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1999 Crop Performance Trials: Corn

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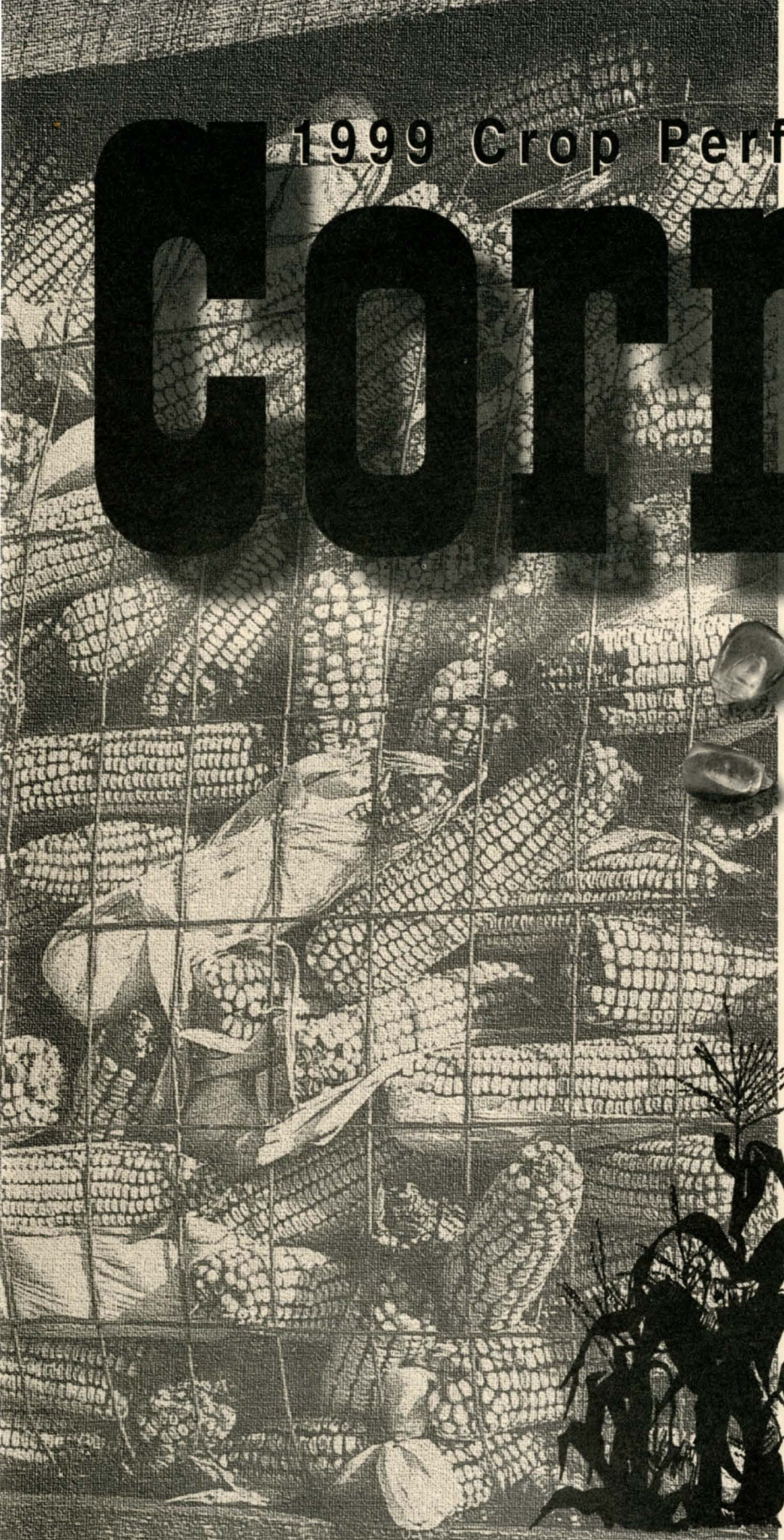
1999 Crop Performance Trials

Corn



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Tables, 1999 corn performance trials

Conventional hybrid trial results

Roundup Ready* hybrid trial results

*Roundup Ready is registered by Monsanto

1999 Corn Performance Trials

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Entries and their yield table locations are reported in tables D and E.

This publication reports the performance of entries in the 1999 South Dakota performance trials of conventional and Roundup Ready corn hybrids.

Information includes both 1998-99 and 1999 grain yields in bushels per acre; and 1999 test weight, moisture percentages of shelled corn at harvest, final plant populations per acre, and stalk lodge percentages. These trials were conducted by the South Dakota State University crop performance testing (CPT) program.

Test Trial Locations

Test trial locations, soil types, and seedbed preparation are given in Table A; seeding and harvest dates are in Table B. Seeding started on May 1 and was completed by May 21. Trial results were very good this year considering problems at three locations:

Frankfort (Spink Co.) plots were hit by high winds on November 1, the day before the plots were harvested. These winds caused some moderate stalk lodging and dropped ears. Damage appeared to be greatly affected by hybrid.

Armour (Robert Clark Farm) plots were exposed to high winds on November 1 and exhibited light to moderate wind damage. Damage consisted of stalk lodging and dropped ears and was influenced by hybrid.

Beresford (SE Research Farm) received hail on July 2, 1999. Plots exhibited little if any stalk breakage but all plots had light to moderate leaf damage. In some cases, damage included removal of exposed leaf surfaces back to the stalk; in other cases, exposed leaf surfaces were stripped back to the vicinity of the stalk.

Weather and Climatic Conditions

Climatic data (Table C) for this year's growing season, April-September, are from the South Dakota Automatic Weather Data Network at http://www.abs.sdstate.edu/ae/weather.htm.

***The assistance of the following is appreciated**: CPT technician Jesse Hall at Brookings, Jim Smolik and Allen Heuer at the Northeast Research Farm, Todd Bortnem and the Brookings Agronomy Farm staff, Bob Berg and the Southeast Research Farm staff, and farmer-cooperators Robert Clark (Armour) and Steve Masat (Frankfort).*

Redfield data included growing degree day information from Huron. Stations are located at or near the other trial sites. Precipitation quantities may differ between test sites and the recording station; however, the nearest available data are reported.

Monthly precipitation totals were variable across locations. Monthly levels varied from a low of 0.58 inches at Centerville in August to a high of 6.48 at Centerville in June. The highest accumulation of seasonal precipitation was at Armour with 21.33 inches (4.27 inches above average). There was, however, little rainfall at Armour in August. Two stations, Brookings and Watertown, reported below-average precipitation from April or May through September. Nevertheless, the rain, along with some sub-soil moisture, enabled these stations to produce respectable yields. Although Brookings was below average in rainfall for the season, a 3.51-inch accumulation for August was timely and critical in obtaining decent yields during an otherwise dry year. Centerville had average seasonal precipitation while Redfield averaged 2.7 inches above the long-term average.

Heat unit or growing degree day (GDD) 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 GDD total across test locations varied from a high of 2915 at Centerville to a low of 2317 at Watertown. At the four locations with a long-term history of GDD accumulation, three sites--Brookings, Centerville, and Redfield--showed above-average heat unit totals for the year. Watertown showed a shortage of 177 GDDs for the growing season. There is no 1999 GDD total for the Armour site.

In summary, climatic conditions, as usual, were variable across all locations. In general, however, there were few major climatic impacts on our test trial results.

General Test Procedures

Participating companies pick the test locations where they want their entries tested. Entries are placed into "early" or "late" maturity trials. The arbitrary relative maturity breaks between early and late are 95 days for Watertown, 100 days for Frankfort and Brookings, 105 days for Armour, and 110 days for Beresford. Hybrids are assigned to maturity trials from relative maturity ratings defined by the 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 show up as exceptionally high or low grain moisture content at harvest.

Higher than average moisture 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.

A fee was charged for all entries at each location. A list of participating seed companies for 1999 is presented in Table F.

Experimental Procedures

Entries were seeded in three replications with each hybrid randomly located within a replication. Plots consisted of two 30-inch rows, 20 feet long. Target field populations equalled harvested plants/A in all trials and are indicated in each yield table.

Soil type, land preparation, and previous crop at each test site are given in Table A. A starter fertilizer of 100 pounds/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 T-banded at label rates for corn rootworm control this year. Recommended herbicides (pre-emergence and post-emergence) were broadcast at labeled rates where needed.

A 31-cell cone drill seeder was used for all plots. Cone units were mounted above commercial maxi-merge units. Seeding rate was 15% more than the desired number of plants harvested per plot. Plots were later thinned to the desired target population. Seedbed preparation was good at all locations.

These procedures apply to both conventional and Roundup Ready hybrid corn trials with one excep-

tion: Weed control in the Roundup Ready trials consisted of two post-emergence applications of Roundup Ultra (32oz/A), the first when weeds were 2-4 inches tall and the second when weed growth was again 2-4 inches tall.

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 were caused by variations in environment or were true variety differences. Experimental error may be the result of several factors including test methods or factors such as moisture, temperature, 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.

In 1999 the coefficient of variation (CV) for yield was 10% or less at all test sites except for Frankfort and Armour where high winds caused some stalk lodging and ear droppage and resulted in high CV values. In the Roundup Ready trial at Beresford the high CV was caused by the hail that hit the plots on July 2nd.

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 it exceeds 15%, we recommend that the test data be used with caution in making hybrid selection decisions.

In 1999, however, the CV values in some of the trials at Frankfort, Armour, and Beresford were close but did not exceed the 15% limit. Although high winds or hail in the trials caused high CV values, the plots were still able to determine hybrid differences in agronomic performance.

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 entries. Hybrids that provide satisfactory yields and can be stored without additional drying are desirable.

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 that column. If there are no real differences among the averages within a given column, yield differences within the column are not significant.

The LSD values reported in this publication can be used in two ways. The LSD value primarily identifies the top-yielding group for each test trial. For example, at Watertown the highest 2-yr yield was 185 bu/A for Garst 8830. To see if Garst 8830 is the only top yielder at Watertown, use the LSD value of 20 bu/A at the bottom of the 2-yr yield column. For hybrids to be in the top-yield group they must yield 165 bu/A (185 - 20 = 165) or higher.

Technically, a yield of 166 bu/A would be in the top-yield group while a yield of 165 bu/A would not be in the top-yield group. However, since all yields and LSD values are rounded to the nearest whole number, we can say 165 bu/A, because of the rounding off, is the more appropriate minimum value for top-yield hybrids at the "early" maturity test at Watertown in 1999. This value is indicated as the min. top-yield value at the bottom of the 2-yr yield column. In addition, the minimum top-yield value is indicated for the 2-year (1998-99) average unless there were no significant yield differences. Top-yield hybrids for 1999 are those hybrids which are equal or higher than the minimim top-yield value indicated at the bottom of the 1999 yield column.

In addition to identifying the top-yield group, LSD values show whether two hybrids differ in performance. For example, in the early test at Watertown, the LSD value of 20 bu/A can be used to compare the yields of any two hybrids in the early maturity trial. If hybrid A yields 166 bu/A and hybrid B yields 148

bu/A, their yield difference is 18 bu/A (166 - 148 = 18). In this case the two hybrids do not differ in yield because their yield difference of 18 bu/A is less than the reported LSD value of 20 bu/A. In contrast, if hybrid C yields 145 bu/A the yield difference between hybrid A and hybrid C would be 21 bu/A (166 - 145 = 21). In this case the yield difference of 21 bu/A is more than the reported LSD value of 20 bu/A and therefore hybrid A would have a significantly higher yield than hybrid C.

Performance Trial Results: Conventional Hybrids

The performance trial results for 2 years (1998-99) and one year (1999) are summarized below:

Watertown (Northeast Research Farm)

Early Maturity Trial (Table 1). The number of hybrid entries was 50. The 2-year average was 163 bu/A; hybrids had to average 165 bu/A or higher to be in the top-yield group (TYG); 11 hybrids qualified for TYG; hybrids had to differ by 20 bu/A to be significantly different in yield. The 1999 average was 158 bu/A; hybrids had to average 162 bu/A or higher to be in the TYG; 19 hybrids qualified for TYG; and hybrids had to differ by 19 bu/A to be significantly different in yield.

Late Maturity Trial (Table 2). The number of hybrid entries was 55. The 2-year average was 152 bu/A; hybrids had to average 142 bu/A or higher to be in the top-yield group (TYG); and 16 hybrids qualified for TYG. The test trial was unable to detect hybrid yield difference among entries tested for 2 years; therefore, all entries qualified for TYG and there were no significant differences in yield among hybrids tested over 2 years. The 1999 average was 129 bu/A; hybrids had to average 130 bu/A or higher to be in the TYG; 29 hybrids qualified for TYG; and hybrids had to differ by 18 bu/A to be significantly different in yield.

Hybrids averaged 19 bu/A less than in the early maturity trial. The lack of seasonal moisture likely took a toll on the yield potential of later maturity hybrids. In the early maturity trial, most of the hybrids made their yield before increasing moisture stress affected them.

Frankfort, No-Till Trial (Steve Masat Farm)

Early Maturity Trial (Table 3). The number of hybrid entries was 50. The 2-year average was 152 bu/A; hybrids had to average 143 bu/A or higher to be in the top-yield group (TYG); 13 hybrids qualified for TYG; and hybrids had to differ by 35 bu/A to be significantly different in yield. The 1999 average was 124 bu/A; hybrids had to average 147 bu/A or higher to be in TYG; 10 hybrids qualified for TYG; and hybrids had to differ by 25 bu/A to be significantly different in yield.

Late Maturity Trial (Table 4). The number of hybrid entries was 39. The 2-year average was 169 bu/A; hybrids had to average 160 bu/A or higher to be in the top-yield group (TYG); 10 hybrids qualified for TYG; the test trial was unable to detect hybrid yield difference among entries tested over 2 years; therefore, all entries qualified for TYG and there were no significant differences in yield among hybrids tested for 2 years. The 1999 average was 140 bu/A; hybrids had to average 164 bu/A or higher to be in the TYG; 4 hybrids qualified for TYG; and hybrids had to differ by 25 bu/A to be significantly different in yield.

Brookings (SDSU Agronomy Farm)

Early Maturity Trial (Table 5). The number of hybrid entries was 59. The 2-year average was 163 bu/A; hybrids had to average 165 bu/A or higher to be in the top-yield group (TYG); 13 hybrids qualified for TYG; and hybrids had to differ by 21 bu/A to be significantly different in yield. The 1999 average was 153 bu/A; hybrids had to average 164 bu/A or higher to be in TYG; 9 hybrids qualified for TYG; and hybrids had to differ by 17 bu/A to be significantly different in yield.

Late Maturity Trial (Table 6). The number of hybrid entries was 69. The 2-year average was 168 bu/A; hybrids had to average 152 bu/A or higher to be in the top-yield group (TYG). The test trial was unable to detect hybrid yield difference among entries tested for 2 years; therefore, all entries qualified for TYG and there were no significant differences in yield among hybrids tested over 2 years. The 1999 average was 173 bu/A; hybrids had to average 186 bu/A or higher to be in the TYG; 8 hybrids qualified for TYG; and hybrids had to differ by 18 bu/A to be significantly different in yield.

Armour, No-Till Trial (Robert Clark Farm)

Early Maturity Trial (Table 7). The number of hybrid entries was 60. The 2-year average was 158 bu/A; hybrids had to average 142 bu/A or higher to be in the top-yield group (TYG). The test trial was unable to detect hybrid yield difference among entries tested for 2 years; therefore, all entries qualified for TYG and there were no significant differences in yield among hybrids tested for 2 years. The 1999 average was 134 bu/A; hybrids had to average 136 bu/A or higher to be in the TYG; 30 hybrids qualified for TYG; and hybrids had to differ by 34 bu/A to be significantly different in yield.

Late Maturity Trial (Table 8). The number of hybrid entries was 65. The 2-year average was 181 bu/A; hybrids had to average 177 bu/A or higher to be in the top-yield group (TYG); 14 hybrids qualified for TYG; and hybrids had to differ by 19 bu/A to be significantly different in yield. The 1999 average was 161 bu/A; hybrids had to average 168 bu/A or higher to be in the TYG; 20 hybrids qualified for TGY; and hybrids had to differ by 23 bu/A to be significantly different in yield.

Beresford (SE Research Farm)

Note that these trials received hail damage on July 2.

Early Maturity Trial (Table 9). The number of hybrid entries was 99. The 2-year average was 178 bu/A; hybrids had to average 169 bu/A or higher to be in the top-yield group (TYG); 16 hybrids qualified for TYG; and hybrids had to differ by 25 bu/A to be significantly different in yield. The 1999 average was 147 bu/A; hybrids had to average 167 bu/A or higher to be in TYG; 5 hybrids qualified for TYG; and hybrids had to differ by 19 bu/A to be significantly different in yield.

Late Maturity Trial (Table 10). The number of hybrid entries was 36. The 2-year average was 176 bu/A; hybrids had to average 182 bu/A or higher to be in the top-yield group (TYG); 2 hybrids qualified for TYG; and hybrids had to differ by 15 bu/A to be significantly different in yield. The 1999 average was 145 bu/A; hybrids had to average 155 bu/A or higher to be in the TYG; 6 hybrids qualified for TYG; and hybrids had to differ by 17 bu/A to be significantly different in yield.

Performance Trial Results: Roundup Ready Hybrids

Brookings (SDSU Agronomy Farm)

Early Maturity Trial (Table 11). The number of hybrid entries was 9. The 1999 average was 125 bu/A; hybrids had to average 128 bu/A or higher to be in the top-yield group (TYG); 2 hybrids qualified for TYG; and hybrids had to differ by 9 bu/A to be significantly different in yield.

Late Maturity Trial (Table 12). The number of hybrid entries was 9. The 1999 average was 140 bu/A; hybrids had to average 141 bu/A or higher to be in the top-yield group (TYG); 5 hybrids qualified for TYG; and hybrids had to differ by 19 bu/A to be significantly different in yield.

Beresford (SE Research Farm)

Note that these trials received hail damage on July 2.

Early Maturity Trial (Table 13). The number of hybrid entries was 20. The 1999 average was 115 bu/A; hybrids had to average 125 bu/A or higher to be in the top-yield group (TYG); 4 hybrids qualified for TYG; and hybrids had to differ by 24 bu/A to be significantly different in yield.

Late Maturity Trial (Table 14). The number of hybrid entries was 9. The test trial was unable to detect hybrid yield differences among entries tested for 2 years; therefore, all entries qualified for the top-yield group (TYG) and there were no significant differences in yield among hybrids tested 2 years. The 1999 average was 116 bu/A; hybrids had to average 108 bu/A or higher to be in the TYG. The test trial was unable to detect hybrid yield difference among entries tested this year; therefore, all entries qualified for TYG; and there were no significant differences in yield among hybrids tested this year.

Table A. Soil classification and land preparation for 1999.

LOCATION	HYBRID TYPE	SOIL TYPE	SEEDBED, PREVIOUS CROP
BROOKINGS	CONVENTIONAL	BRANDT SILT CLAY	CONVENTIONAL, SPRING WHEAT
BROOKINGS	ROUNDUP READY	BRANDT SILT CLAY	CONVENTIONAL, SPRING WHEAT
WATERTOWN	CONVENTIONAL	BROOKINGS SILT CLAY LOAM	CONVENTIONAL, OATS
FRANKFORT	CONVENTIONAL	BEOTIA SILT LOAM	NO-TILL, SOYBEAN
BERESFORD	CONVENTIONAL	TRENT SILT LOAM	CONVENTIONAL, OATS
BERESFORD	ROUNDUP READY	TRENT SILT LOAM	CONVENTIONAL, OATS
ARMOUR	CONVENTIONAL	EAKIN-ETHAN COMPLEX	NO-TILL, SOYBEAN

Table B. Trial cooperators, locations, seeding and harvest dates.

COOPERATOR	LOCATION	DATE SEEDED	DATE HARVESTED
ROBERT CLARK	ARMOUR	MAY 19	NOV. 3
S.E. RESEARCH FARM	BERESFORD	MAY 21	NOV. 4
SDSU AGRONOMY FARM	BROOKINGS	MAY 1	OCT. 27
N.E. RESEARCH FARM	WATERTOWN	MAY 4	OCT. 28
STEVE MASAT FARM	FRANKFORT	MAY 13	NOV. 2

Table C. 1999 nearest station precipitation and accumulated growing degree days (GDD). Source: S.D. Automatic Weather Data Network.

STATION	DATA	VARIABLE	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
Armour	Precip.	'99 (in.)	4.37	4.17	3.83	5.80	0.78	2.38	21.33
		DFA (in.)	2.04	0.99	-0.05	2.68	-1.38	0.04	4.27
Airport	Accum.	'99 (day)	-	-	-	-	-	-	-
	GDD's	DFA (day)	186	566	1145	1880	2560	2990	-
Brook-	Precip.	'99 (in.)	4.18	3.42	2.58	2.72	1.86	2.88	17.64
ings		DFA (in.)	2.11	0.49	-1.76	0.60	-0.95	0.81	-0.47
2NE	Accum.	'99 (day)	108	419	906	1581	2163	2491	
	GDD's	DFA (day)	123	425	904	1524	2082	2418	+73
Center-	Precip.	'99 (in.)	4.56	4.0	6.48	3.46	0.58	0.54	19.62
ville		DFA (in.)	2.29	0.56	2.26	0.08	-2.35	-1.73	0.74
6SE	Accum.	'99 (day)	139	505	1038	1823	2485	2915	
	GDD's	DFA (day)	186	565	1133	1833	2465	2876	+39
Red-	Precip.	'99 (in.)	2.57	2.48	4.01	2.75	2.22	3.47	17.50
field		DFA (in.)	0.47	-0.41	0.84	0.08	0.04	1.37	2.72
2NE	Accum.	'99 (day)	135	485	1022	1758	2456	2846	
	GDD's	DFA (day)	158	495	1024	1717	2353	2744	+102
Water-	Precip.	'99 (in.)	1.55	2.41	5.45	1.65	1.39	2.21	14.66
town		DFA (in.)	-0.62	-0.61	1.92	-1.40	-1.33	0.03	-1.82
Airport	Accum.	'99 (day)	106	382	827	1472	2034	2317	
	GDD's	DFA (day)	122	426	919	1567	2157	2494	-177

Precipitation (Precip.), Accumulated growing degree days (Accum. GGD's), Departure from average, 1961-90. (DFA)

Table D. 1999 corn performance trials—conventional hybrids, by brand/hybrid and yield table location.

NO.	BRAND/HYBRID	TABLE NO.	NO.	BRAND/HYBRID	TABLE NO.
1	CARGILL/3677	2	62	GARST/8830	1,3,5
2	CARGILL/6888	8,10	63	GARST/8585 GLS/BLT	9
3	CARGILL/7770	10	64	GARST/N7870	1,3
4	CARGILL/5677	8,9	65	GARST/N8894BT	1,3
5	CARGILL/2777	3,5	66	GARST/N7801	2,3
6	CARGILL/4111	4,6	67	GARST/8773BLT	2,3
7	CARGILL/2610	1	68	GARST/N8701BT	2,4
8	CARGILL/4021 BT	2,4,6	69	GARST/N8658BT	4
9	CARGILL/4521 BT	6,7	70	GARST/8820IT	1
10	CARGILL/4220 BT	8,9	71	GARST/8732IT	2,3,5
11	CARGILL/5212	7,9	72	GARST/8608BT	4,6,7,9
12	CARGILL/6521 BT	8,9	73	GARST/8600BLT	8,9
14	DEKALB/DK477	2,3	74	GARST/8590IT	8,9
15	DEKALB/DK405	1	75	GARST/8550BT	9
16	DEKALB/DK440	1,3,5	76	WILSON/1390	7
17	DEKALB/DK493BTX	2,3,5	77	WILSON/1664	8,10
18	DEKALB/DK545BTY	4,9	78	WILSON/1464	8,9
19	DEKALB/DK389BTY	1	79	WILSON/1205BT	7,9
20	DEKALB/DK427	1	80	WILSON/1364	7,9
21	DEKALB/DK507	2,3,5	81	WILSON/E4011	8,10
22	DEKALB/DK537	6,7	82	WILSON/1436BT	8,9
23	DEKALB/DK539	4,6,7	83	WILSON/E4019BT	10
24	DEKALB/DK551BTY	4,6,7,9	84	TOP FARM/TFSX 2101	2,3,5
25	DEKALB/DK589BTY	8,9	85	TOP FARM/TFSX 2100	2,4,6,7
26	DEKALB/DK595BTY	9	86	TOP FARM/TFSX 2108	6,8,9
27	DEKALB/DK626BTY	10	87	TOP FARM/TFSX 2196	1,3,5
28	MALLARD/UC-389-A	1	88	TOP FARM/TFSX 2201	2,3,5,7
30	MALLARD/UC-595-A	2	89	TOP FARM/TFSX 2111	6,8,9
31	MALLARD/UC-585	2	90	TOP FARM/TFSX 2202	4,6,7
32	MALLARD/BT 2660	2,6,7	91	TOP FARM/TFSX 795BT	1,3,5
33	MALLARD/UC 2682	8,9	92	TOP FARM/TFSX 7102BT	2,4,6,7,9
34	MALLARD/BT 2700	8,9	93	TOP FARM/TFSX 105BT	2,4,6,7,9
35	MALLARD/BT 621-CC	8,9	94	TOP FARM/TFSX 106BT	8,9
36	DAIRYLAND/STEALTH-1401	5	95	TOP FARM/TFSX 2107	6,8,9
37	DAIRYLAND/STEALTH-1406	9	96	KAYSTAR/KX-777	8,9
38	DAIRYLAND/STEALTH-1595	1	97	KAYSTAR/KX-410	1
39	DAIRYLAND/STEALTH-1496	1	98	KAYSTAR/KX-625	4
40	DAIRYLAND/STEALTH-1410	9	99	KAYSTAR/KX-808	10
41	DAIRYLAND/STEALTH-1409	8	100	KAYSTAR/KX-675	6
42	DAIRYLAND/STEALTH-1494	1	101	KAYSTAR/KX-405	1
43	DAIRYLAND/STEALTH-1499	3	102	KAYSTAR/X9971	2,3,5
44	DAIRYLAND/STEALTH-1507	9	103	KAYSTAR/X9071	6
45	DAIRYLAND/STEALTH-1404	6	104	KALTENBERG/K3904	1
46	DAIRYLAND/STEALTH-1403	5	105	KALTENBERG/K4809	2,5
47	DAIRYLAND/STEALTH1298BT	3	106	KALTENBERG/K5808	9
48	DAIRYLAND STEALTH-1493	1	107	KALTENBERG/K6901	10
49	SANDS SOI/9126	8,10	108	KALTENBERG/K7101	10
50	SANDS SOI/9009	5,7	109	KALTENBERG/K4907	2,5
51	SANDS SOI/9058	7,9	110	KALTENBERG/K4508	2,5
52	SANDS SOI/105BT	7,9	111	KALTENBERG/K5454BT	6
53	ASGROW/RX346	1,5	112	KALTENBERG/K5404	6
54	ASGROW/RX393	3,5	113	KALTENBERG/K5005	6
55	ASGROW/RX481	3,5	114	KALTENBERG/K5901	6,9
56	ASGROW/RX601YG	7,9	115	KALTENBERG/K6606	9
57	ASGROW/RX355YG	1	116	LG SEEDS/LG 2583	9
58	ASGROW/RX495YG	4,6	117	LG SEEDS/LG 2473	1
59	GARST/8640	6,7	118	LG SEEDS/LG 2530	7
60	GARST/8707	3,5,7	119	LG SEEDS/LG 2587	10
61	GARST/8766	2,3	120	LG SEEDS/LG 2544	8,9

Table D (continued).

NO.	BRAND/HYBRID	TABLE NO.	NO.	BRAND/HYBRID	TABLE NO.
121	LG SEEDS/LG 2512	6	181	EPLEY/E2422	6,8,9
122	LG SEEDS/LG 2484	2,5	182	EPLEY/E1500	6,7,9
123	KRUGER/K-9614A	8,9	183	EPLEY/E3608	8,10
124	KRUGER/K-9513	8	184	EPLEY/E3242	8,10
125	KRUGER/K-9802	2,3,5	185	EPLEY/E1160	2,5
126	KRUGER/K-9806	4,7	186	EPLEY/E1460	6,7
127	KRUGER/K-9896	1,3,5	187	EPLEY/E1122	1,5
128	KRUGER/9902BT	2,3	188	EPLEY/E2434	6,8
129	KRUGER/K-9806B	4,7	189	EPLEY/E3620	8,10
130	KRUGER/K-9906BT	2,4,6,7,9	190	EPLEY/E1510BT	6,7,9
131	KRUGER/K-9808	9	191	EPLEY/E1470BT	2,6,7,9
132	KRUGER/K-9908BT	6,7	192	EPLEY/E3610BT	8,10
133	KRUGER/K-9909BT	6,7	193	MUSTANG/403	1,5
134	KRUGER/K-9910	8,9	194	MUSTANG/503	3,5
135	KRUGER/K-2091	1	195	MUSTANG/3090	1
136	KRUGER/K-2094	1	196	MUSTANG/3093	1
137	KRUGER/EX-2096	1	197	MUSTANG/402	1,5
138	KRUGER/EX-2098	1,3,5	198	MUSTANG/661	6,9
139	KRUGER/K-9898+	1,3,5	199	MUSTANG/602	6
140	KRUGER/K-2002BT	2,3,5	200	MUSTANG/6004	6,7,9
141	KRUGER/K-9903BT	2,3,5	201	MUSTANG/6104BT	6,7,9
142	KRUGER/K-9905BT	2,4,7	202	MUSTANG/6102BT	6,9
143	KRUGER/EX-2005	2,4	203	MUSTANG/7007	8,9
144	KRUGER/EX-006	6	204	MUSTANG/7110	8,9
145	KRUGER/EX-908	6	205	MUSTANG/7210	9
146	KRUGER/EX-908BT	4,6	206	MUSTANG/3900	1
147	KRUGER/K-2008	4,6,7,9	207	MUSTANG/4099IMI	5
148	KRUGER/K-2010BT	8,9	208	MUSTANG/4095BT	1,3,5
149	KRUGER/K-9410BT	8,9	209	MUSTANG/5103BT	4,6
150	KRUGER/K-9911A	8	210	RENZE/6386	8,10
151	KRUGER/K-2012	8,9	211	RENZE/8158BT	6,7,9
152	KRUGER/K-9614ABT	8,9	212	RENZE/8248BT	8,9
153	KRUGER/K-9814BT	10	213	RENZE/8349BT	8,10
154	KRUGER/K-2014BT	10	214	RENZE/6210	6,7,9
155	JACOBSEN/JS56	8,10	215	RENZE/6229	6,7,9
156	JACOBSEN/JS4635	8,10	216	RENZE/6260	8,9
157	JACOBSEN/JS4685	10	217	RENZE/6320	8,9
158	JACOBSEN/JS4196	7,9	218	MYCOGEN/2616IMI	9
159	JACOBSEN/JS4205BT	7	219	MYCOGEN/2725	8,10
160	JACOBSEN/JS4785BT	8	220	MYCOGEN/2620	4,6,7,9
161	JACOBSEN/JS4495	9	221	MYCOGEN/2424	1
162	FONTANELLE/HC7529BT	9	222	MYCOGEN/2525	2,3,5
163	FONTANELLE/HC7729BT	9	223	MYCOGEN/2544	2,3,5
164	FONTANELLE/HC7739BT	9	224	MYCOGEN/2566	2,4,6,7
165	PAYCO/468	1,3	225	MYCOGEN/2592	2,4,6,7
166	CROW'S/209BT	9	226	MYCOGEN/2652	4,6,8,9
167	NC+/4880	9	227	MYCOGEN/2657	4,6,8,9
168	NC+/1799	5	228	MYCOGEN/2717	8,9
169	NC+/1888	5	229	MYCOGEN/2799IMI	10
170	NC+/2839	6,9	230	WENSMAN/MAX 78	1,3,5
171	NC+/3289	9	231	WENSMAN/MAX 007	1,3,5
172	HOEGEMEYER/2655	10	232	WENSMAN/MAX 127	1,3,5,7
173	HOEGEMEYER/2623	8	233	WENSMAN/W 5088 BT	1,3,5
174	HOEGEMEYER/2593	7,9	234	WENSMAN/W 5178 BT	1,3,5
175	HOEGEMEYER/2604	8,9	235	WENSMAN/W 5258 BT	1,3,5,7
176	HOEGEMEYER/2649	10	236	WENSMAN/W 5308 BT	2,4,6,7,9
177	HOEGEMEYER/2598	7,9	237	WENSMAN/W 5319 BT	2,4,6,7,9
178	TERRA/TR 1097	9	238	WENSMAN/W 5329 BT	2,4,6,7,9
179	TERRA/TR 1008BT	6,9	239	WENSMAN/W 5359 BT	8,9
180	TERRA/TR 1087BT	9	240	WENSMAN/W 5378 BT	8,9

Table D (continued).

NO.	BRAND/HYBRID	TABLE NO.	NO.	BRAND/HYBRID	TABLE NO.
241	WENSMAN/W 5398 BT	9	267	PROSEED/ET96	2,3,5
242	DENBESTEN/DB2890	1,3,5	268	U.S. SEEDS/US C909	1
243	DENBESTEN/DB2892	1,3,5	269	U.S. SEEDS/US C969	2
244	DENBESTEN/DB2702	2,4,6,7	270	U.S. SEEDS/US C1009	3,5
245	DENBESTEN/DB5112	8,10	271	U.S. SEEDS/US C1059	6,7
246	DENBESTEN/DB2611	8,10	272	U.S. SEEDS/US C1099	8,9
247	DENBESTEN/DB2985	1,3,5	273	U.S. SEEDS/US C1129	10
248	DENBESTEN/DB2999	2,3,5	274	U.S. SEEDS/US C1029BT	4,6,7
249	DENBESTEN/DB2904	2,4,6,7,9	275	U.S. SEEDS/US C1069BT	8,9
250	DENBESTEN/DB2905BT	2,4,6,7,9	276	U.S. SEEDS/US C1109BT	8,9
251	DENBESTEN/DB2906BT	2,4,6,7,9	277	U.S. SEEDS/US C1129BT	10
252	DENBESTEN/DB2902BT	2,4,6,7,9	278	SEEDS 2000/2951	1
253	DENBESTEN/DB2910BT	8,9	279	SEEDS 2000/3101	2,3,5
254	DENBESTEN/DB2011BT	8,10	280	SEEDS 2000/3121BT	2,4,6
255	DENBESTEN/DB2912BT	8,10	281	SEEDS 2000/3103	6,7,9
256	HYLAND SEEDS/HL 2521	2,5	282	SEEDS 2000/3105	6,7,9
257	HYLAND SEEDS/HL 2505	2,5	283	HEINE/H840	10
258	HYLAND SEEDS/HL 2507	2,5	284	HEINE/H830	10
259	HYLAND SEEDS/HL 2614	2,5	285	HEINE/H825	10
260	PROSEED/ES4938	1	286	HEINE/H821	9
261	PROSEED/295	1	287	HEINE/H790	8,9
262	PROSEED/ES4968	2,3,5	288	HEINE/H770	8,9
263	PROSEED/200	2,3,5	289	HEINE/H765	8,9
264	PROSEED/ES4038	4,6	290	HEINE/H755	7
265	PROSEED/ES5100	3,5	291	HEINE/H827	10
266	PROSEED/ES4048	4,6			

Table E. 1999 corn performance trials—Roundup Ready hybrids, by brand/hybrid and yield table location.

NO.	BRAND/HYBRID	TABLE NO.	NO.	BRAND/HYBRID	TABLE NO.
1	DEKALB/DK493RR	11	19	KRUGER/K-9513RR	12,13
2	DEKALB/DK520RR	12,13	20	KRUGER/K-9905RR	12,13
3	DEKALB/DK545RRBTY	13	21	JACOBSEN/4256RR	13
4	DEKALB/DK580RR	13	22	JACOBSEN/4552RR	13
5	DEKALB/DK589RR	13	23	JACOBSEN/4655RR	14
6	DEKALB/DK626RR	14	24	JACOBSEN/4753RR	14
7	ASGROW/RX601RR/YG	12,13	25	NC+/2019R	11,13
8	ASGROW/RX638RR/YG	13	26	EPLEY/E1485RR	11
9	GARST/8756RR	11	27	EPLEY/E3615RR	14
10	GARST/8557RR	13	28	MUSTANG/5002RR	11,13
11	TOP FARM /FSX 8103RR	12,13	29	MUSTANG/6005RR	12,13
12	KAYSTAR/6200RR	11	30	DENBESTEN/DB2012RR	12,14
13	KAYSTAR/7700RR	13	31	DENBESTEN/DB2002RR	11,13
14	KAYSTAR/8900RR	14	32	U.S. SEEDS/US C1009RR	11
15	KALTENBERG/K5788RR	12	33	U.S. SEEDS/US C1079RR	13
16	KALTENBERG/K7122RR	14	34	U.S. SEEDS/US C1119RR	14
17	KRUGER/K-9802RR	11,13	35	U.S. SEEDS/US C1139RR	14
18	KRUGER/K-9907RR	12,13	36	SEEDS 2000/3102RR	11

Table F. Seed company addresses for 1999.

Company Name	Name	Address	City and State	Zip	Phone Number
CARGILL HYBRID SEEDS	CARGILL	PO BOX 5645	MINNEAPOLIS, MN	55440	612-742-2570
CROWS HYBRIDS	CROW'S	PO BOX 306	MILFORD, IL	60953	815-889-4151
DAIRYLAND SEED	STEALTH	PO BOX 958	WEST BEND, WI	53095-0958	414-338-0163
DEN BESTEN SEED CO	DEN BESTEN	BOX 896	PLATTE, SD	57369	605-337-3318
DOMESTIC SEED & SUPPLY INC	MUSTANG	BOX 466	MADISON, SD	57042	605-256-6529
EPLEY BROTHERS HYBRIDS INC	EPLEY	PO BOX 310	SHELL ROCK, IA	50670	319-885-6293
FONTANELLE HYBRIDS	HIGH CYCLE	10981 8 ST	NICKERSON, NE	68044-2505	402-721-1410
GARST SEED CO	GARST	PO BOX 647	BRANDON, SD	57005	605-582-2777
HEINE SEEDCORN	HEINE	1020 E 320TH ST	VERMILLION, SD	57069	605-624-3414
HOEGEMEYER HYBRIDS	HOEGEMEYER	1755 HOEGEMEYER RD	HOOPER, NE	68031	402-654-3399
HYLAND SEEDS	HYLAND	2 HYLAND DRIVE	BLENHEIM, ONT,CAN	NOPIAO	519-676-8146
INTERSTATE PAYCO SEED CO	GARST	PO BOX 338	WEST FARGO, ND	58078	701-282-7338
INTERSTATE PAYCO SEED CO	PAYCO	PO BOX 338	WEST FARGO, ND	58078	701-282-7338
JACOBSEN HYBRID CORN CO	JACOBSEN	BOX 379	LAKE VIEW, IA	51450	712-657-2841
KALTENBERG SEEDS	KALTENBERG	PO BOX 278	WAUNAKEE, WI	53597-0278	800-383-3276
KAYSTAR SEED	KAYSTAR	PO BOX 947	HURON, SD	57350	605-352-8791
KRUGER SEED COMPANY	KRUGER	HWY 20 EAST, BOX A	DIKE, IA	50624	319-989-2414
LG SEEDS	LG SEEDS	BOX 88	TEKAMAH, NE	68061	800-752-6574
MALLARD SEED CO INC	MALLARD	311 WEST BROADWAY	PLAINVIEW, MN	55964	507-534-2300
MONSANTO GLOBAL SEED GRP.	ASGROW	3100 SYCAMORE RD	DEKALB, IL	60115	815-758-3461
MONSANTO GLOBAL SEED GRP.	DEKALB	3100 SYCAMORE RD	DEKALB, IL	60115	815-758-3461
MYCOGEN SEEDS	MYCOGEN	1340 CORP. CTR CURVE	EAGAN, MN	55121-1233	651-405-5973
NC+ HYBRIDS	NC+	BOX 4408	LINCOLN, NE	68504	402-467-2517
PROSEED	PROSEED	705 E BREWSTER	HARVEY, ND	58341	701-324-4177
RENZE HYBRIDS INC	RENZE	27410 KITTYHAWK AVE	CARROL, IA	51401	712-669-3301
SAND SEED SERVICE INC	SANDS	PO BOX 648	MARCUS, IA	51035	712-376-4135
SEEDS 2000	SEEDS 2000	BOX 200	BRECKENRIDGE, MN	56520	218-643-2410
TERRA	TERRA	PO BOX 600	SIOUX CITY, IA	51102	712-233-3609
TOP FARM HYBRIDS	TOP FARM	BOX 850	COKATO, MN	55321	320-286-5516
UNITED SUPLIERS INC	U.S. SEEDS	PO BOX 538	ELDORA, IA	50627	515-858-2341
WENSMAN SEED COMPANY	WENSMAN	PO BOX 190	WADENA, MN	56482	218-631-2954
WILSON GENETICS, L.L.C.	WILSON	PO BOX 391	HARLAN, IA	51537	712-755-3841

Table 1. 1999 corn hybrid trial results—conventional, Watertown, N.E. Research Farm, early maturity—95 days or less.

BRAND & HYBRID	YIELDS AT 15.5% MOIST. 2-YR (Bu/A)	YIELDS AT 15.5% MOIST. 1999 (Bu/A)	1999 GRAIN MOIST. (%)	1999 BU. WT. (lb)	1999 PLANTS PER ACRE	1999 STALKS LODGED (%)
******* ENTRIES TESTED TWO YEARS *******						
GARST 8830	185	181	17	55	27878	1
DEKALB DK440	179	180	14	55	27878	1
KALTENBERG K3904	170	164	15	56	27878	2
MUSTANG 402	169	173	15	54	27878	1
WENSMAN MAX 127	169	169	17	59	27878	0
DEKALB DK405	168	171	13	55	27878	1
PAYCO 468	167	161	14	55	27878	1
MUSTANG 3090	166	175	14	55	27878	1
WENSMAN MAX 007	166	161	15	58	27878	5
DAIRYLAND STEALTH-1496	165	162	15	55	27878	3
DENBESTEN DB2890	165	176	15	55	27878	1
MUSTANG 403	164	161	16	54	27878	1
EPLEY E1122	161	172	14	56	27878	1
WENSMAN MAX 78	161	150	14	57	27878	0
MALLARD UC-389-A	157	154	14	54	27878	1
KRUGER K-9896	156	163	14	55	27878	2
WENSMAN W 5088 BT	156	159	15	59	27878	0
DENBESTEN DB2892	156	158	14	57	27878	0
DAIRYLAND STEALTH-1595	153	145	15	56	27878	1
TOP FARM TFSX 2196	151	155	15	56	27878	1
MUSTANG 3093	148	141	15	55	27878	1
KAYSTAR KX-410	145	135	14	55	27878	1
******* ENTRIES TESTED ONE YEAR *******						
KRUGER EX-2096	.	178	15	56	27878	2
KRUGER EX-2098	.	174	14	55	27878	3
DEKALB DK427	.	172	14	58	27878	3
KRUGER K-9898+	.	168	17	59	27878	2
DAIRYLAND STEALTH-1493	.	167	16	55	27878	5
DEKALB DK389BTY	.	167	15	59	27878	0
MYCOGEN 2424	.	164	17	59	27878	2
GARST 8820IT	.	163	15	56	27878	6
WENSMAN W 5258 BT	.	160	14	59	27878	4
LG SEEDS LG 2473	.	159	14	55	27878	1
GARST N7870	.	159	15	56	27878	4
U.S. SEEDS US C909	.	158	16	59	27878	1
PROSEED 295	.	156	15	56	27878	2
PROSEED ES4938	.	155	14	56	27878	1
TOP FARM TFSX 795BT	.	155	16	57	27878	4
GARST N8894BT	.	154	14	56	27878	3
CARGILL 2610	.	154	16	59	27878	0
KRUGER K-2094	.	153	15	55	27878	2
DAIRYLAND STEALTH-1494	.	152	15	56	27878	0
KRUGER K-2091	.	152	13	56	27878	0

Table 1 (continued).

BRAND & HYBRID	YIELDS AT 15.5% MOIST. 2-YR (Bu/A)	YIELDS AT 15.5% MOIST. 1999 (Bu/A)	1999 GRAIN MOIST. (%)	1999 BU. WT. (lb)	1999 PLANTS PER ACRE	1999 STALKS LODGED (%)
	******* ENTRIES TESTED ONE YEAR *******					
KAYSTAR KX-405	.	147	14	55	27878	1
DENBESTEN DB2985	.	147	15	57	27878	0
ASGROW RX355YG	.	146	14	57	27878	1
SEEDS 2000 2951	.	139	14	55	27878	1
MUSTANG 3900	.	139	13	55	27878	0
MUSTANG 4095BT	.	138	15	56	27878	3
ASGROW RX346	.	137	14	58	27878	0
WENSMAN W 5178 BT	.	135	14	58	27878	0
AVERAGE:	163	158	15	56	27878	1
LSD (5%):	20	19	1	2	$$	$$
MIN. TOP YIELD VALUE*:	165	162				
COEF. OF VARIATION#:	7	7				

*TOP YIELD - YIELDS WITHIN ONE LSD VALUE OF HIGHEST YIELD.
$$DIFFERENCES WITHIN A COLUMN ARE NOT SIGNIFICANT.
#A MEASURE OF EXPERIMENTAL ERROR; A VALUE OF 15% OR LESS IS DESIRABLE.

Table 2. 1999 corn hybrid trial results—conventional, Watertown, N.E. Research Farm, late maturity—96 days or more.

BRAND & HYBRID	YIELDS AT 15.5% MOIST. 2-YR (Bu/A)	YIELDS AT 15.5% MOIST. 1999 (Bu/A)	1999 GRAIN MOIST. (%)	1999 BU. WT. (lb)	1999 PLANTS PER ACRE	1999 STALKS LODGED (%)
******* ENTRIES TESTED TWO YEARS *******						
DEKALB DK477	162	134	14	53	27878	0
GARST 8766	158	134	15	57	27878	1
HYLAND SEEDS HL 2521	158	148	19	53	27878	0
DEKALB DK493BTX	155	135	14	54	27878	2
HYLAND SEEDS HL 2614	154	140	16	53	27878	1
DENBESTEN DB2702	154	125	18	52	27878	0
HYLAND SEEDS HL 2507	153	134	15	53	27878	0
KALTENBERG K4809	153	125	14	53	27878	1
EPLEY E1160	153	128	14	52	27878	1
CARGILL 3677	153	134	15	55	27878	0
KRUGER K-9802	153	131	18	53	27878	1
TOP FARM TFSX 2100	150	129	18	52	27878	1
MALLARD UC-595-A	149	131	17	53	27878	1
HYLAND SEEDS HL 2505	146	124	15	53	27878	1
TOP FARM TFSX 2201	143	124	15	53	27878	0
KRUGER 9902BT	142	117	14	50	27878	2
******* ENTRIES TESTED ONE YEAR *******						
KRUGER K-9903BT	.	148	15	55	27878	1
MYCOGEN 2525	.	145	15	54	27878	1
DEKALB DK507	.	141	15	54	27878	1
U.S. SEEDS US C969	.	140	14	53	27878	1
MYCOGEN 2566	.	139	16	53	27878	0
MYCOGEN 2592	.	136	17	55	27878	0
DENBESTEN DB2904	.	136	21	51	27878	1
LG SEEDS LG 2484	.	136	17	54	27878	1
TOP FARM TFSX 105BT	.	135	16	55	27878	1
KRUGER EX-2005	.	135	17	53	27878	1
WENSMAN W 5329 BT	.	135	18	57	27878	0
KRUGER K-2002BT	.	135	14	54	27878	0
KALTENBERG K4907	.	134	17	56	27878	0
CARGILL 4021 BT	.	133	15	54	27878	1
TOP FARM TFSX 2101	.	133	16	53	27878	1
WENSMAN W 5308 BT	.	132	13	53	27878	0
TOP FARM TFSX 7102BT	.	132	20	52	27878	1
MALLARD UC-585	.	132	15	51	27878	0
SEEDS 2000 3121BT	.	131	19	52	27878	1
PROSEED ES4968	.	130	14	54	27878	0
SEEDS 2000 3101	.	128	17	52	27878	0
EPLEY E1470BT	.	127	18	51	27878	1
MALLARD BT 2660	.	127	18	52	27878	1
DENBESTEN DB2999	.	126	17	53	27878	0
GARST N7801	.	125	15	53	27878	0

Table 2 (continued).

BRAND & HYBRID	YIELDS AT 15.5% MOIST. 2-YR (Bu/A)	YIELDS AT 15.5% MOIST. 1999 (Bu/A)	1999 GRAIN MOIST. (%)	1999 BU. WT. (lb)	1999 PLANTS PER ACRE	1999 STALKS LODGED (%)
******* ENTRIES TESTED ONE YEAR *******						
DENBESTEN DB2902BT	.	125	19	52	27878	2
DENBESTEN DB2905BT	.	124	15	54	27878	0
GARST N8701BT	.	123	19	51	27878	1
WENSMAN W 5319 BT	.	123	16	54	27878	1
KRUGER K-9905BT	.	123	23	49	27878	0
MYCOGEN 2544	.	119	19	51	27878	1
GARST 8773BLT	.	118	16	56	27878	1
KALTENBERG K4508	.	118	14	55	27878	0
PROSEED ET96	.	118	14	53	27878	1
GARST 8732IT	.	113	15	53	27878	2
KRUGER K-9906BT	.	112	25	50	27878	1
PROSEED 200	.	111	19	52	27878	2
KAYSTAR X9971	.	109	15	53	27878	0
DENBESTEN DB2906BT	.	98	22	50	27878	1
AVERAGE:	152	129	17	53	27878	1
LSD (5%):	$$	18	1	2	$$	$$
MIN. TOP YIELD VALUE*:	142	130				
COEF. OF VARIATION#:	7	9				

*TOP YIELD - YIELDS WITHIN ONE LSD VALUE OF HIGHEST YIELD.
$$DIFFERENCES WITHIN A COLUMN ARE NOT SIGNIFICANT.
#A MEASURE OF EXPERIMENTAL ERROR; A VALUE OF 15% OR LESS IS DESIRABLE.

Table 3. 1999 corn hybrid trial (no-till) results—conventional, Frankfort, Steve Masat farm, early maturity—100 days or less.

BRAND & HYBRID	YIELDS AT 15.5% MOIST. 2-YR (Bu/A)	YIELDS AT 15.5% MOIST. 1999 (Bu/A)	1999 GRAIN MOIST. (%)	1999 BU. WT. (lb)	1999 PLANTS PER ACRE	1999 STALKS LODGED (%)
******* ENTRIES TESTED TWO YEARS *******						
KRUGER K-9802	178	163	15	56	27878	13
GARST 8830	175	161	14	56	27878	3
DEKALB DK440	170	161	14	56	27878	33
GARST 8766	164	142	15	57	27878	16
WENSMAN MAX 78	163	153	14	58	27878	32
KRUGER 9902BT	160	133	14	52	27878	32
CARGILL 2777	159	142	15	60	27878	31
GARST 8707	156	117	14	54	27878	9
WENSMAN MAX 127	156	119	14	56	27878	27
KRUGER K-9896	155	131	14	54	27878	31
DEKALB DK493BTX	155	125	14	55	27878	27
DEKALB DK477	148	105	14	55	27878	25
DENBESTEN DB2890	144	103	14	55	27878	16
PAYCO 468	137	93	14	54	27878	20
WENSMAN MAX 007	130	79	15	57	27878	35
WENSMAN W 5088 BT	127	61	14	50	27878	2
DENBESTEN DB2892	126	78	14	55	27878	16
TOP FARM TFSX 2196	125	83	14	53	27878	18
******* ENTRIES TESTED ONE YEAR *******						
SEEDS 2000 3101	.	172	17	54	27878	14
GARST 8732IT	.	169	15	55	27878	12
GARST 8773BLT	.	162	16	58	27878	12
PROSEED 200	.	156	17	53	27878	14
MUSTANG 503	.	155	15	57	27878	12
ASGROW RX481	.	152	15	54	27878	24
MYCOGEN 2544	.	140	15	57	27878	4
GARST N7870	.	139	14	56	27878	23
DENBESTEN DB2999	.	138	15	55	27878	16
PROSEED ES4968	.	138	14	53	27878	25
TOP FARM TFSX 795BT	.	137	15	56	27878	18
KAYSTAR X9971	.	137	15	55	27878	16
WENSMAN W 5258 BT	.	137	14	58	27878	46
TOP FARM TFSX 2101	.	136	15	56	27878	7
PROSEED ES5100	.	129	16	57	27878	22
DAIRYLAND STEALTH-1499	.	128	15	56	27878	19
DAIRYLAND STEALTH1298BT	.	128	16	57	27878	39
ASGROW RX393	.	126	15	57	27878	21
MUSTANG 4095BT	.	126	15	56	27878	36
KRUGER K-9898+	.	124	15	57	27878	21

Table 3 (continued).

BRAND & HYBRID	YIELDS AT 15.5% MOIST. 2-YR (Bu/A)	YIELDS AT 15.5% MOIST. 1999 (Bu/A)	1999 GRAIN MOIST. (%)	1999 BU. WT. (lb)	1999 PLANTS PER ACRE	1999 STALKS LODGED (%)
******* ENTRIES TESTED ONE YEAR *******						
KRUGER EX-2098	.	123	14	55	27878	21
DEKALB DK507	.	120	15	56	27878	23
MYCOGEN 2525	.	116	17	58	27878	39
GARST N8894BT	.	112	14	56	27878	39
GARST N7801	.	111	14	55	27878	14
DENBESTEN DB2985	.	110	15	57	27878	19
WENSMAN W 5178 BT	.	108	15	57	27878	8
KRUGER K-2002BT	.	100	14	56	27878	16
U.S. SEEDS US C1009	.	83	14	53	27878	37
PROSEED ET96	.	83	13	50	27878	14
KRUGER K-9903BT	.	79	14	56	27878	10
TOP FARM TFSX 2201	.	78	14	56	27878	19
AVERAGE:	152	124	15	56	27878	21
LSD (5%):	35	25	1	4	$$	14
MIN. TOP YIELD VALUE*:	143	147				
COEF. OF VARIATION#:	9	12				

*TOP YIELD - YIELDS WITHIN ONE LSD VALUE OF HIGHEST YIELD.
$$DIFFERENCES WITHIN A COLUMN ARE NOT SIGNIFICANT.
#A MEASURE OF EXPERIMENTAL ERROR; A VALUE OF 15% OR LESS IS DESIRABLE.

Table 4. 1999 corn hybrid trial (no-till) results—conventional, Frankfort, Steve Masat farm, late maturity—101 days or more.

BRAND & HYBRID	15.5% MOIST. 2-YR (Bu/A)	15.5% MOIST. 1999 (Bu/A)	GRAIN MOIST. (%)	BU. WT. (lb)	PLANTS PER ACRE	STALKS LODGED (%)
	******* ENTRIES TESTED TWO YEARS *******					
KRUGER K-9906BT	183	157	17	52	27878	8
DEKALB DK545BTY	179	151	15	53	27878	3
DENBESTEN DB2702	177	159	15	58	27878	10
TOP FARM TFSX 2202	176	157	17	54	27878	10
TOP FARM TFSX 2100	167	159	15	59	27878	6
CARGILL 4111	165	118	14	57	27878	10
KAYSTAR KX-625	164	158	15	56	27878	4
MYCOGEN 2620	163	138	17	56	27878	8
KRUGER K-9806	161	120	17	55	27878	7
KRUGER K-9806B	160	113	16	54	27878	14
	******* ENTRIES TESTED ONE YEAR *******					
KRUGER K-2008	.	189	16	53	27878	6
DEKALB DK551BTY	.	184	15	54	27878	7
MYCOGEN 2566	.	181	17	57	27878	13
GARST N8658BT	.	172	18	54	27878	6
WENSMAN W 5319 BT	.	162	16	57	27878	17
DENBESTEN DB2904	.	161	17	56	27878	9
MUSTANG 5103BT	.	159	16	56	27878	11
DENBESTEN DB2902BT	.	159	16	58	27878	12
SEEDS 2000 3121BT	.	156	15	57	27878	4
KRUGER EX-2005	.	153	15	57	27878	10
DENBESTEN DB2906BT	.	152	18	55	27878	5
KRUGER EX-908BT	.	151	17	54	27878	7
WENSMAN W 5308 BT	.	151	15	59	27878	6
MYCOGEN 2652	.	150	15	55	27878	11
TOP FARM TFSX 7102BT	.	148	15	55	27878	8
PROSEED ES4038	.	143	16	56	27878	4
KRUGER K-9905BT	.	140	17	53	27878	9
ASGROW RX495YG	.	139	16	56	27878	8
GARST N8701BT	.	132	17	55	27878	13
CARGILL 4021 BT	.	125	15	59	27878	9
MYCOGEN 2657	.	122	16	55	27878	15
MYCOGEN 2592	.	120	15	57	27878	24
WENSMAN W 5329 BT	.	119	16	59	27878	12
GARST 8608BT	.	112	15	55	27878	7
DEKALB DK539	.	111	16	58	27878	28
DENBESTEN DB2905BT	.	95	15	56	27878	13
U.S. SEEDS US C1029BT	.	89	14	52	27878	10
TOP FARM TFSX 105BT	.	80	15	57	27878	10
PROSEED ES4048	.	80	14	57	27878	9
AVERAGE:	169	140	16	56	27878	10
LSD (5%):	$$	25	1	4	$$	9
MIN. TOP YIELD VALUE*:	160	164				
COEF. OF VARIATION#:	8	11				

*TOP YIELD - YIELDS WITHIN ONE LSD VALUE OF HIGHEST YIELD.
$$DIFFERENCES WITHIN A COLUMN ARE NOT SIGNIFICANT.
#A MEASURE OF EXPERIMENTAL ERROR; A VALUE OF 15% OR LESS IS DESIRABLE.

Table 5. 1999 corn hybrid trial results—conventional, Brookings, SDSU Agronomy Farm, early maturity—100 days or less.

BRAND & HYBRID	YIELDS AT 15.5% MOIST. 2-YR (Bu/A)	YIELDS AT 15.5% MOIST. 1999 (Bu/A)	1999 GRAIN MOIST. (%)	1999 BU. WT. (lb)	1999 PLANTS PER ACRE	1999 STALKS LODGED (%)
******* ENTRIES TESTED TWO YEARS *******						
DEKALB DK440	186	175	12	56	27878	2
KRUGER K-9802	176	160	13	57	27878	1
HYLAND SEEDS HL 2614	175	166	13	56	27878	1
GARST 8707	175	149	12	55	27878	0
DEKALB DK493BTX	174	169	13	56	27878	1
MUSTANG 503	173	181	13	59	27878	1
HYLAND SEEDS HL 2507	171	153	12	55	27878	0
WENSMAN MAX 007	170	166	13	59	27878	1
DAIRYLAND STEALTH-1401	168	161	13	59	27878	1
HYLAND SEEDS HL 2505	167	152	12	55	27878	1
MUSTANG 402	167	163	13	56	27878	1
HYLAND SEEDS HL 2521	166	161	13	60	27878	2
WENSMAN MAX 127	166	170	14	58	27878	0
WENSMAN W 5088 BT	158	153	13	60	27878	0
CARGILL 2777	157	152	13	60	27878	1
KALTENBERG K4809	155	150	12	56	27878	1
DENBESTEN DB2892	154	146	12	58	27878	1
MUSTANG 403	153	145	13	57	27878	0
WENSMAN MAX 78	152	144	12	56	27878	1
DENBESTEN DB2890	151	142	13	56	27878	1
TOP FARM TFSX 2201	149	131	12	56	27878	2
EPLEY E1122	147	138	13	55	27878	1
TOP FARM TFSX 2196	147	131	13	56	27878	1
******* ENTRIES TESTED ONE YEAR *******						
SEEDS 2000 3101	.	172	13	57	27878	0
ASGROW RX393	.	171	13	57	27878	1
DEKALB DK507	.	165	13	59	27878	1
KRUGER K-9903BT	.	163	13	58	27878	7
WENSMAN W 5258 BT	.	162	14	60	27878	1
KAYSTAR X9971	.	162	13	58	27878	0
PROSEED ET96	.	160	13	56	27878	2
PROSEED ES4968	.	160	13	56	27878	1
MYCOGEN 2525	.	160	13	56	27878	1
KRUGER K-2002BT	.	159	13	57	27878	3
ASGROW RX481	.	158	12	56	27878	1
TOP FARM TFSX 2101	.	156	13	59	27878	0
DAIRYLAND STEALTH-1403	.	155	14	57	27878	3
KRUGER K-9896	.	155	13	55	27878	4
MYCOGEN 2544	.	153	13	57	27878	0
PROSEED 200	.	153	13	57	27878	2
EPLEY E1160	.	153	13	57	27878	1
U.S. SEEDS US C1009	.	153	12	55	27878	1
LG SEEDS LG 2484	.	152	13	57	27878	2
GARST 8830	.	152	13	57	27878	2

Table 5 (continued).

BRAND & HYBRID	YIELDS AT 15.5% MOIST. 2-YR (Bu/A)	YIELDS AT 15.5% MOIST. 1999 (Bu/A)	1999 GRAIN MOIST. (%)	1999 BU. WT. (lb)	1999 PLANTS PER ACRE	1999 STALKS LODGED (%)
******* ENTRIES TESTED ONE YEAR *******						
KALTENBERG K4508	.	151	12	57	27878	0
PROSEED ES5100	.	150	13	60	27878	1
KRUGER EX-2098	.	150	12	54	27878	1
NC+ 1799	.	150	13	58	27878	1
DENBESTEN DB2999	.	150	13	56	27878	0
GARST 8732IT	.	149	13	56	27878	2
NC+ 1888	.	148	13	58	27878	2
WENSMAN W 5178 BT	.	146	14	58	27878	0
DENBESTEN DB2985	.	145	13	58	27878	0
SANDS SOI 9009	.	144	13	59	27878	0
KALTENBERG K4907	.	143	13	60	27878	1
MUSTANG 4099IMI	.	141	13	59	27878	1
MUSTANG 4095BT	.	139	13	57	27878	4
KRUGER K-9898+	.	137	13	60	27878	1
TOP FARM TFSX 795BT	.	137	13	58	27878	3
ASGROW RX346	.	131	13	59	27878	1
AVERAGE:	163	153	13	57	27878	1
LSD (5%):	21	17	1	2	$$	2
MIN. TOP YIELD VALUE*:	165	164				
COEF. OF VARIATION#:	6	7				

*TOP YIELD - YIELDS WITHIN ONE LSD VALUE OF HIGHEST YIELD.
$$DIFFERENCES WITHIN A COLUMN ARE NOT SIGNIFICANT.
#A MEASURE OF EXPERIMENTAL ERROR; A VALUE OF 15% OR LESS IS DESIRABLE.

Table 6. 1999 corn hybrid trial results—conventional, Brookings, SDSU Agronomy Farm, late maturity—101 days or more.

BRAND & HYBRID	YIELDS AT 15.5% MOIST. 2-YR (Bu/A)	YIELDS AT 15.5% MOIST. 1999 (Bu/A)	1999 GRAIN MOIST. (%)	1999 BU. WT. (lb)	1999 PLANTS PER ACRE	1999 STALKS LODGED (%)
******* ENTRIES TESTED TWO YEARS *******						
KRUGER K-9908BT	187	203	15	56	27878	4
GARST 8640	186	188	14	58	27878	3
KRUGER K-9909BT	180	187	15	57	27878	3
EPLEY E2434	174	165	14	56	27878	3
DENBESTEN DB2702	174	170	14	58	27878	1
MYCOGEN 2620	169	180	15	58	27878	2
MUSTANG 661	169	179	14	57	27878	1
EPLEY E2422	169	178	14	56	27878	1
TOP FARM TFSX 2100	164	165	14	58	27878	1
TOP FARM TFSX 2202	164	150	14	55	27878	2
KAYSTAR KX-675	162	155	13	56	27878	1
KRUGER K-9906BT	160	175	15	56	27878	1
EPLEY E1460	157	159	13	58	27878	1
CARGILL 4111	156	161	13	56	27878	1
EPLEY E1500	152	156	14	58	27878	1
******* ENTRIES TESTED ONE YEAR *******						
TOP FARM TFSX 2108	.	204	15	56	27878	0
KRUGER EX-908BT	.	201	15	55	27878	2
TOP FARM TFSX 2107	.	191	15	55	27878	1
DEKALB DK537	.	187	14	58	27878	1
LG SEEDS LG 2512	.	187	15	60	27878	1
MALLARD BT 2660	.	185	14	58	27878	1
KAYSTAR X9071	.	184	14	55	27878	1
MYCOGEN 2652	.	184	13	55	27878	1
MYCOGEN 2566	.	181	14	56	27878	1
CARGILL 4521 BT	.	180	14	58	27878	3
KRUGER EX-006	.	179	15	54	27878	1
U.S. SEEDS US C1059	.	179	14	56	27878	1
GARST 8608BT	.	179	14	59	27878	2
MYCOGEN 2657	.	179	14	58	27878	0
RENZE 8158BT	.	178	14	58	27878	3
DENBESTEN DB2904	.	178	15	59	27878	1
DAIRYLAND STEALTH-1404	.	176	14	57	27878	1
U.S. SEEDS US C1029BT	.	176	14	58	27878	2
ASGROW RX495YG	.	176	15	58	27878	1
WENSMAN W 5319 BT	.	175	14	58	27878	0
WENSMAN W 5329 BT	.	175	15	60	27878	1
KRUGER EX-908	.	175	13	54	27878	1
KALTENBERG K5005	.	174	14	59	27878	2
KALTENBERG K5454BT	.	174	14	58	27878	1
MUSTANG 6102BT	.	174	14	57	27878	1

Table 6 (continued).

BRAND & HYBRID	YIELDS AT 15.5% MOIST. 2-YR (Bu/A)	YIELDS AT 15.5% MOIST. 1999 (Bu/A)	1999 GRAIN MOIST. (%)	1999 BU. WT. (lb)	1999 PLANTS PER ACRE	1999 STALKS LODGED (%)
******* ENTRIES TESTED ONE YEAR *******						
SEEDS 2000 3103	.	174	14	58	27878	1
DEKALB DK539	.	174	14	59	27878	0
MUSTANG 6104BT	.	174	14	56	27878	1
DEKALB DK551BTY	.	173	14	56	27878	1
KRUGER K-2008	.	173	14	57	27878	1
TOP FARM TFSX 2111	.	172	13	55	27878	1
DENBESTEN DB2905BT	.	171	14	57	27878	1
EPLEY E1470BT	.	171	14	59	27878	1
EPLEY E1510BT	.	171	14	58	27878	1
KALTENBERG K5404	.	170	14	58	27878	1
MUSTANG 5103BT	.	170	14	59	27878	1
SEEDS 2000 3105	.	169	14	56	27878	3
NC+ 2839	.	169	14	57	27878	0
PROSEED ES4048	.	169	14	57	27878	2
TOP FARM TFSX 105BT	.	168	14	58	27878	2
TOP FARM TFSX 7102BT	.	168	14	58	27878	1
RENZE 6210	.	167	14	56	27878	2
TERRA TR 1008BT	.	166	14	58	27878	1
DENBESTEN DB2906BT	.	166	14	55	27878	2
MUSTANG 6004	.	166	13	56	27878	1
WENSMAN W 5308 BT	.	164	14	58	27878	0
SEEDS 2000 3121BT	.	161	14	57	27878	0
DENBESTEN DB2902BT	.	161	14	57	27878	1
RENZE 6229	.	161	14	56	27878	1
CARGILL 4021 BT	.	160	14	57	27878	0
MYCOGEN 2592	.	158	14	58	27878	0
MUSTANG 602	.	158	14	56	27878	2
KALTENBERG K5901	.	154	14	56	27878	2
PROSEED ES4038	.	143	14	58	27878	0
AVERAGE:	168	173	14	57	27878	1
LSD (5%):	$$	18	1	2	$$	$$
MIN. TOP YIELD VALUE*:	152	186				
COEF. OF VARIATION#:	6	6				

*TOP YIELD - YIELDS WITHIN ONE LSD VALUE OF HIGHEST YIELD.
$$DIFFERENCES WITHIN A COLUMN ARE NOT SIGNIFICANT.
#A MEASURE OF EXPERIMENTAL ERROR; A VALUE OF 15% OR LESS IS DESIRABLE.

Table 7. 1999 corn hybrid trial (no-till) results—conventional, Armour, Robert Clark farm, early maturity—105 days or less.

BRAND & HYBRID	YIELDS AT 15.5% MOIST. 2-YR (Bu/A)	YIELDS AT 15.5% MOIST. 1999 (Bu/A)	1999 GRAIN MOIST. (%)	1999 BU. WT. (lb)	1999 PLANTS PER ACRE	1999 STALKS LODGED (%)
	******* ENTRIES TESTED TWO YEARS *******					
KRUGER K-9908BT	174	161	13	54	27878	0
KRUGER K-9909BT	173	154	14	55	27878	1
EPLEY E1510BT	169	126	13	58	27878	0
KRUGER K-9906BT	169	156	14	56	27878	3
DENBESTEN DB2702	167	161	13	59	27878	0
KRUGER K-9806	159	142	13	57	27878	3
MYCOGEN 2620	158	133	13	57	27878	1
GARST 8640	157	121	13	56	27878	2
EPLEY E1460	155	138	13	58	27878	1
LG SEEDS LG 2530	150	100	14	57	27878	5
RENZE 8158BT	149	82	13	58	27878	1
EPLEY E1500	149	127	14	59	27878	1
WILSON 1390	149	99	13	56	27878	3
GARST 8707	147	120	12	54	27878	1
KRUGER K-9806B	142	98	11	51	27878	1
	******* ENTRIES TESTED ONE YEAR *******					
U.S. SEEDS US C1059	.	170	13	58	27878	2
DENBESTEN DB2904	.	170	14	59	27878	1
HOEGEMEYER 2598	.	167	14	57	27878	1
WENSMAN W 5308 BT	.	166	13	57	27878	0
TOP FARM TFSX 2202	.	161	14	59	27878	4
DEKALB DK551BTY	.	159	13	58	27878	2
HOEGEMEYER 2593	.	159	13	58	27878	2
RENZE 6210	.	157	14	58	27878	2
WENSMAN W 5319 BT	.	154	13	58	27878	2
MALLARD BT 2660	.	154	13	57	27878	1
SANDS SOI 9058	.	149	14	56	27878	2
TOP FARM TFSX 7102BT	.	147	13	59	27878	1
WENSMAN W 5258 BT	.	146	13	58	27878	4
WENSMAN MAX 127	.	145	14	61	27878	1
MUSTANG 6104BT	.	143	14	57	27878	2
DEKALB DK539	.	141	14	60	27878	2
TOP FARM TFSX 2100	.	141	13	58	27878	0
SEEDS 2000 3105	.	141	13	55	27878	2
DENBESTEN DB2902BT	.	139	13	58	27878	2
HEINE H755	.	139	13	56	27878	1
KRUGER K-9905BT	.	137	14	57	27878	3
MUSTANG 6004	.	136	14	58	27878	2
WENSMAN W 5329 BT	.	136	14	60	27878	1
MYCOGEN 2566	.	136	13	57	27878	1
RENZE 6229	.	135	14	57	27878	0

Table 7 (continued).

BRAND & HYBRID	YIELDS AT 15.5% MOIST. 2-YR (Bu/A)	YIELDS AT 15.5% MOIST. 1999 (Bu/A)	1999 GRAIN MOIST. (%)	1999 BU. WT. (lb)	1999 PLANTS PER ACRE	1999 STALKS LODGED (%)
******* ENTRIES TESTED ONE YEAR *******						
U.S. SEEDS US C1029BT	.	132	13	58	27878	1
ASGROW RX601YG	.	132	13	56	27878	2
KRUGER K-2008	.	130	12	55	27878	1
EPLEY E1470BT	.	129	13	59	27878	0
JACOBSEN JS4196	.	129	13	57	27878	2
CARGILL 5212	.	127	13	57	27878	5
TOP FARM TFSX 2201	.	125	13	57	27878	1
WILSON 1364	.	124	13	58	27878	2
CARGILL 4521 BT	.	123	13	56	27878	1
DEKALB DK537	.	122	13	56	27878	2
JACOBSEN JS4205BT	.	122	13	59	27878	1
SEEDS 2000 3103	.	122	12	56	27878	1
DENBESTEN DB2906BT	.	121	14	57	27878	1
MYCOGEN 2592	.	121	13	56	27878	1
SANDS SOI 9009	.	116	13	60	27878	0
TOP FARM TFSX 105BT	.	114	13	58	27878	1
GARST 8608BT	.	113	13	58	27878	0
DENBESTEN DB2905BT	.	106	13	56	27878	1
SANDS SOI 105BT	.	103	13	58	27878	2
WILSON 1205BT	.	87	12	50	27878	1
AVERAGE:	158	134	13	57	27878	1
LSD (5%):	$$	34	1	3	$$	$$
MIN. TOP YIELD VALUE*:	142	136				
COEF. OF VARIATION#:	9	15				

*TOP YIELD - YIELDS WITHIN ONE LSD VALUE OF HIGHEST YIELD.
$$DIFFERENCES WITHIN A COLUMN ARE NOT SIGNIFICANT.
#A MEASURE OF EXPERIMENTAL ERROR; A VALUE OF 15% OR LESS IS DESIRABLE.

Table 8. 1999 corn hybrid trial (no-till) results—conventional, Armour, Robert Clark farm, late maturity—106 days or more.

BRAND & HYBRID	YIELDS AT 15.5% MOIST. 2-YR (Bu/A)	YIELDS AT 15.5% MOIST. 1999 (Bu/A)	1999 GRAIN MOIST. (%)	1999 BU. WT. (lb)	1999 PLANTS PER ACRE	1999 STALKS LODGED (%)
	******* ENTRIES TESTED TWO YEARS *******					
SANDS SOI 9126	196	173	14	57	27878	1
DENBESTEN DB2611	193	174	14	59	27878	2
KRUGER K-9513	191	172	14	56	27878	0
JACOBSEN JS4635	189	171	14	57	27878	1
MYCOGEN 2725	188	167	14	58	27878	3
CARGILL 6888	187	163	14	57	27878	1
RENZE 6386	187	167	14	57	27878	3
EPLEY E3608	187	181	14	57	27878	1
KRUGER K-9614A	185	165	14	57	27878	0
DENBESTEN DB5112	183	171	14	57	27878	2
HOEGEMEYER 2623	181	152	13	56	27878	1
RENZE 8248BT	180	155	13	56	27878	1
KRUGER K-9910	179	162	14	57	27878	2
DAIRYLAND STEALTH-1409	178	164	14	58	27878	2
WILSON 1664	176	166	14	57	27878	1
EPLEY E3242	175	152	14	55	27878	2
KAYSTAR KX-777	171	154	14	56	27878	2
WILSON 1464	171	161	14	58	27878	0
CARGILL 5677	170	138	13	59	27878	2
EPLEY E2434	169	158	14	58	27878	1
EPLEY E2422	160	139	12	55	27878	2
	******* ENTRIES TESTED ONE YEAR *******					
RENZE 8349BT	.	191	14	57	27878	1
DENBESTEN DB2912BT	.	189	14	56	27878	2
KRUGER K-9614ABT	.	188	14	56	27878	1
KRUGER K-2010BT	.	185	14	57	27878	1
MYCOGEN 2717	.	185	14	58	27878	1
EPLEY E3620	.	182	14	57	27878	1
JACOBSEN JS56	.	180	15	58	27878	5
EPLEY E3610BT	.	178	14	56	27878	1
HEINE H770	.	177	14	58	27878	1
KRUGER K-9410BT	.	176	15	58	27878	3
GARST 8590IT	.	174	14	58	27878	2
KRUGER K-9911A	.	172	13	57	27878	2
JACOBSEN JS4785BT	.	170	14	57	27878	1
MYCOGEN 2657	.	170	13	58	27878	0
MUSTANG 7110	.	167	14	57	27878	4
RENZE 6320	.	167	14	57	27878	1
HOEGEMEYER 2604	.	165	13	57	27878	1
MALLARD BT 621-CC	.	165	15	59	27878	2
TOP FARM TFSX 2107	.	162	13	56	27878	2
KRUGER K-2012	.	162	14	57	27878	2

Table 8 (continued).

BRAND & HYBRID	YIELDS AT 15.5% MOIST. 2-YR (Bu/A)	YIELDS AT 15.5% MOIST. 1999 (Bu/A)	1999 GRAIN MOIST. (%)	1999 BU. WT. (lb)	1999 PLANTS PER ACRE	1999 STALKS LODGED (%)
******* ENTRIES TESTED ONE YEAR *******						
DEKALB DK589BTY	.	162	13	57	27878	1
WENSMAN W 5378 BT	.	161	13	58	27878	1
GARST 8600BLT	.	161	15	58	27878	3
TOP FARM TFSX 2111	.	160	12	55	27878	2
LG SEEDS LG 2544	.	159	12	56	27878	1
TOP FARM TFSX 2108	.	159	15	58	27878	5
MALLARD UC 2682	.	158	13	59	27878	1
WENSMAN W 5359 BT	.	158	14	59	27878	2
TOP FARM TFSX 106BT	.	158	14	57	27878	0
DENBESTEN DB2910BT	.	157	13	57	27878	1
HEINE H790	.	156	13	55	27878	2
CARGILL 6521 BT	.	154	14	58	27878	3
HEINE H765	.	153	13	55	27878	0
U.S. SEEDS US C1069BT	.	151	13	57	27878	2
RENZE 6260	.	151	13	57	27878	3
MYCOGEN 2652	.	150	13	55	27878	4
DENBESTEN DB2011BT	.	149	14	57	27878	0
U.S. SEEDS US C1099	.	142	13	55	27878	2
U.S. SEEDS US C1109BT	.	140	13	57	27878	2
WILSON 1436BT	.	138	13	58	27878	4
MUSTANG 7007	.	134	13	57	27878	2
WILSON E4011	.	121	15	58	27878	1
MALLARD BT 2700	.	120	13	57	27878	1
CARGILL 4220 BT	.	104	9	44	27878	1
AVERAGE:	181	161	14	57	27878	2
LSD (5%):	19	23	1	$$	$$	$$
MIN. TOP YIELD VALUE*:	177	168				
COEF. OF VARIATION#:	7	9				

*TOP YIELD - YIELDS WITHIN ONE LSD VALUE OF HIGHEST YIELD.
$$DIFFERENCES WITHIN A COLUMN ARE NOT SIGNIFICANT.
#A MEASURE OF EXPERIMENTAL ERROR; A VALUE OF 15% OR LESS IS DESIRABLE.

Table 9. 1999 corn hybrid trial results—conventional, Beresford, S.E. Research Farm, early maturity—110 days or less, trial was exposed to hail on July 2, 1999.

BRAND & HYBRID	YIELDS AT 15.5% MOIST. 2-YR (Bu/A)	YIELDS AT 15.5% MOIST. 1999 (Bu/A)	1999 GRAIN MOIST. (%)	1999 BU. WT. (lb)	1999 PLANTS PER ACRE	1999 STALKS LODGED (%)
	******* ENTRIES TESTED TWO YEARS *******					
LG SEEDS LG 2583	194	160	13	59	27878	2
KAYSTAR KX-777	192	153	13	61	27878	0
KRUGER K-9614A	191	160	13	58	27878	1
DAIRYLAND STEALTH-1410	190	168	13	59	27878	1
KRUGER K-9910	187	164	13	59	27878	1
NC+ 4880	187	151	13	58	27878	1
RENZE 8248BT	185	159	13	59	27878	3
TERRA TR 1097	182	149	12	56	27878	1
KRUGER K-9906BT	181	154	13	57	27878	6
KRUGER K-9808	181	142	13	59	27878	2
RENZE 8158BT	178	137	13	61	27878	8
DAIRYLAND STEALTH-1406	177	137	12	55	27878	2
MYCOGEN 2620	176	166	14	62	27878	7
DEKALB DK545BTY	175	142	12	58	27878	0
EPLEY E1510BT	173	142	13	60	27878	6
GARST 8585 GLS/BLT	171	148	14	61	27878	27
EPLEY E2422	168	136	12	59	27878	2
CARGILL 5677	167	119	12	56	27878	3
MUSTANG 661	166	138	12	59	27878	2
WILSON 1464	154	129	14	60	27878	2
EPLEY E1500	154	124	13	59	27878	2
	******* ENTRIES TESTED ONE YEAR *******					
MYCOGEN 2717	.	186	14	62	27878	4
KRUGER K-2010BT	.	179	13	62	27878	2
TERRA TR 1087BT	.	177	13	59	27878	0
TOP FARM TFSX 2107	.	175	13	60	27878	4
U.S. SEEDS US C1099	.	166	13	60	27878	2
DAIRYLAND STEALTH-1507	.	166	13	60	27878	4
FONTANELLE HC7529BT	.	164	13	60	27878	3
KALTENBERG K5808	.	163	13	64	27878	5
DEKALB DK551BTY	.	163	13	60	27878	3
HEINE H765	.	160	12	57	27878	3
TOP FARM TFSX 2108	.	160	13	60	27878	0
GARST 8590IT	.	158	13	60	27878	1
FONTANELLE HC7739BT	.	158	14	59	27878	3
DENBESTEN DB2904	.	158	14	61	27878	3
FONTANELLE HC7729BT	.	158	13	60	27878	5
MYCOGEN 2652	.	158	12	59	27878	1
RENZE 6260	.	158	13	59	27878	5
RENZE 6210	.	158	13	61	27878	6
DENBESTEN DB2905BT	.	158	13	60	27878	6
KRUGER K-2008	.	158	12	57	27878	1

Table 9 (continued).

BRAND & HYBRID	YIELDS AT 15.5% MOIST. 2-YR (Bu/A)	YIELDS AT 15.5% MOIST. 1999 (Bu/A)	1999 GRAIN MOIST. (%)	1999 BU. WT. (lb)	1999 PLANTS PER ACRE	1999 STALKS LODGED (%)
******* ENTRIES TESTED ONE YEAR *******						
SEEDS 2000 3105	.	157	13	60	27878	4
DEKALB DK589BTY	.	156	13	59	27878	1
KRUGER K-2012	.	155	13	59	27878	3
RENZE 6320	.	155	13	60	27878	2
MALLARD UC 2682	.	155	13	62	27878	7
HEINE H821	.	155	13	59	27878	1
MUSTANG 7110	.	154	13	59	27878	4
HOEGEMEYER 2604	.	154	13	58	27878	3
MALLARD BT 2700	.	153	13	62	27878	7
CARGILL 4220 BT	.	153	12	59	27878	3
GARST 8600BLT	.	153	14	62	27878	2
MYCOGEN 2657	.	153	12	56	27878	2
DEKALB DK595BTY	.	153	13	60	27878	1
MALLARD BT 621-CC	.	152	14	61	27878	2
TOP FARM TFSX 106BT	.	151	13	60	27878	7
CROW'S 209BT	.	149	13	60	27878	6
TOP FARM TFSX 105BT	.	149	13	59	27878	11
WENSMAN W 5398 BT	.	149	14	60	27878	3
SANDS SOI 105BT	.	148	12	57	27878	2
NC+ 2839	.	148	13	59	27878	2
HEINE H790	.	146	12	58	27878	2
U.S. SEEDS US C1069BT	.	146	13	61	27878	2
KRUGER K-9614ABT	.	146	13	59	27878	1
WENSMAN W 5359 BT	.	146	14	62	27878	4
CARGILL 5212	.	145	13	60	27878	10
TOP FARM TFSX 7102BT	.	145	13	59	27878	2
WENSMAN W 5329 BT	.	145	14	64	27878	1
KALTENBERG K5901	.	144	12	58	27878	1
WENSMAN W 5308 BT	.	144	12	58	27878	1
DENBESTEN DB2910BT	.	144	12	58	27878	2
TERRA TR 1008BT	.	143	12	57	27878	10
ASGROW RX601YG	.	143	13	60	27878	2
KRUGER K-9410BT	.	143	13	59	27878	2
MUSTANG 7210	.	143	13	61	27878	3
EPLEY E1470BT	.	143	13	61	27878	2
GARST 8608BT	.	142	13	61	27878	8
WILSON 1436BT	.	141	13	61	27878	11
GARST 8550BT	.	141	14	60	27878	6
MUSTANG 6004	.	141	13	60	27878	4
WILSON 1364	.	141	13	60	27878	6
LG SEEDS LG 2544	.	141	12	56	27878	2
HOEGEMEYER 2598	.	140	13	58	27878	6
MUSTANG 6104BT	.	140	13	58	27878	3
DENBESTEN DB2902BT	.	139	13	59	27878	1
SANDS SOI 9058	.	138	12	58	27878	1

Table 9 (continued).

BRAND & HYBRID	YIELDS AT 15.5% MOIST. 2-YR (Bu/A)	YIELDS AT 15.5% MOIST. 1999 (Bu/A)	1999 GRAIN MOIST. (%)	1999 BU. WT. (lb)	1999 PLANTS PER ACRE	1999 STALKS LODGED (%)
******* ENTRIES TESTED ONE YEAR *******						
HEINE H770	.	137	13	59	27878	3
HOEGEMEYER 2593	.	136	13	59	27878	1
U.S. SEEDS US C1109BT	.	135	11	55	27878	1
DENBESTEN DB2906BT	.	135	12	59	27878	4
WENSMAN W 5319 BT	.	135	13	61	27878	2
WILSON 1205BT	.	133	12	57	27878	8
JACOBSEN JS4495	.	133	11	57	27878	1
KALTENBERG K6606	.	132	12	57	27878	1
MYCOGEN 2616IMI	.	132	13	58	27878	5
RENZE 6229	.	132	12	59	27878	3
TOP FARM TFSX 2111	.	131	12	55	27878	2
WENSMAN W 5378 BT	.	131	12	59	27878	2
MUSTANG 7007	.	131	11	53	27878	1
SEEDS 2000 3103	.	130	13	58	27878	0
NC+ 3289	.	126	13	61	27878	2
MUSTANG 6102BT	.	122	12	56	27878	1
CARGILL 6521 BT	.	120	13	60	27878	4
JACOBSEN JS4196	.	115	12	55	27878	2
AVERAGE:	178	147	13	59	27878	3
LSD (5%):	25	19	1	4	$$	5
MIN. TOP YIELD VALUE*:	169	167				
COEF. OF VARIATION#:	6	8				

*TOP YIELD - YIELDS WITHIN ONE LSD VALUE OF HIGHEST YIELD.
$$DIFFERENCES WITHIN A COLUMN ARE NOT SIGNIFICANT.
#A MEASURE OF EXPERIMENTAL ERROR; A VALUE OF 15% OR LESS IS DESIRABLE.

Table 10. 1999 corn hybrid trial results—conventional, Beresford, S.E. Research Farm, late maturity—111 days or more, trial was exposed to hail on July 2,

BRAND & HYBRID	15.5% MOIST. 2-YR (Bu/A)	15.5% MOIST. 1999 (Bu/A)	GRAIN MOIST. (%)	BU. WT. (lb)	PLANTS PER ACRE	STALKS LODGED (%)
	******* ENTRIES TESTED TWO YEARS *******					
CARGILL 7770	197	172	14	57	27878	5
LG SEEDS LG 2587	183	158	14	59	27878	21
RENZE 6386	181	154	13	58	27878	2
KAYSTAR KX-808	178	148	12	55	27878	3
WILSON 1664	178	146	13	57	27878	1
EPLEY E3608	177	137	13	57	27878	3
EPLEY E3620	175	146	13	58	27878	3
SANDS SOI 9126	174	139	13	57	27878	2
DENBESTEN DB5112	173	141	13	58	27878	0
CARGILL 6888	173	136	13	57	27878	1
EPLEY E3242	172	143	12	55	27878	5
DENBESTEN DB2611	170	131	13	57	27878	1
MYCOGEN 2725	169	138	13	57	27878	3
KALTENBERG K7101	168	139	13	57	27878	2
	******* ENTRIES TESTED ONE YEAR *******					
KRUGER K-2014BT	.	171	14	57	27878	1
WILSON E4019BT	.	160	17	57	27878	3
MYCOGEN 2799IMI	.	160	14	58	27878	7
HEINE H840	.	157	12	56	27878	5
HEINE H830	.	154	13	56	27878	3
KALTENBERG K6901	.	153	13	55	27878	6
DENBESTEN DB2912BT	.	151	13	56	27878	0
JACOBSEN JS56	.	147	13	57	27878	0
KRUGER K-9814BT	.	145	13	57	27878	0
EPLEY E3610BT	.	145	13	57	27878	0
U.S. SEEDS US C1129BT	.	143	13	56	27878	0
JACOBSEN JS4685	.	142	12	55	27878	2
RENZE 8349BT	.	142	13	56	27878	1
HEINE H825	.	141	13	57	27878	1
HOEGEMEYER 2655	.	140	13	57	27878	3
HOEGEMEYER 2649	.	139	13	57	27878	8
HEINE H827	.	137	12	56	27878	1
DENBESTEN DB2011BT	.	136	14	59	27878	0
WILSON E4011	.	136	14	58	27878	1
U.S. SEEDS US C1129	.	135	13	58	27878	3
JACOBSEN JS4635	.	131	13	57	27878	2
DEKALB DK626BTY	.	127	13	57	27878	10
AVERAGE:	176	145	13	57	27878	3
LSD (5%):	15	17	1	2	$$	4
MIN. TOP YIELD VALUE*:	182	155				
COEF. OF VARIATION#:	6	7				

*TOP YIELD - YIELDS WITHIN ONE LSD VALUE OF HIGHEST YIELD.
**DIFFERENCES WITHIN A COLUMN ARE NOT SIGNIFICANT.
#A MEASURE OF EXPERIMENTAL ERROR; A VALUE OF 15% OR LESS IS DESIRABLE.

Table 11. 1999 corn hybrid trial results—Roundup Ready, Brookings, SDSU Agronomy Farm, early maturity—100 days or less.

BRAND & HYBRID	YIELDS AT 15.5% MOIST. 2-YR (Bu/A)	YIELDS AT 15.5% MOIST. 1999 (Bu/A)	1999 GRAIN MOIST. (%)	1999 BU. WT. (lb)	1999 PLANTS PER ACRE	1999 STALKS LODGED (%)
******* ENTRIES TESTED ONE YEAR *******						
DEKALB DK493RR	.	137	13	54	27878	Ø
KAYSTAR 62ØØRR	.	129	13	53	27878	Ø
MUSTANG 5ØØ2RR	.	127	13	54	27878	1
KRUGER K-98Ø2RR	.	125	13	53	27878	1
SEEDS 2ØØØ 31Ø2RR	.	124	13	53	27878	1
GARST 8756RR	.	124	13	53	27878	1
EPLEY E1485RR	.	121	13	52	27878	Ø
NC+ 2Ø19R	.	121	13	53	27878	Ø
DENBESTEN DB2ØØ2RR	.	117	13	52	27878	Ø
AVERAGE:	.	125	13	53	27878	Ø
LSD (5%):	.	9	$$	$$	$$	$$
MIN. TOP YIELD VALUE*:	.	128				
COEF. OF VARIATION#:	.	4				

*TOP YIELD - YIELDS WITHIN ONE LSD VALUE OF HIGHEST YIELD.
$$DIFFERENCES WITHIN A COLUMN ARE NOT SIGNIFICANT.
#A MEASURE OF EXPERIMENTAL ERROR; A VALUE OF 15% OR LESS IS DESIRABLE.

Table 12. 1999 corn hybrid trial results—Roundup Ready, Brookings, SDSU Agronomy Farm, late maturity—101 days or more.

BRAND & HYBRID	YIELDS AT 15.5% MOIST. 2-YR (Bu/A)	YIELDS AT 15.5% MOIST. 1999 (Bu/A)	1999 GRAIN MOIST. (%)	1999 BU. WT. (lb)	1999 PLANTS PER ACRE	1999 STALKS LODGED (%)
******* ENTRIES TESTED ONE YEAR *******						
ASGROW RX601RR/YG	.	160	14	55	27878	0
DEKALB DK520RR	.	148	13	53	27878	0
DENBESTEN DB2012RR	.	147	14	51	27878	0
KRUGER K-9513RR	.	147	14	52	27878	1
MUSTANG 6005RR	.	143	14	52	27878	0
TOP FARM TFSX 8103RR	.	134	13	53	27878	0
KRUGER K-9905RR	.	127	13	54	27878	0
KALTENBERG K5788RR	.	126	13	53	27878	1
KRUGER K-9907RR	.	125	13	51	27878	2
AVERAGE:	.	140	13	53	27878	0
LSD (5%):	.	19	1	2	$$	$$
MIN. TOP YIELD VALUE*:	.	141				
COEF. OF VARIATION#:	.	8				

*TOP YIELD - YIELDS WITHIN ONE LSD VALUE OF HIGHEST YIELD.
$$DIFFERENCES WITHIN A COLUMN ARE NOT SIGNIFICANT.
#A MEASURE OF EXPERIMENTAL ERROR; A VALUE OF 15% OR LESS IS DESIRABLE.

Table 13. 1999 corn hybrid trial results—Roundup Ready, Beresford, S.E. Research Farm, early maturity—110 days or less, trial was exposed to hail on July 2, 1999.

BRAND & HYBRID	YIELDS AT 15.5% MOIST. 2-YR (Bu/A)	YIELDS AT 15.5% MOIST. 1999 (Bu/A)	1999 GRAIN MOIST. (%)	1999 BU. WT. (lb)	1999 PLANTS PER ACRE	1999 STALKS LODGED (%)
******* ENTRIES TESTED ONE YEAR *******						
DEKALB DK580RR	.	149	12	56	27878	4
ASGROW RX601RR/YG	.	135	13	58	27878	1
MUSTANG 6005RR	.	130	11	53	27878	0
DK545RRBTY	.	125	12	55	27878	0
KAYSTAR 7700RR	.	124	11	52	27878	1
KRUGER K-9513RR	.	120	12	53	27878	1
U.S. SEEDS US C1079RR	.	119	11	54	27878	3
KRUGER K-9907RR	.	118	11	56	27878	3
DEKALB DK520RR	.	116	11	53	27878	5
DEKALB DK589RR	.	113	12	55	27878	1
ASGROW RX638RR/YG	.	110	12	56	27878	1
GARST 8557RR	.	110	11	51	27878	1
KRUGER K-9802RR	.	108	11	54	27878	0
JACOBSEN 4256RR	.	107	12	54	27878	2
DENBESTEN DB2002RR	.	107	11	54	27878	2
NC+ 2019R	.	105	11	53	27878	1
KRUGER K-9905RR	.	105	11	52	27878	1
TOP FARM TFSX 8103RR	.	105	11	54	27878	0
MUSTANG 5002RR	.	101	11	53	27878	1
JACOBSEN 4552RR	.	101	10	52	27878	1
AVERAGE:	.	115	11	54	27878	1
LSD (5%):	.	24	1	2	$$	2
MIN. TOP YIELD VALUE*:	.	125				
COEF. OF VARIATION#:	.	13				

*TOP YIELD - YIELDS WITHIN ONE LSD VALUE OF HIGHEST YIELD.
$$DIFFERENCES WITHIN A COLUMN ARE NOT SIGNIFICANT.
#A MEASURE OF EXPERIMENTAL ERROR; A VALUE OF 15% OR LESS IS DESIRABLE.

Table 14. 1999 corn hybrid trial results—Roundup Ready, Beresford, S.E. Research Farm, late maturity—111 days or more, trial was exposed to hail on July 2, 1999.

BRAND & HYBRID	YIELDS AT 15.5% MOIST. 2-YR (Bu/A)	YIELDS AT 15.5% MOIST. 1999 (Bu/A)	1999 GRAIN MOIST. (%)	1999 BU. WT. (lb)	1999 PLANTS PER ACRE	1999 STALKS LODGED (%)
******* ENTRIES TESTED ONE YEAR *******						
JACOBSEN 4753RR	.	123	12	57	27878	2
KAYSTAR 8900RR	.	123	12	56	27878	4
DENBESTEN DB2012RR	.	118	11	52	27878	1
U.S. SEEDS US C1119RR	.	117	11	52	27878	1
U.S. SEEDS US C1139RR	.	116	12	56	27878	3
JACOBSEN 4655RR	.	115	11	53	27878	1
KALTENBERG K7122RR	.	115	11	52	27878	2
EPLEY E3615RR	.	112	11	52	27878	2
DEKALB DK626RR	.	108	12	54	27878	2
AVERAGE:	.	116	11	54	27878	2
LSD (5%):	.	$$	1	2	$$	$$
MIN. TOP YIELD VALUE*:	.	108				
COEF. OF VARIATION#:	.	13				

*TOP YIELD - YIELDS WITHIN ONE LSD VALUE OF HIGHEST YIELD.
$$DIFFERENCES WITHIN A COLUMN ARE NOT SIGNIFICANT.
#A MEASURE OF EXPERIMENTAL ERROR; A VALUE OF 15% OR LESS IS DESIRABLE.

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