165	169	58	18	28,604	0	0
AGSOURCE SEEDS/6203BT	112	164	144	58	18	26,717	0	0
			Entries tested one year					
DEKALB/DKC63-79 (YGCB	113	.	176	60	20	28,314	0	0
JACOBSEN/JS4757BT	112	.	174	57	21	27,443	0	1
GARST/8454YG1	112	.	171	58	16	28,605	0	1
CROW'S/5366 B	114	.	170	58	18	27,588	0	0
KRUGER/K-9114+ YGCB	115	.	169	58	17	27,879	0	1
KRUGER/K-9212 YGCB	113	.	169	58	15	27,878	0	0
KRUGER/K-9115 YGCB	115	.	168	59	18	27,878	0	0
HEINE/H827YGCB	111	.	166	58	18	26,717	0	0
KRUGER/K-9415	114	.	165	56	17	27,588	0	0
HEINE/H851YGCB	113	.	165	58	19	27,878	0	0
MIDWEST/G 8125 B	114	.	164	58	20	26,862	0	0
HEINE/H838YGCB	113	.	163	58	14	28,169	0	0
KAYSTAR/KX-890BT	112	.	163	58	17	27,152	0	1
DAIRYLAND/STEALTH-5112	111	.	162	58	16	27,588	0	0
KRUGER/EXP116 YGCB	114	.	161	58	24	27,878	0	0
GARST/8331YG1	114	.	161	59	22	28,314	0	0
EPLEY/E3641	114	.	160	58	16	29,185	0	0
HEINE/H824YGCB	112	.	160	60	20	27,152	0	1
CROW'S/5202 B	113	.	157	57	20	28,459	0	0
MIDWEST/G 8070 B	113	.	151	58	17	28,459	0	0
Test average:		172	165	58	18	27,661	0	0
LSD (5%) values:		NS	NS	1	3	1,456	.	1
Top group value*- Minimum:		164	144	59		27,729		
Maximum:					17		.	1
No. entries in top group:		4	24	5	10	13	.	24
Coef. of variation#:		6	7	1	9	3	.	.

\+ Relative maturity of hybrid as reported by seed company.
* Value is within one LSD value of the highest yield, bushel weight, or harvest population values; or the lowest grain moisture, green snap or lodging values.
NS indicates values within a column are not significantly different.
\# Measure of experimental error: values less than 15% are desired.

Table E. Roundup Ready™ entries by brand/hybrid, and yield table number(s).

Brand / Hybrid	Table No.	Brand / Hybrid	Table No.
AGSOURCE/3931RR	17	AGSOURCE/5921RR	23
AGSOURCE/4306RR/BT	21	AGSOURCE/5986RR/BT	22,23
AGSOURCE/5206RR/BT	18,21	AGSOURCE/6166BTR	22,24
AGSOURCE/5216RR/BT	21	AGSOURCE/6886BTR	24
AGSOURCE/5356RR/BT	18,22	ASGROW/RX601RR/YG	21,23
AGSOURCE/5456RR/BT	18,22		
CHANNEL/6925RB	13,15,19	CHANNEL/7406R	20,21
CHANNEL/6939RB	13,15,19	CHANNEL/7624RB	22,23
CHANNEL/6999RB	16,17	CHANNEL/7806RB	22,23
CHANNEL/7091RB	16,18,20	CHANNEL/8075RB	24
CHANNEL/7128RB	18,20,21	CHANNEL/8127RB	24
CHANNEL/7135RB	18,20,21		
DEKALB/DKC39-48 RRYGCB	13,15	DEKALB/DKC53-34 RRYGCB	14,18,21
DEKALB/DKC40-63 (RR)	15	DEKALB/DKC58-24 RRYGCB	18,20,22,23
DEKALB/DKC42-95 RRYGCB	13,15,19	DEKALB/DKC60-09 RRYGCB	22,23
DEKALB/DKC44-46 RRYGCB	13,15,17,19	DEKALB/DKC60-17 (RR)	23
DEKALB/DKC46-28 (RR)	16,19	DEKALB/DKC60-19 RRYGCB	22
DEKALB/DKC47-10 RRYGCB	14,17,21		
EPLEY/E1165RR	19,21	EPLEY/E14R95BT	18,20,22
EPLEY/E1445RR	18,20,21	EPLEY/E2425RR	18,20,22
EPLEY/E1485RR	19,21		
GARST/8487YG1/RR	24	GARST/8782RR	16,19
GARST/8510YG1/RR	23	GARST/8812YG1/RR	16
GARST/8553RR	20,23		
GOLD COUNTRY/1016RRBT	16,18,20	GOLD COUNTRY/92-01CBR	13
GOLD COUNTRY/104-01CBR	20	GOLD COUNTRY/94-01RR	15
GOLD COUNTRY/105-03R	20		
HEINE/H625RR/YGCB	13,15	HEINE/H725RR/YGCB	17
HEINE/H650RR/YGCB	13,15	HEINE/H8490RR/YGCB	23
HEINE/H722RR	17		
INTEGRA/INT 6193RRYGCB	13,15	INTEGRA/INT 6300RRYGCB	14,16,17,19
INTEGRA/INT 6208RRYGCB	22,23	INTEGRA/INT 6312RRYGCB	22,24
INTEGRA/INT 6290RR	13,15	INTEGRA/INT 6395RR	13,15,17,19
JACOBSEN/JS4615RBT	22,24	JACOBSEN/JS4655RBT	24
JACOBSEN/JS4637R	22,23	JACOBSEN/JS4748RBT	22

Table E. Roundup Ready™ entries by brand/hybrid, and yield table number(s) (continued).

Brand / Hybrid	Table No.	Brand / Hybrid	Table No.
JUNG/6205RR/BT	15	JUNG/6560ARR/BT	20
JUNG/6418RR/BT	15,19	JUNG/6580RR/BT	20
KALTENBERG/K5711RR	23	KALTENBERG/K6788RR	23
KAYSTAR/KX-4000RRBT	13,15,17	KAYSTAR/KX-777RRBT	18
KAYSTAR/KX-4250RRBT	13,15,17,19	KAYSTAR/KX-780RR	22,23
KAYSTAR/KX-5150RR	13,15,17,19	KAYSTAR/KX-8551RR	22,24
KAYSTAR/KX-6261RR	21	KAYSTAR/KX-8770RRBT	24
KAYSTAR/KX-6500RRBT	18,20,21,23		
KRUGER/EXP104 RR/YGCB	18	KRUGER/K-9299A RR/YGCB	14
KRUGER/EXP9492 RR/YGRW	13	KRUGER/K-9300 RR/YGCB	14,16,17
KRUGER/K-9002 RR/YGCB	14,16,17	KRUGER/K-9392 RR	13,15
KRUGER/K-9111 RR/YGCB	22	KRUGER/K-9392 RR/YGCB	13,15
KRUGER/K-9115 RR/YGCB	24	KRUGER/K-9404 RR/YGCB	16,18
KRUGER/K-9203 RR/YGCB	14,16,17	KRUGER/K-9491 RR/YGCB	13,15
KRUGER/K-9212 RR/YGCB	24	KRUGER/K-9496 RR	13,15
KRUGER/K-9299A RR	16,17		
PFISTER/1553 RR-BT	19,21	PFISTER/2656 RR	23
SABRE/3554RRBT	13,15,19	SABRE/4280RRBT	20
SABRE/3555RR	13,15,19	SABRE/4320RRBT	20
SEEDS 2000/2944RRBT	13,19	SEEDS 2000/3122RRBT	18
SEEDS 2000/2953RR	13,15,19	SEEDS 2000/3171RR	22
TOP FARM/8200RY	16,19	TOP FARM/8395RR	15,17,19
TOP FARM/8391R	15	TOP FARM/EXP3103ER	18,20
TRIUMPH/1120BTRR	23	TRIUMPH/3421RR	21
TRIUMPH/2370RR	17,21	TRIUMPH/9066RR	13,17
WENSMAN/W 6089RRBT	13,15	WENSMAN/W 6212RR	13,15,17,19
WENSMAN/W 6116RR	13,15,17,19	WENSMAN/W 6315RRBT	14,16,18,20,21
WENSMAN/W 6117RRBT	13,15,17,19	WENSMAN/W 6421RR	18,20,22,23

Table 13. Warner, Roundup Ready™, early corn hybrid results, 2002-2003. Allen and Inel Ryckman farm, test relative maturity is 95-day or less.

Brand / Hybrid	+Rel. Mat.	Yield-bu/a @15.5% mst. 2-yr	2003	2003 Bu. wt. lb	2003 Grain moist. pct	2003 Acre harvest pop.	2003 Green snap pct	2003 Lodged below ear pct
			Entries tested two years					
DEKALB/DKC44-46 RRYGCB	94	192	205	60	16	28,314	0	3
WENSMAN/W 6212RR	95	191	201	59	15	28,459	0	5
INTEGRA/INT 6193RRYGCB	93	184	200	59	14	27,152	0	3
INTEGRA/INT 6290RR	92	166	181	59	14	27,443	0	6
			Entries tested one year					
WENSMAN/W 6117RRBT	92	.	201	61	14	26,862	0	6
KRUGER/K-9491 RR/YGCB	91	.	201	60	14	25,845	0	2
GOLD COUNTRY/92-01CBR	92	.	199	61	14	28,459	0	6
KRUGER/EXP9492 RR/YGRW	90	.	198	59	15	27,733	0	5
SABRE/3555RR	95	.	198	60	14	28,750	0	2
DEKALB/DKC42-95 RRYGCB	92	.	196	60	14	28,895	0	5
CHANNEL/6939RB	93	.	196	60	13	26,281	0	6
SEEDS 2000/2944RRBT	94	.	196	60	14	24,539	0	1
SABRE/3554RRBT	94	.	196	61	14	27,878	0	5
KAYSTAR/KX-4250RRBT	93	.	195	61	14	27,879	0	5
KAYSTAR/KX-4000RRBT	91	.	195	61	14	25,265	0	5
HEINE/H625RR/YGCB	93	.	193	60	14	25,700	0	1
KAYSTAR/KX-5150RR	95	.	193	58	15	27,588	0	7
WENSMAN/W 6116RR	91	.	192	60	14	25,991	0	7
KRUGER/K-9496 RR	94	.	191	59	16	27,878	0	12
CHANNEL/6925RB	92	.	189	60	13	27,443	0	7
SEEDS 2000/2953RR	95	.	189	59	16	27,588	0	6
KRUGER/K-9392 RR/YGCB	90	.	187	60	14	25,846	0	1
WENSMAN/W 6089RRBT	84	.	187	62	14	26,571	0	4
HEINE/H650RR/YGCB	93	.	185	61	14	27,298	0	8
INTEGRA/INT 6395RR	95	.	180	58	15	26,862	0	5
DEKALB/DKC39-48 RRYGCB	89	.	175	59	15	24,829	0	9
KRUGER/K-9392 RR	90	.	173	60	13	25,700	0	4
TRIUMPH/9066RR	90	.	170	60	13	23,958	0	4
Test average:		184	191	60	14	26,893	0	5
LSD (5%) values:		12	14	2	1	1,986	.	5
Top group value*- Minimum:		180	191	60		26,910		
Maximum:					14		.	6
No. entries in top group:		3	18	19	20	15	.	22
Coef. of variation#:		4	4	2	6	5	.	.

\+ Relative maturity of hybrid as reported by seed company.
* Value is within one LSD value of the highest yield, bushel weight, or harvest population values; or the lowest grain moisture, green snap or lodging values.
NS indicates values within a column are not significantly different.
\# Measure of experimental error: values less than 15% are desired.

Table 14. Warner, Roundup Ready™, late corn hybrid results, 2002-2003. Allen and Inel Ryckman farm, test relative maturity is 96-day or more.

Brand / Hybrid	+Rel. Mat.	Yield- bu/a @15.5% mst. 2-yr	2003	2003 Bu. wt. lb	2003 Grain moist. pct	2003 Acre harvest pop.	2003 Green snap pct	2003 Lodged below ear pct
			Entries tested two years					
DEKALB/DKC53-34 RRYGCB	103	187	202	57	19	28,895	0	4
			Entries tested one year					
KRUGER/K-9203 RR/YGCB	100	.	199	56	19	27,588	0	6
WENSMAN/W 6315RRBT	101	.	197	57	18	28,314	0	7
KRUGER/K-9002 RR/YGCB	100	.	187	58	21	27,298	0	1
INTEGRA/INT 6300RRYGCB	100	.	184	58	19	27,298	0	3
KRUGER/K-9299A RR/YGCB	100	.	182	58	15	28,169	0	3
KRUGER/K-9300 RR/YGCB	96	.	178	57	16	26,862	0	3
Test average:		187	191	58	17	27,878	0	5
LSD (5%) values:		.	14	1	2	NS	.	3
Top group value*- Minimum:		.	188	60		26,862		
Maximum:					16		.	4
No. entries in top group:		.	4	1	2	8	.	5
Coef. of variation#:		.	4	1	6	4	.	.

\+ Relative maturity of hybrid as reported by seed company.
* Value is within one LSD value of the highest yield, bushel weight, or harvest population values; or the lowest grain moisture, green snap or lodging values.
NS indicates values within a column are not significantly different.
\# Measure of experimental error: values less than 15% are desired.

Table 15. South Shore, Roundup Ready™, early corn hybrid results, 2000-2003. NE Research Farm, test relative maturity is 95-day or less.

Brand / Hybrid	+Rel. Mat.	Yield- bu/a @15.5% mst. 2-yr	2003	2003 Bu. wt. lb	2003 Grain moist. pct	2003 Acre harvest pop.	2003 Green snap pct	2003 Lodged below ear pct
			Entries tested two years					
INTEGRA/INT 6193RRYGCB	93	119	78	55	15	27,007	0	8
DEKALB/DKC44-46 RRYGCB	94	118	80	54	18	27,588	0	15
CHANNEL/6925RB	92	113	78	57	16	23,377	0	2
WENSMAN/W 6212RR	95	113	77	58	16	27,733	0	6
			Entries tested one year					
DEKALB/DKC42-95 RRYGCB	92	.	88	56	17	29,040	0	3
WENSMAN/W 6089RRBT	84	.	86	58	15	27,152	0	6
JUNG/6418RR/BT	92	.	86	58	16	26,862	0	9
SABRE/3555RR	95	.	84	57	16	25,991	0	11
KRUGER/K-9491 RR/YGCB	91	.	84	56	15	26,717	0	2
SABRE/3554RRBT	94	.	84	59	16	27,443	0	7
WENSMAN/W 6117RRBT	92	.	82	58	16	25,120	0	9
KAYSTAR/KX-4250RRBT	93	.	81	58	16	28,314	0	7
GOLD COUNTRY/94-01RR	94	.	81	57	16	27,152	0	6
KRUGER/K-9392 RR/YGCB	90	.	81	57	17	24,248	0	3
WENSMAN/W 6116RR	91	.	80	57	16	26,717	0	2
HEINE/H625RR/YGCB	93	.	80	55	15	27,297	0	9
INTEGRA/INT 6395RR	95	.	79	57	16	27,588	0	10
SEEDS 2000/2953RR	95	.	79	57	17	26,281	0	13
KAYSTAR/KX-4000RRBT	91	.	79	54	15	27,153	0	4
CHANNEL/6939RB	93	.	78	56	15	25,991	0	1
KAYSTAR/KX-5150RR	95	.	76	56	16	27,733	0	13
KRUGER/K-9496 RR	94	.	76	57	16	28,459	0	8
HEINE/H650RR/YGCB	93	.	76	58	16	27,153	0	1
DEKALB/DKC39-48 RRYGCB	89	.	76	57	16	23,232	0	9
TOP FARM/8395RR	95	.	76	58	16	24,394	0	9
KRUGER/K-9392 RR	90	.	76	57	16	26,426	0	3
TOP FARM/8391R	91	.	75	56	15	26,136	0	1
DEKALB/DKC40-63 (RR)	90	.	70	56	15	27,733	0	9
JUNG/6205RR/BT	82	.	68	55	15	26,572	0	31
INTEGRA/INT 6290RR	92	.	56	52	16	28,314	0	13
Test average:		116	78	57	16	26,697	0	8
LSD (5%) values:		NS	11	2	1	1,636	.	8
Top group value*- Minimum:		113	77	57		27,404		
Maximum:					16		.	9
No. entries in top group:		4	20	18	26	10	.	23
Coef. of variation#:		8	9	2	4	4	.	.

\+ Relative maturity of hybrid as reported by seed company.
* Value is within one LSD value of the highest yield, bushel weight, or harvest population values; or the lowest grain moisture, green snap or lodging values.
NS indicates values within a column are not significantly different.
\# Measure of experimental error: values less than 15% are desired.

Table 16. South Shore, Roundup Ready™, late corn hybrid results, 2002-2003. NE Research Farm, test relative maturity is 96-day or more.

Brand / Hybrid	+Rel. Mat.	Yield- bu/a @15.5% mst. 2-yr	2003	2003 Bu. wt. lb	2003 Grain moist. pct	2003 Acre harvest pop.	2003 Green snap pct	2003 Lodged below ear pct
			Entries tested two years					
DEKALB/DKC46-28 (RR)	96	119	77	58	16	28,024	0	9
CHANNEL/6999RB	99	90	70	54	19	28,605	0	8
			Entries tested one year					
WENSMAN/W 6315RRBT	101	.	75	55	23	28,024	0	5
GARST/8812YG1/RR	97	.	75	56	18	26,862	0	3
GOLD COUNTRY/1016RRBT	104	.	74	55	23	28,024	0	6
INTEGRA/INT 6300RRYGCB	100	.	73	56	25	24,539	0	7
KRUGER/K-9203 RR/YGCB	100	.	70	55	22	26,717	0	9
CHANNEL/7091RB	101	.	70	58	23	28,604	0	2
GARST/8782RR	100	.	70	56	17	26,426	0	5
KRUGER/K-9299A RR	99	.	69	56	17	27,007	0	5
KRUGER/K-9002 RR/YGCB	100	.	64	59	22	26,426	0	0
TOP FARM/8200RY	100	.	61	57	18	24,684	0	3
KRUGER/K-9404 RR/YGCB	102	.	60	60	21	28,023	0	1
KRUGER/K-9300 RR/YGCB	96	.	59	54	20	27,298	0	4
Test average:		104	69	56	20	27,090	0	5
LSD (5%) values:		NS	10	2	2	1,836	.	6
Top group value*- Minimum:		90	67	58		26,769		
Maximum:					18		.	6
No. entries in top group:		2	10	4	5	6	.	10
Coef. of variation#:		2	8	2	6	4	.	.

+ Relative maturity of hybrid as reported by seed company.
* Value is within one LSD value of the highest yield, bushel weight, or harvest population values; or the lowest grain moisture, green snap or lodging values.
NS indicates values within a column are not significantly different.
Measure of experimental error: values less than 15% are desired.

Table 17. Yale, Roundup Ready™, no-till early corn hybrid results, 2002-2003. Kim Tschetter farm, test relative maturity is 100-day or less.

Brand / Hybrid	+Rel. Mat.	Yield- bu/a @15.5% mst. 2-yr	2003	2003 Bu. wt. lb	2003 Grain moist. pct	2003 Acre harvest pop.	2003 Green snap pct	2003 Lodged below ear pct
			Entries tested one year					
DEKALB/DKC47-10 RRYGCB	97	.	106	58	12	28,459	0	4
KAYSTAR/KX-5150RR	95	.	102	56	12	27,298	0	2
DEKALB/DKC44-46 RRYGCB	94	.	101	54	11	28,895	0	2
KAYSTAR/KX-4000RRBT	91	.	100	55	11	27,443	0	3
WENSMAN/W 6116RR	91	.	100	57	12	27,007	0	2
AGSOURCE/3931RR	96	.	100	56	11	28,169	0	0
WENSMAN/W 6117RRBT	92	.	99	58	12	27,443	0	3
KAYSTAR/KX-4250RRBT	93	.	98	57	12	28,605	0	4
INTEGRA/INT 6395RR	95	.	98	56	12	27,007	0	2
TOP FARM/8395RR	95	.	93	56	12	26,136	0	3
WENSMAN/W 6212RR	95	.	90	56	12	28,024	0	3
HEINE/H725RR/YGCB	100	.	88	58	13	28,024	0	1
KRUGER/K-9203 RR/YGCB	100	.	87	55	11	27,443	0	3
INTEGRA/INT 6300RRYGCB	100	.	84	57	12	27,733	0	2
CHANNEL/6999RB	99	.	83	52	11	28,605	0	1
KRUGER/K-9299A RR	99	.	83	53	11	26,717	0	0
HEINE/H722RR	100	.	81	53	11	27,152	0	0
TRIUMPH/9066RR	90	.	81	58	12	22,651	0	2
KRUGER/K-9002 RR/YGCB	100	.	79	57	12	27,733	0	0
KRUGER/K-9300 RR/YGCB	96	.	75	52	11	27,733	0	2
TRIUMPH/2370RR	100	.	74	56	12	27,443	0	0
Test average:		.	91	56	12	27,415	0	2
LSD (5%) values:		.	8	1	0	1,500	.	2
Top group value*- Minimum:		.	98	57		27,395		
Maximum:					11		.	2
No. entries in top group:		.	9	8	5	14	.	14
Coef. of variation#:		.	5	1	2	3	.	.

+ Relative maturity of hybrid as reported by seed company.
* Value is within one LSD value of the highest yield, bushel weight, or harvest population values; or the lowest grain moisture, green snap or lodging values.
NS indicates values within a column are not significantly different.
Measure of experimental error: values less than 15% are desired.

Table 18. Yale, Roundup Ready™, no-till late corn hybrid results, 2002-2003. Kim Tschetter farm, test relative maturity is 101-day or more.

Brand / Hybrid	+Rel. Mat.	Yield- bu/a @15.5% mst. 2-yr	2003	2003 Bu. wt. lb	2003 Grain moist. pct	2003 Acre harvest pop.	2003 Green snap pct	2003 Lodged below ear pct
			Entries tested one year					
AGSOURCE/5356RR/BT	106	.	100	56	12	26,571	0	0
DEKALB/DKC53-34 RRYGCB	103	.	91	56	12	27,733	0	2
CHANNEL/7128RB	102	.	86	57	13	27,152	0	0
EPLEY/E2425RR	107	.	86	57	13	26,572	0	1
KRUGER/EXP104 RR/YGCB	102	.	85	58	13	28,314	0	2
SEEDS 2000/3122RRBT	102	.	85	55	11	26,572	0	3
CHANNEL/7135RB	102	.	84	54	11	26,717	0	3
KAYSTAR/KX-6500RRBT	104	.	83	57	12	27,588	0	0
TOP FARM/EXP3103ER	103	.	82	54	11	21,635	0	1
GOLD COUNTRY/1016RRBT	104	.	82	54	11	28,024	0	2
WENSMAN/W 6315RRBT	101	.	82	54	12	28,169	0	2
EPLEY/E1445RR	104	.	81	57	12	27,297	0	2
WENSMAN/W 6421RR	106	.	80	57	13	27,443	0	1
EPLEY/E14R95BT	106	.	77	57	13	28,459	0	0
AGSOURCE/5206RR/BT	104	.	76	57	13	27,733	0	1
AGSOURCE/5456RR/BT	107	.	76	55	12	28,459	0	2
DEKALB/DKC58-24 RRYGCB	108	.	74	57	13	26,717	0	0
CHANNEL/7091RB	101	.	71	57	13	27,733	0	0
KRUGER/K-9404 RR/YGCB	102	.	69	58	13	27,878	0	3
KAYSTAR/KX-777RRBT	110	.	57	57	23	25,701	0	4
Test average:		.	80	56	13	27,123	0	1
LSD (5%) values:		.	10	3	1	2,294	.	2
Top group value*- Minimum:		.	90	55		26,165		
Maximum:					12		.	2
No. entries in top group:		.	2	16	10	18	.	16
Coef. of variation#:		.	7	3	6	5	.	.

\+ Relative maturity of hybrid as reported by seed company.
* Value is within one LSD value of the highest yield, bushel weight, or harvest population values; or the lowest grain moisture, green snap or lodging values.
NS indicates values within a column are not significantly different.
\# Measure of experimental error: values less than 15% are desired.

Table 19. Brookings, Roundup Ready™, early corn hybrid results, 2002-2003. SDSU Agronomy Farm, test relative maturity is 100-day or less.

Brand / Hybrid	+Rel. Mat.	Yield- bu/a @15.5% mst. 2-yr	2003	2003 Bu. wt. lb	2003 Grain moist. pct	2003 Acre harvest pop.	2003 Green snap pct	2003 Lodged below ear pct
			Entries tested two years					
DEKALB/DKC44-46 RRYGCB	94	183	190	58	15	28,750	0	2
DEKALB/DKC46-28 (RR)	96	178	181	60	15	28,459	0	0
WENSMAN/W 6212RR	95	174	193	59	16	29,766	0	1
SEEDS 2000/2944RRBT	94	169	177	58	15	26,426	0	0
EPLEY/E1485RR	100	154	166	58	15	25,410	0	0
			Entries tested one year					
TOP FARM/8395RR	95	.	198	58	16	28,895	0	1
SABRE/3555RR	95	.	192	59	16	28,459	0	2
SEEDS 2000/2953RR	95	.	190	59	16	28,024	0	1
INTEGRA/INT 6395RR	95	.	189	58	16	26,717	0	2
EPLEY/E1165RR	95	.	187	59	16	27,443	0	1
KAYSTAR/KX-5150RR	95	.	187	59	15	28,750	0	2
SABRE/3554RRBT	94	.	184	60	15	28,604	0	1
KAYSTAR/KX-4250RRBT	93	.	182	60	15	28,169	0	1
DEKALB/DKC42-95 RRYGCB	92	.	181	58	15	28,895	0	0
JUNG/6418RR/BT	92	.	181	61	15	26,717	0	0
WENSMAN/W 6117RRBT	92	.	180	60	15	27,733	0	1
WENSMAN/W 6116RR	91	.	179	60	15	28,024	0	0
INTEGRA/INT 6300RRYGCB	100	.	179	59	17	28,024	0	0
CHANNEL/6939RB	93	.	177	59	15	27,443	0	0
CHANNEL/6925RB	92	.	175	60	15	28,895	0	2
PFISTER/1553 RR-BT	99	.	166	57	15	28,459	0	1
GARST/8782RR	100	.	164	57	15	28,023	0	0
TOP FARM/8200RY	100	.	159	58	15	25,846	0	1
Test average:		172	181	59	15	27,910	0	1
LSD (5%) values:		NS	13	2	1	1,374	.	NS
Top group value*- Minimum:		154	185	59		28,392		
Maximum:					16		.	2
No. entries in top group:		5	8	14	22	10	.	23
Coef. of variation#:		4	4	2	2	3	.	.

\+ Relative maturity of hybrid as reported by seed company.
* Value is within one LSD value of the highest yield, bushel weight, or harvest population values; or the lowest grain moisture, green snap or lodging values.
NS indicates values within a column are not significantly different.
\# Measure of experimental error: values less than 15% are desired.

Table 20. Brookings, Roundup Ready™, late corn hybrid results, 2002-2003. SDSU Agronomy Farm, test relative maturity is 101-day or more.

Brand / Hybrid	+Rel. Mat.	Yield-@15.5% bu/a mst. 2-yr	2003	2003 Bu. wt. lb	2003 Grain moist. pct	2003 Acre harvest pop.	2003 Green snap pct	2003 Lodged below ear pct
			Entries tested two years					
EPLEY/E2425RR	107	163	166	58	17	27,878	0	3
			Entries tested one year					
GARST/8553RR	107	.	183	54	21	27,588	0	0
SABRE/4280RRBT	102	.	177	56	16	28,169	0	0
GOLD COUNTRY/1016RRBT	104	.	176	58	16	28,169	0	1
CHANNEL/7135RB	102	.	172	57	16	28,024	0	2
WENSMAN/W 6421RR	106	.	170	56	19	27,443	0	1
JUNG/6580RR/BT	104	.	170	60	19	27,443	0	0
CHANNEL/7091RB	101	.	169	58	18	28,604	0	0
WENSMAN/W 6315RRBT	101	.	167	57	16	28,314	0	1
EPLEY/E1445RR	104	.	165	58	19	27,878	0	1
KAYSTAR/KX-6500RRBT	104	.	165	58	18	28,314	0	1
DEKALB/DKC58-24 RRYGCB	108	.	164	58	21	28,604	0	0
EPLEY/E14R95BT	106	.	163	57	20	28,024	0	3
CHANNEL/7128RB	102	.	162	58	17	27,007	0	0
JUNG/6560ARR/BT	101	.	160	56	15	28,459	0	0
CHANNEL/7406R	105	.	160	56	16	28,459	0	1
SABRE/4320RRBT	102	.	159	59	17	29,040	0	0
GOLD COUNTRY/105-03R	105	.	158	56	16	26,717	0	1
TOP FARM/EXP3103ER	103	.	155	57	15	25,846	0	1
GOLD COUNTRY/104-01CBR	103	.	155	58	17	28,169	0	1
Test average:		163	166	57	17	27,907	0	1
LSD (5%) values:		.	15	1	2	NS	.	NS
Top group value*- Minimum:		.	168	59		25,846		
Maximum:					17		.	3
No. entries in top group:		.	7	2	12	20	.	20
Coef. of variation#:		.	5	2	7	4	.	.

+ Relative maturity of hybrid as reported by seed company.
* Value is within one LSD value of the highest yield, bushel weight, or harvest population values; or the lowest grain moisture, green snap or lodging values.
NS indicates values within a column are not significantly different.
Measure of experimental error: values less than 15% are desired.

Table 21. Armour, Roundup Ready™, no-till early corn hybrid results, 2003. Mark and Cletus Wiechmann farm, test relative maturity is 105-day or less.

Brand / Hybrid	+Rel. Mat.	Yield- bu/a @15.5% mst. 2-yr	2003	Bu. wt. lb	Grain moist. pct	Acre harvest pop.	Green snap pct	Lodged below ear pct
			Entries tested one year					
DEKALB/DKC47-10 RRYGCB	97	.	101	55	14	26,571	0	4
EPLEY/E1165RR	95	.	99	53	13	25,846	0	2
DEKALB/DKC53-34 RRYGCB	103	.	92	52	13	25,555	0	3
EPLEY/E1445RR	104	.	90	55	14	25,410	0	0
WENSMAN/W 6315RRBT	101	.	88	51	12	25,991	0	2
TRIUMPH/3421RR	104	.	86	53	14	25,845	0	2
CHANNEL/7128RB	102	.	85	53	14	24,829	0	0
AGSOURCE/5206RR/BT	104	.	84	53	14	24,829	0	1
PFISTER/1553 RR-BT	99	.	83	49	12	25,845	0	5
ASGROW/RX601RR/YG	105	.	82	55	14	25,410	0	2
CHANNEL/7135RB	102	.	82	51	13	23,522	0	1
EPLEY/E1485RR	100	.	80	52	13	22,506	0	1
AGSOURCE/4306RR/BT	102	.	78	48	12	25,555	0	0
KAYSTAR/KX-6500RRBT	104	.	74	53	14	25,700	0	2
CHANNEL/7406R	105	.	73	50	13	24,974	0	2
KAYSTAR/KX-6261RR	102	.	70	53	14	24,249	0	1
TRIUMPH/2370RR	100	.	70	53	13	23,813	0	1
AGSOURCE/5216RR/BT	105	.	52	48	13	25,555	0	1
Test average:		.	82	52	13	25,111	0	2
LSD (5%) values:		.	13	2	1	NS	.	NS
Top group value*- Minimum:		.	88	53		22,506		
Maximum:					13		.	5
No. entries in top group:		.	4	10	10	18	.	18
Coef. of variation#:		.	10	3	3	7	.	.

\+ Relative maturity of hybrid as reported by seed company.
* Value is within one LSD value of the highest yield, bushel weight, or harvest population values; or the lowest grain moisture, green snap or lodging values.
NS indicates values within a column are not significantly different.
\# Measure of experimental error: values less than 15% are desired.

Table 22. Armour, Roundup Ready™, no-till late corn hybrid results, 2003. Mark and Cletus Wiechmann farm, test relative maturity is 106-day or more.

Brand / Hybrid	+Rel. Mat.	Yield- bu/a @15.5% mst. 2-yr	2003	Bu. wt. lb	Grain moist. pct	Acre harvest pop.	Green snap pct	Lodged below ear pct
				2003				
			Entries tested one year					
AGSOURCE/5356RR/BT	106	.	95	53	13	26,136	0	0
DEKALB/DKC60-19 RRYGCB	110	.	93	54	14	25,265	0	1
EPLEY/E14R95BT	106	.	89	56	14	24,974	0	4
WENSMAN/W 6421RR	106	.	89	56	14	23,813	0	1
AGSOURCE/6166BTR	111	.	88	56	15	26,717	0	0
CHANNEL/7624RB	108	.	88	53	14	25,555	0	1
EPLEY/E2425RR	107	.	83	54	14	25,555	0	1
KRUGER/K-9111 RR/YGCB	111	.	83	55	14	26,281	0	0
AGSOURCE/5986RR/BT	110	.	83	56	16	23,232	0	0
INTEGRA/INT 6208RRYGCB	108	.	82	54	14	26,281	0	0
DEKALB/DKC58-24 RRYGCB	108	.	81	56	14	24,394	0	0
JACOBSEN/JS4615RBT	112	.	81	55	14	24,974	0	0
KAYSTAR/KX-8551RR	112	.	80	56	15	24,393	0	1
INTEGRA/INT 6312RRYGCB	112	.	79	56	15	24,975	0	0
KAYSTAR/KX-780RR	109	.	76	54	14	25,265	0	2
DEKALB/DKC60-09 RRYGCB	110	.	73	54	14	25,700	0	0
AGSOURCE/5456RR/BT	107	.	67	52	13	24,974	0	0
JACOBSEN/JS4748RBT	112	.	66	57	17	24,393	0	1
JACOBSEN/JS4637R	110	.	63	54	14	24,103	0	1
CHANNEL/7806RB	110	.	59	56	14	24,974	0	1
SEEDS 2000/3171RR	107	.	58	51	13	25,846	0	1
Test average:		.	79	55	14	25,133	0	1
LSD (5%) values:		.	12	2	1	NS	.	NS
Top group value*- Minimum:		.	83	55		23,232		
Maximum:					14		.	4
No. entries in top group:		.	9	11	16	21	.	21
Coef. of variation#:		.	9	3	4	6	.	.

\+ Relative maturity of hybrid as reported by seed company.
* Value is within one LSD value of the highest yield, bushel weight, or harvest population values; or the lowest grain moisture, green snap or lodging values.
NS indicates values within a column are not significantly different.
\# Measure of experimental error: values less than 15% are desired.

Table 23. Beresford, Roundup Ready™, early corn hybrid results, 2002-2003. SE Research Farm, test relative maturity is 110-day or less.

Brand / Hybrid	+Rel. Mat.	Yield- bu/a @15.5% mst. 2-yr	2003	Bu. wt. lb	Grain moist. pct	Acre harvest pop.	Green snap pct	Lodged below ear pct
				2003				
		Entries tested two years						
PFISTER/2656 RR	109	168	161	58	14	27,443	0	2
DEKALB/DKC58-24 RRYGCB	108	167	184	61	16	27,879	0	0
DEKALB/DKC60-09 RRYGCB	110	167	175	61	16	28,169	0	0
ASGROW/RX601RR/YG	105	162	171	60	15	28,750	0	1
TRIUMPH/1120BTRR	108	154	155	58	19	26,136	0	0
JACOBSEN/JS4637R	110	151	148	57	14	25,700	0	1
		Entries tested one year						
WENSMAN/W 6421RR	106	.	190	59	17	27,733	0	0
KAYSTAR/KX-6500RRBT	104	.	182	60	16	27,443	0	0
KALTENBERG/K6788RR	108	.	179	58	17	28,459	0	0
DEKALB/DKC60-17 (RR)	110	.	179	59	17	27,878	0	1
GARST/8553RR	107	.	177	57	17	28,459	0	1
INTEGRA/INT 6208RRYGCB	108	.	171	58	16	27,443	0	0
GARST/8510YG1/RR	110	.	169	58	18	29,040	0	0
AGSOURCE/5986RR/BT	110	.	169	59	17	27,588	0	0
KALTENBERG/K5711RR	105	.	168	59	15	28,024	0	1
CHANNEL/7624RB	108	.	167	58	16	27,443	0	0
CHANNEL/7806RB	110	.	164	59	15	25,845	0	1
HEINE/H8490RR/YGCB	110	.	164	55	16	28,024	0	0
AGSOURCE/5921RR	110	.	161	59	15	27,588	0	1
KAYSTAR/KX-780RR	109	.	148	57	15	27,588	0	1
Test average:		162	169	58	16	27,632	0	0
LSD (5%) values:		NS	26	2	2	1,749	.	NS
Top group value*- Minimum:		151	164	59		27,291		
Maximum:					16		.	2
No. entries in top group:		6	15	10	13	17	.	20
Coef. of variation#:		8	9	2	9	4	.	.

+ Relative maturity of hybrid as reported by seed company.
* Value is within one LSD value of the highest yield, bushel weight, or harvest population values; or the lowest grain moisture, green snap or lodging values.
NS indicates values within a column are not significantly different.
Measure of experimental error: values less than 15% are desired.

Table 24. Beresford, Roundup Ready™, late corn hybrid results, 2002-2003. SE Research Farm, test relative maturity is 111-day or more.

Brand / Hybrid	+Rel. Mat.	Yield-bu/a @15.5% mst. 2-yr	2003	Bu. wt. lb	Grain moist. pct	Acre harvest pop.	Green snap pct	Lodged below ear pct
				2003				
			Entries tested one year					
AGSOURCE/6166BTR	111	.	179	59	19	26,281	0	0
AGSOURCE/6886BTR	112	.	176	59	20	26,717	0	0
CHANNEL/8127RB	114	.	169	58	21	27,879	0	0
CHANNEL/8075RB	113	.	169	60	21	27,153	0	0
INTEGRA/INT 6312RRYGCB	112	.	164	57	14	25,846	0	0
KAYSTAR/KX-8770RRBT	114	.	162	58	20	27,588	0	0
KRUGER/K-9212 RR/YGCB	113	.	160	58	14	26,717	0	0
KAYSTAR/KX-8551RR	112	.	159	58	14	26,717	0	0
JACOBSEN/JS4615RBT	112	.	156	58	17	27,588	0	0
GARST/8487YG1/RR	112	.	154	58	17	27,588	0	0
KRUGER/K-9115 RR/YGCB	115	.	152	59	18	27,588	0	0
JACOBSEN/JS4655RBT	112	.	151	56	18	27,298	0	0
Test average:		.	163	58	18	27,080	0	0
LSD (5%) values:		.	18	2	3	NS	.	.
Top group value*- Minimum:		.	161	58		25,846		
Maximum:					17		.	.
No. entries in top group:		.	6	10	5	12	.	.
Coef. of variation#:		.	7	2	10	5	.	.

\+ Relative maturity of hybrid as reported by seed company.
* Value is within one LSD value of the highest yield, bushel weight, or harvest population values; or the lowest grain moisture, green snap or lodging values.
NS indicates values within a column are not significantly different.
\# Measure of experimental error: values less than 15% are desired.

Table F. Seed companies entered in the 2003 corn hybrid trials by seed brand name.

Seed brand	Mailing address
AgSource	Agsource Seeds, 1717 E. 8th Street, Boone, IA 50036
Asgrow	Monsanto, 3100 Sycamore Rd, Dekalb, IL 60115
Channel	Channel Bio Corp., 5932 Schumann Dr., Madison, WI 53711
Crows	Crows Hybrid Corn Co., 5932 Schumann Dr., Madison, WI 53711
Dairyland	Dairyland Seed Co., Inc., PO Box 958, West Bend, WI 53095
Dekalb	Monsanto, 3100 Sycamore Rd, Dekalb, IL 60115
Epley Bros.	Epley Bros. Hybrids Inc., PO Box 310 Shell Rock, IA 50670
Garst	Garst/AgriPro Seed Co., 1010 Christine Ave, Brookings, SD 57006
Gold Country	Gold Country Seed Inc., PO Box 604, Hutchinson, MN 55350
Heine	Heine Seed Corn, 1020 E. 320th St., Vermillion, SD 57064
Integra Seed	Integra Seed, Ltd., PO Box 40, Bozeman, MT 59771
Jacobsen	Jacobsen Hybrid Corn Co., Inc., Box 379, Lake View, IA 51450
Jung	Jung Seed Genetics, 341 S. High St., Randolph, WI 53956
Kaltenberg	Kaltenberg Seeds, PO Box 278, Waunakee, WI 5359
Kaystar	Kaystar Seed, PO Box 947, Huron, SD 57350
Kruger	Kruger Seed Co., Hwy 20 E, Box A, Dike, IA 50624
Merschaman	Merschman Seeds, Inc. 103 Ave. D, West Point, IA 52656
Midwest	Midwest Seed Genetics, 5932 Schumann Dr., Madison, WI 53711
Pfister	Pfister Hybrid Corn Co., 187 N. Fayette St., El Paso, IL 61738
Sabre	Sabre Initiatives, LLC, 2508 Trott Ave. SW, Willmar, MN 56201
Sands	Sand Seed Service, Inc., Box 648, Marcus, IA 51035
Seeds 2000	Seeds 2000, PO Box 200, Breckenridge, MN 56520
Top Farm	Top Farm Hybrids, PO Box 850, Cokato, MN 55321
Triumph	Triumph Seed Co., Inc., PO Box 1050, Ralls, TX 79357
Wensman	Wensman Seed Co., PO Box 190, Wadena, MN 56482