

South Dakota State University  
**Open PRAIRIE: Open Public Research Access Institutional  
Repository and Information Exchange**

---

Department of Plant Science Publications

Plant Science

---

1984

## 1984 Corn Performance Trials

J.J. Bonnemann  
*South Dakota State University*

Follow this and additional works at: [http://openprairie.sdstate.edu/plant\\_pubs](http://openprairie.sdstate.edu/plant_pubs)

---

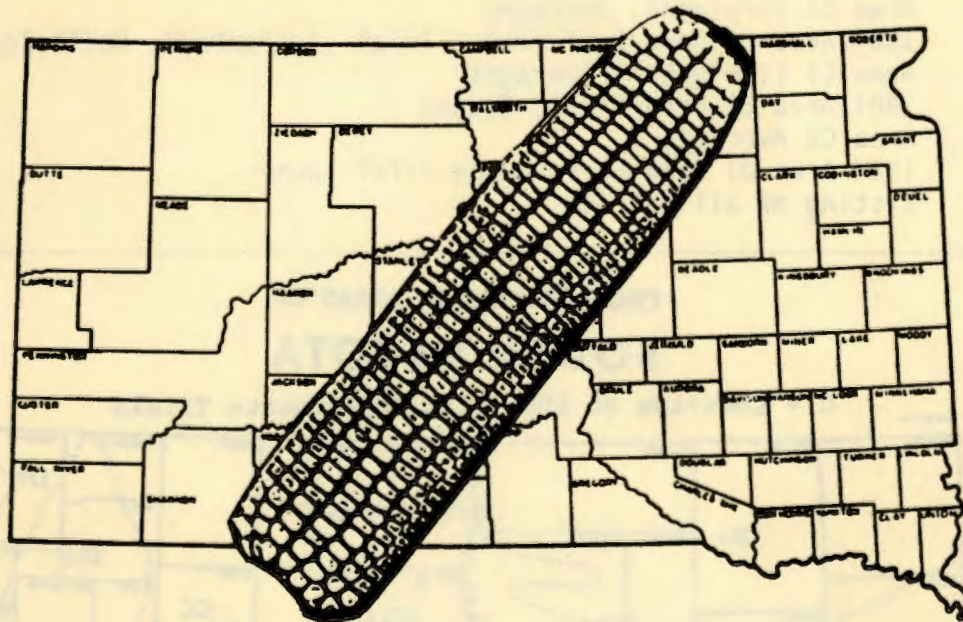
### Recommended Citation

Bonnemann, J.J., "1984 Corn Performance Trials" (1984). *Department of Plant Science Publications*. Paper 10.  
[http://openprairie.sdstate.edu/plant\\_pubs/10](http://openprairie.sdstate.edu/plant_pubs/10)

This Report is brought to you for free and open access by the Plant Science at Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. It has been accepted for inclusion in Department of Plant Science Publications by an authorized administrator of Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. For more information, please contact [michael.biondo@sdstate.edu](mailto:michael.biondo@sdstate.edu).

1984

CORN PERFORMANCE TRIALS



Plant Science Department  
Agricultural Experiment Station  
South Dakota State University

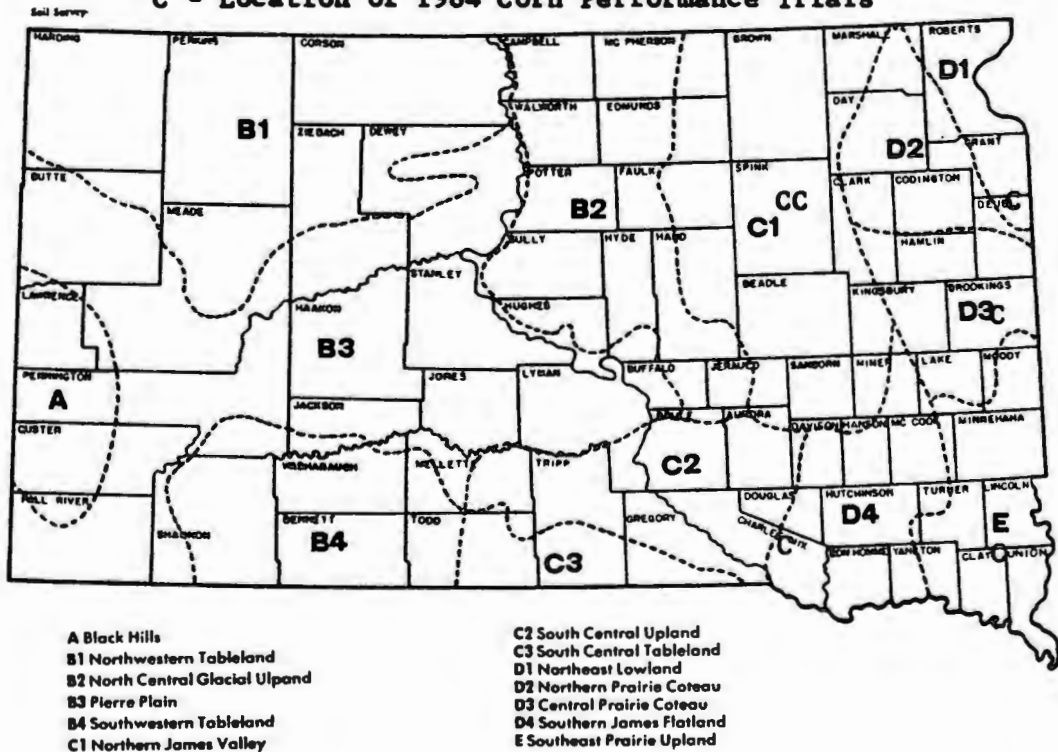
Brookings, South Dakota  
57007-1096

Listing of Tables

Table No.	Contents	Page No.
1	Location of the Trials	4
2	Laboratory Analyses and Soil Classification	4
3	Temperature and Precipitation Data	5
4	Field Methods	5
5	1984 Area D3 Corn Performance Trial, Brookings	8
6	Area D3 Averages	9
7	1984 Area E Corn Performance Trial, Beresford	10
8	Area E Averages	11
9	1984 Area C1 Corn Performance Trial (dryland), Redfield	12
10	Area C1 (dryland), Averages	13
11	1984 Area C1 Corn Performance Trial (irrigated), Redfield	14
12	Area C1 (irrigated) Averages	15
13	1984 Area C2 Corn Trial, Geddes	16
14	Area C2 Averages	17
15	1984 Area D1 Corn Performance Trial, Gary	18
16	Listing of all entries	19

CROP ADAPTATION AREAS OF  
SOUTH DAKOTA

C - Location of 1984 Corn Performance Trials



## 1984 Corn Performance Trials

J. J. Bonnemann, Assistant Professor

Plant Science Department  
Agricultural Experiment Station  
South Dakota State University  
Brookings, SD 57007-1096

The relative performance of corn hybrids grown under similar environmental conditions in 1984 are evaluated in this report. Information in the accompanying tables includes grain yields in bushels per acre, moisture percentages of either ear corn or shelled corn at harvest, performance scores and other related information. Records of the corn hybrids harvested in 1984 and available two-, three- and four-year averages of yield, moisture and stalk lodging percentages are also presented. The trials reported here were conducted under the Plant Science Department program in Crop Performance Testing, Agricultural Experiment Station, SDSU.

### Location of the 1984 Trials

Trials were located in the crop adaptation areas marked on the accompanying map of South Dakota. The exact location of each trial and date of seeding and harvesting are included in Table 1. The soil classification, laboratory analyses of soil samples taken and fertility applied at each site are given in Table 2.

### Weather and Climatic Conditions

Climatic data (Table 3) for the 1984 corn growing season, May-October, are based upon information obtained from a U.S. Weather Bureau station reasonably near each trial site. The Milbank recording station is closest to the field north of Gary in Deuel County. Stations are located at or near the other trial sites; the Pickstown station representing the Geddes trial. Precipitation quantities would vary from the actual site to the recording station but temperatures are similar over a much wider area and considered applicable to the trial area.

Field conditions were wet in the eastern third of South Dakota through most of the growing period. Field work began late and ended late. Good moisture was available for germination and stands were generally uniform, though lower than desired at Redfield. Growth was generally behind and uneven until mid-summer at most sites, especially in the eastern portion of the state where standing water was a problem. Growing degree days were below normal, more so in the eastern part of the state. The cooler, moist conditions delayed harvest and high moisture corn was a serious problem in the major production areas. A killing frost in the lower 20's occurred on September 25-26 causing growth to halt in many fields. Starting in early October fog, overcast skies, recurring rains and wet soil hindered drydown and harvest was very spotty and delayed until late in the month. Though conditions were less than favorable, yields were good in all trials. Excess moisture moved the herbicide through the soil more rapidly than necessary and weeds were a problem in many fields. Additional fertilizer was side-dressed at Redfield to compensate for leaching losses earlier in the season.

---

The assistance of the following individuals is appreciated: Dwayne Beck, Burton Lawrensen, Herb Lund, Lucian Edler, Kevin Kirby, Delbert Robbins, and Zeno Wicks of the Stations; and John Biddle and John Heaton, farmer-cooperators.

Table 1. Location of Trials, Dates of Seeding and Harvesting of the 1984 Corn Performance Trials, South Dakota.

Area	County	Location	Post Office	Dates	
				Seeded	Harvested
C1-dry	Spink	James Valley Res. Farm, 6E	Redfield	May 11	Nov. 2
C1-irr.	Spink	James Valley Res. Farm, 6E	Redfield	May 11	Nov. 5&6
C2	Charles Mix	Jack Biddle Farm, 3S, 1/2 E	Geddes	May 16	Nov. 7
D1	Deuel	John Heaton, 1W, 5N	Gary	May 14	Oct. 29
D3	Brookings	Plant Science Farm, 2NE	Brookings	May 17	Nov. 15
E	Clay	Southeast Exp. Farm, 7W, 3S	Beresford	May 21	Nov. 8&10

Excessively high temperatures were not present over extended periods, as in 1983, and did not seriously affect pollination. Corn borers were a serious problem in some areas, to the extent an insecticide was applied for control. The trials at Beresford were affected most seriously by the borers. High velocity winds in late September and October caused some ear droppage even though the moisture level in the corn was still quite high. Stalk breakage was also a problem, most serious at Beresford.

The irrigated trial at Redfield was irrigated with approximately 2 inches of water each time the tensiometer reached 50 cb at the 18-inch depth.

#### Hybrid Entry Procedure

Hybrids in the trials were entered by the participating companies and they designate the locations where their entries were to be grown. A fee was charged for each entry in each area except for hybrids included by the Agricultural Experiment Station. Either closed- or open-pedigree hybrids were eligible and each was allowed to be entered once in each adaptation area. A maximum of 5 entries could be entered by a company at any trial site. A listing of the firms, with brands and hybrids harvested, is presented in Table 16.

Hybrids frequently used by the industry have been used as check entries since 1975. They are indicated in the trials as SDAES Check 1, 4, 9, etc. The identities of the checks are as follows:

Check 1 = B73 x Mo17Ht	Check 10 = A632 x W153R
Check 4 = W64Ht x W117Ht	Check 11 = A554 x CM105
Check 9 = Mo17 x A634	

Table 2. Laboratory Analyses, Soil Classification and Fertilizer Applied to the 1984 Corn Performance Trial Fields.

Area	Soil Classification	% O.M.	P lb/A	K lb/A	pH	Preparation and method	lb/A		
							N	P	K
C1-dry	Beotia SiCl	2.8	40	880	7.4	Plowed and disced	295	40	0
C1-irr.	Beotia SiCl	2.8	40	880	7.4	Plowed and disced	295	40	0
C2	Highmore SiL	2.4	16	820	6.6	Chisled & disced(soybeans)	0	0	0
D1	Forman SiCl	4.7	68	420	6.8	Chisled & disced	60	60	30
D3	Lamour SiL	4.1	34	180	6.8	Plowed and disced	100	49	20
E	Egan SiL	3.0	51	840	6.5	Plowed and disced	160	60	40

Table 3. Temperature and Precipitation Data for the 1984 Corn Performance Trials

Location	Type of Data	May	June	July	August	Sept.	Oct.	Total
Brookings 2 NE	Precip. (inches)	3.06	8.48	1.64	1.83	1.83	1.33	18.51
	Temp. (mean)	53.0	65.0	69.8	70.6	54.4	47.4	
	Days 90° F +	--	--	2	5	2	--	
	First Freeze	Sept. 26		23 <sup>o</sup>				
Centerville 6 SE	Precip. (inches)	4.06	7.94	2.06	1.15	1.34	4.99	21.55
	Temp. (mean)	56.2	69.9	73.1	73.0	57.2	50.0	
	Days 90° F +	--	1	4	10	--	--	
	First Freeze	Sept. 26		19 <sup>o</sup>				
Pickstown	Precip. (inches)	3.42	8.70	3.59	0.56	0.92	3.94	21.13
	Temp. (mean)	57.3	69.8	73.7	75.7	59.2	50.8	
	Days 90° F +	1	1	5	14	3	--	
	First Freeze	Sept. 25		29 <sup>o</sup>				
Redfield 6E	Precip. (inches)	2.33	6.00	2.65	4.71	0.82	2.32	18.83
	Temp. (mean)	53.7	66.4	72.0	72.8	54.9	53.5	
	Days 90° F +	--	--	6	9	2	--	
	First Freeze	Sept. 26		22 <sup>o</sup>				
Milbank 2 SSW	Precip. (inches)	1.16	7.89	1.46	1.62	1.71	4.46	18.30
	Temp. (mean)	54.0	65.0	70.7	73.1	57.9	48.9	
	Days 90° F +	--	--	6	8	2	--	
	First Freeze	Sept. 26		26 <sup>o</sup>				

Changes occur from time to time but the checks are maintained to establish a several year average before another might be substituted.

#### Experimental Procedure

Entries included in each trial were seeded in four or more replications. Two population levels were included at sites where climatic conditions are generally more favorable for growing corn. The number of replications depended upon the site and populations under trial. Plots of individual hybrids were located at random within each replication. Available space, soil type and variability, and other factors determined plot size and number of replications. The plot size, populations, and related data are presented in Table 4.

Recommended insecticides were used at all locations for corn rootworm control. The product used depended upon prior history of the field and insecticide used in the past years. A recommended short-residue preemergence herbicide was banded over the row at seeding at all sites.

All trials were seeded as drilled corn. A 31-cell cone seeder was used for the single-row plots. These units were mounted above commercial flexi-planter units

with double-disc openers. Seeding rate was 25% more than the number of plants per plot desired. Seedbeds were generally soft and moist favoring rapid germination. Stands in some of the trials were below desired levels because of the cool, excessive moisture conditions during June.

Table 4. Field Methods

Area	Table No.	Number of Replications Harvested	Final Population Obtained	Rows		
				Number of	Width, inches	Length, feet
C1-dry	10	4	16,824	1	30	35
C1-irr.	12	3	24,026	1	30	26
C1-irr.	12	3	28,574	1	30	26
C2	14	4	15,409	1	30	36
D1	5	4	17,618	1	30	35
D3	6	2	16,161	1	36	32
D3	6	2	20,205	1	36	32
E	8	2	17,728	1	36	30
E	8	2	21,376	1	36	30

#### Measurements of Performance

Yield. The yield reported for each hybrid is the average obtained from the yield weights of all replications, expressed as bushels per acre of No. 2 corn at 15.5% moisture. Varieties of equal potential may yield differently because of variations in slope, soil fertility, and stand. Mathematical determinations have been made to determine whether yield differences obtained were caused by variations in environment or were true varietal differences. The 1984 coefficients of variations (CV) were quite high in all, in part due to the stand and growth problems created by saturated fields soon after seeding. Population differences were significantly different in the Brookings and Beresford trials but nonsignificant for the Redfield irrigated trial, the higher populations better.

To convert data in these tables to the metric system of kilograms or quintals per hectare use the following methods. (The factor 1.121 converts from lb/A to kg/ha).

- I. 1 bu. #2 shelled corn = 54 lb.: 1 lb. = .454 kilograms; 1 hectare = 2.471 acres; so  $54 \times .454 \times 2.471 = 60.6 \times B/A =$  kilograms per hectare.
- II. Or, assuming a yield of 60.6 B/A from the tables;
  - Step 1 =  $60.6 B/A \times 54 \text{ lb/B} = 3272 \text{ lb/acre.}$
  - Step 2 =  $3272 \text{ lb/acre} \times 1.121 = 3668 \text{ kilograms/hectare or } 36.7 \text{ quintals/hectare.}$

Moisture Content. The moisture content of each entry is expressed as the percentage of moisture in the ear corn or shelled corn at the time of harvest. Moisture content is inversely related to maturity. Because maturity is of prime importance in South Dakota, these figures are of considerable importance in the evaluation of the trial entries.

Stalk breakage was a severe problem in 1984 for at least two reasons; corn borer at the Southeast Farm and high velocity winds prior to grain drydown to favorable moisture levels for harvest. Ear droppage was a slight occurrence in most trials, probably more serious where corn borer damage was most severe.

Performance Rating. Undue delays should be held to a minimum if farm operations are to be efficient and provide high economic returns. Prevention of harvest operation delays and reduction of additional drying costs are possible if an operator can produce sound, dry corn. Grain yield and moisture percentages are of prime importance. Cash grain operators who do not turn livestock into their fields after harvest will receive greater returns when the stalks remain upright so the ears will go through their harvesting machinery. Because of the importance of the three factors- yield, moisture percentage and upright stalks - the three results in the tables presenting this information are used to determine a rating or performance score.

The yields in each test were converted to percentages by comparing them to the mean yield of the test. Similar calculations were made for moisture and stalks broken below the ear at harvest time after first subtracting the moisture content or stalks broken from 100% so that the varieties could be ranked according to their ability to produce sound, upright corn rather than soft, lodged corn.

The performance ratings that appear in the tables were computed as follows:

$$\frac{(\text{Yield percentage} \times 50) + (\text{Dry matter percentages} \times 35) + (\text{Percent upright stalks} \times 15)}{100}$$

Use of the Tables. South Dakota conditions are generally quite different from those in the mid-western Corn Belt. Most of the crop adaptation areas have conditions common to the Northern Great Plains, i.e., limited frost-free growing periods, limited precipitation and high summer temperatures. Corn hybrids that provide satisfactory yields of harvestable corn that can be stored without additional costly handling are desirable. The performance score provides information on these factors in a weighted fashion or manner.

In choosing a hybrid, first check those which yield the most. Then look for entries with below average moisture and good standability. The results will generally be similar to that of the performance score. Finally, check the performance score over a "several year period", if available, as the average of several years is considerably more reliable than the data from only one year. When planting a new hybrid the acreage should be limited until the hybrid's adaptation to the environment of the particular farm is known.



Table 5. 1984 Corn Performance Trial, Area D3, Plant Science Farm, Brookings, SD

BRAND AND VARIETY	TYPE AND CROSS	YIELD B/A	PCT ROOT LODGED	PCT STALK LODGED	PCT EARS DROPPED	PERCENT MOISTURE	PERFORMANCE SCORE RATING
PIIONEER 3901	E 2X	113.5	0.0	2.5	0.0	18.8	1
PIIONEER 3732	M 2X	109.3	0.0	1.9	0.0	20.5	2
KELTGEN KS1050	M 2X	108.7	0.0	2.5	0.0	20.4	3
P-A-G SX239	E 2X	105.5	0.0	1.9	0.0	21.1	4
PIIONEER 3906	E 2X	103.2	0.0	3.8	0.0	18.6	6
SUPERCROST 1940	E 2X	102.9	0.0	2.5	0.0	18.2	5
TOP FARM SX1104	M 2X	101.8	0.0	1.9	0.0	18.2	7
O'S GOLD 2450	M 2X	101.2	0.0	2.5	0.0	21.0	10
SUPERCROST 2288	M 2X	100.6	0.0	0.6	0.0	19.0	8
LYNKS LX4235	M 2X	100.5	0.0	5.8	0.0	23.4	18
KELTGEN KS95	M 2X	100.0	0.0	3.7	0.0	19.3	11
SIGCO 1300	M 2X	99.6	0.0	2.5	0.0	18.5	9
MC CURDY 4945	M 2X	99.4	0.0	10.2	0.0	20.6	19
PIIONEER 3737	M 2X	98.6	0.0	8.0	0.0	18.2	13
KELTGEN KS104	M 2X	98.0	0.0	2.5	0.0	20.3	17
SDAES CHECK 10	M 2X	97.4	0.0	10.5	0.0	19.6	23
NORTHROP KING PX9151	E 2X	97.1	0.0	1.9	0.0	18.1	12
TOP FARM SX1098	M 2X	97.1	0.0	1.2	0.0	18.9	15
PIIONEER 3540	M 2X	97.0	0.0	1.3	0.0	18.6	14
PAYMASTER 1990	E 2X	96.9	0.0	1.2	0.0	18.9	16
PRIDE 3355	E 2X	95.6	0.0	2.5	0.0	18.5	20
KELTGEN KS1020	M 2X	95.1	0.0	4.3	0.0	21.6	30
TOP FARM SX1096	E 2X	95.0	0.0	1.3	0.0	18.2	21
HORIZON 202	M 2X	94.8	0.0	3.1	0.0	19.7	26
PRIDE 3344	E 2X	94.5	0.0	1.9	0.0	18.1	22
MC CURDY 5750	M 2X	94.4	0.0	5.0	0.0	24.0	35
P-A-G SX180	E 2X	94.1	0.0	5.6	0.0	18.8	28
WESTERN KX-5400	M 2X	94.0	0.0	1.9	0.0	18.3	24
KELTGEN KS101	M 2X	93.6	0.0	1.2	0.0	18.3	25
WESTERN KX-42	M 2X	93.5	0.0	3.1	0.0	18.4	27
DEKALB DK-505	M 2X	92.8	0.0	3.1	0.0	18.6	29
CARGILL 861	E 2X	92.1	0.0	3.1	0.0	19.4	31
CURRY SC1477	L 2X	91.7	0.0	0.0	0.0	22.8	37
FONTANELLE 4230	M 2X	91.7	0.0	4.0	0.0	23.3	42
PRIDE X1094	M 2X	91.3	0.0	1.2	0.0	21.6	36
O'S GOLD 6880	M 2X	91.1	0.0	1.3	0.0	20.8	34
NORTHROP KING PX9290	E 2X	91.0	0.0	3.1	0.0	18.6	32
P-A-G SX275	M 2X	90.1	0.0	2.5	0.0	24.7	47
CURRY SC1466	L 2X	90.1	0.0	3.7	0.0	23.9	45
HORIZON 90	E 2X	89.8	0.0	4.3	0.0	17.9	33
STAUFFER S5340	M 2X	89.7	0.0	5.7	0.0	24.2	51
CARGILL 874	E 2X	89.7	0.0	0.6	0.0	20.7	38
DEKALB DK-556	M 2X	89.6	0.0	0.6	0.0	20.8	39
STAUFFER S5260	M 2X	88.3	0.0	1.3	0.0	22.2	44
SEEDTEC 7971	M M2X	88.0	0.0	3.7	0.0	18.5	41
ARROWHEAD AH1010	M 2X	87.6	0.0	0.6	0.0	18.5	40
STAUFFER S4402	E 2X	86.9	0.0	1.3	0.0	18.3	43
SDAES CHECK 4	E 2X	86.6	0.0	3.1	0.0	20.3	49
SIGCO 2405	M M2X	85.3	0.0	3.1	0.0	18.5	48
INTERSTATE 375	E 2X	85.2	0.0	2.5	0.0	18.4	46
STAUFFER S4880	E 2X	85.0	0.0	7.1	0.0	19.4	54
CENEX 2105	M 2X	85.0	0.0	1.3	0.0	22.7	56
PAYMASTER 2890	E 2X	84.8	0.0	2.5	0.0	19.1	52
HOEGEMEYER SX2560	E 2X	84.3	0.0	0.6	0.0	18.9	50
MC CURDY 5596	M 2X	84.1	0.0	10.3	0.0	23.6	57
NORTHROP KING PX9242	E 2X	83.6	0.0	4.3	0.0	18.4	53
LYNKS LX4115	E 2X	83.5	0.0	7.0	0.0	21.1	62
INTERSTATE 434	E 2X	82.9	0.0	1.2	0.0	20.1	57
ASGROW RX480	M 2X	82.4	0.0	1.3	0.0	18.2	55
HOEGEMEYER SX2570	M 2X	82.3	0.0	1.9	0.0	19.3	58
DEKALB DK-484	E 2X	82.3	0.0	4.3	0.0	19.1	61

Table 5. (Continued)

BRAND AND VARIETY	TYPE AND CROSS		YIELD B/A	PCT ROOT LODGED	PCT STALK LODGED	PCT EARS DROPPED	PERCENT MOISTURE	PERFORMANCE SCORE RATING
CENEX 2106	E	2X	81.7	0.0	3.1	0.0	18.6	60
ARROWHEAD AH950	M	2X	81.0	0.0	0.6	0.0	18.2	59
PAYMASTER 2990	M	2X	80.7	0.0	4.5	0.0	20.5	64
SIGCO 1507	L	2X	80.6	0.0	0.7	0.0	21.7	65
CARGILL 867	E	2X	80.2	0.0	3.7	0.0	21.6	70
CURRY SC1426	M	2X	80.1	0.0	1.3	0.0	22.7	71
FONTANELLE 370	M	2X	80.0	0.0	0.6	0.0	22.3	69
ASGROW RX532	M	2X	79.9	0.0	6.4	0.0	18.5	63
CENEX 2108A	M	2X	79.6	0.0	16.7	0.0	21.7	78
P-A-G SX267	M	2X	79.6	0.0	1.2	0.0	24.2	73
LYNKS LX4225	M	2X	79.5	0.0	2.5	0.0	23.9	74
ASGROW RX420	E	2X	78.3	0.0	2.5	0.0	19.0	68
SDAES CHECK 11	E	2X	77.8	0.0	7.4	0.0	18.7	72
HOEGEMEYER SX2565	E	2X	77.8	0.0	0.6	0.0	18.4	66
WESTERN KX-5800	M	2X	77.7	0.0	3.9	0.0	21.6	75
LYNKS LX4210	M	2X	76.8	0.0	1.9	0.0	22.1	77
TOP FARM SX1193	E	2X	75.9	0.0	3.7	0.0	19.4	76
PRIDE 5523	M	2X	73.9	0.0	3.1	0.0	20.3	79
DEKALB DK-587	M	2X	71.1	0.0	0.6	0.0	27.4	81
TOP FARM SX104	M	2X	69.8	0.0	1.9	0.0	18.3	80
P-A-G SX241	M	2X	64.9	0.0	3.7	0.0	22.3	82
PRIDE 6692	L	2X	64.2	0.0	1.3	0.0	31.2	84
SDAES CHECK 9	M	2X	63.5	0.0	1.2	0.0	25.3	83
Means			88.5		3.1		20.4	
LSD (.05)			4.6					
C.V. - %					16.8			

Table 6. Area D3 2-, 3-, and 4-year yield, moisture and stalk lodging averages of corn hybrids, 1981-1984.

BRAND AND VARIETY	ACRE YIELD, B/A			STK LODGING, PCT			GRAIN MOIST, PCT		
	4-YR	3-YR	2-YR	4-YR	3-YR	2-YR	4-YR	3-YR	2-YR
	ASGROW RX532			93			11		
CARGILL 861		110	107		7	9		23	20
CARGILL 867			102			11			21
CENEX 2106		103	99		8	10		21	19
DEKALB DK-484			97			11			19
DEKALB DK-556			103			3			21
FONTANELLE 370		101	96		6	8		24	21
KELTGEN KS101			113		5	8		22	19
KELTGEN KS1020	107	110	106	3	4	7	26	25	21
KELTGEN KS104	109	105	105	5	7	10	24	24	20
KELTGEN KS95	110	111	108	5	6	10	22	23	19
LYNKS LX4115			101			11			21
LYNKS LX4210	106	102	99	3	4	6	26	26	21
LYNKS LX4225		106	100		7	10		26	23
MC CUPDY 5596	108	109	107	7	7	10	28	28	23
O'S GOLD SX6880	108	106	99	5	6	9	24	24	21
P-A-G SX239			107			6			21
P-A-G SX275			104			3			23
PIONEER 3732		115	112		7	10		23	20
PIONEER 3901		117	115		8	12		21	19
PIONEER 3906		103	100		8	11		21	19
PRIDE 5523		101	92		6	8		24	20
SDAES CHECK 10			96			24			19
SDAES CHECK 4			94			9			21
SDAES CHECK 9	96	95	85	2	2	2	27	26	23
SIGCO 2405			101			12			19
STAUFFER S4402			103			9			19
STAUFFER S5260			113			6			22
STAUFFER S5340			106			6			23
TOP FARM SX104	101	98	94	4	5	5	21	21	19
TOP FARM SX1098		104	102		5	7		21	19
TOP FARM SX1193			90			13			19
WESTERN KX-5400			103			8			19

Table 7. 1984 Corn Performance Trial, Area E, Southeast Experiment Farm, Beresford, SD

BRAND AND VARIETY	TYPE AND CROSS	YIELD B/A	PCT ROOT LODGED	PCT STALK LODGED	PCT EARS DROPPED	PERCENT MOISTURE	PERFORMANCE SCORE RATING
PIONEER 3377	L 2X	158.8	0.0	17.2	0.0	20.8	1
MC CURDY 7384	L 2X	151.9	0.0	17.5	0.0	24.7	8
QUALITY PLUS Q+1132	L 2X	149.1	0.0	7.3	0.0	21.5	3
CURRY SC1477	L 2X	148.9	0.0	6.7	0.0	19.6	2
CURRY SC1466	L 2X	147.2	0.0	16.8	0.0	19.5	5
HOEGEMEYER SX2684	L 2X	147.0	0.0	20.7	0.0	24.3	20
SUPERCROST 2989	M 2X	145.9	0.0	16.0	0.0	19.5	7
PAG SX241	L 2X	145.2	0.0	10.8	0.0	18.5	4
PIONEER 3475	M 2X	143.5	0.0	12.0	0.0	20.2	9
PRIDE 6692	L 2X	142.6	0.0	16.2	0.0	21.2	15
STAUFFER S5340	M 2X	142.1	0.0	20.1	0.0	19.5	18
CARGILL 889	M 2X	140.7	0.0	6.7	0.0	18.8	6
NC+ 2747	E 2X	140.5	0.0	6.1	0.0	20.2	10
MC CURDY 5750	M 2X	140.2	0.0	15.1	0.0	19.7	16
WILSON 15008	M 2X	139.1	0.0	19.6	0.0	19.1	22
WILSON 1700	L 2X	138.4	0.0	17.6	0.0	23.1	29
LYNKS LX4235	M 2X	138.3	0.0	20.2	0.0	19.6	24
DEKALB T1100	L 2X	137.9	0.0	3.1	0.0	20.7	11
HOEGEMEYER SX2630	L 2X	137.6	0.0	3.1	0.0	21.0	12
PAYMASTER 4790	M 2X	137.1	0.0	6.8	0.0	19.3	13
PIONEER 3551	M 2X	137.0	0.0	25.6	0.0	19.7	32
NC+ 4710	L 2X	136.6	0.0	4.2	0.0	21.2	17
PAYMASTER 6990	L 2X	136.5	0.0	12.7	0.0	20.8	23
KELTGEN KS114	L 2X	136.1	0.0	24.3	0.0	21.5	36
PIONEER 3540	M 2X	135.7	0.0	25.3	0.0	18.0	30
PAYMASTER 7190	L 2X	135.4	0.0	22.8	0.0	29.5	54
NC+ 3440	M 2X	135.2	0.0	3.1	0.0	19.8	14
FONTANELLE 435	M 2X	135.0	0.0	23.2	0.0	22.2	37
DISCO DS5433	L 2X	134.8	0.0	17.9	0.0	21.2	33
PRIDE EXP.115	L 2X	134.6	0.0	19.9	0.0	23.4	38
PAG SX275	L 2X	134.1	0.0	3.0	0.0	19.7	19
STAUFFER S5650	M 2X	133.7	0.0	15.6	0.0	19.7	28
NORTHRUP KING PX9527	M 2X	133.6	0.0	9.2	0.0	21.4	26
QUALITY PLUS Q+1152	L 2X	133.6	0.0	16.7	0.0	25.7	41
QUALITY PLUS Q+1082	M 2X	133.5	0.0	18.5	0.0	19.2	31
KELTGEN KS1050	M 2X	133.4	0.0	13.9	0.0	19.1	25
CARGILL 937	M 2X	133.3	0.0	19.2	0.0	28.0	50
WILSON 1440	M 2X	132.0	0.0	2.0	0.0	19.6	21
SDAES CHECK 9	M 2X	132.0	0.0	35.6	0.0	20.2	51
KELTGEN KS1070	M 2X	131.4	0.0	17.3	0.0	19.6	35
QUALITY PLUS Q+1102	M 2X	130.7	0.0	9.9	0.0	18.6	27
ASGROW RX777	L 2X	129.6	0.0	25.9	0.0	22.5	53
LYNKS LX4315A	L 2X	129.0	0.0	22.5	0.0	21.7	47
O'S GOLD 6882	L 2X	128.7	0.0	18.0	0.0	21.6	44
PIONEER 3378	L 2X	128.7	0.0	34.0	0.0	19.8	57
FONTANELLE 4528	M 2X	126.5	0.0	14.3	0.0	19.6	39
WESTERN KX-6800	L 2X	126.5	0.0	22.2	0.0	19.9	48
KELTGEN KS1090	L 2X	126.2	0.0	18.6	0.0	18.8	43
PRIDE X1094	M 2X	126.2	0.0	19.5	0.0	18.8	45
WILSON 11008	E 2X	125.9	0.0	17.4	0.0	18.9	42
NORTHRUP KING PX9410	M 2X	124.8	0.0	3.7	0.0	18.7	34
DEKALB DK656	L 2X	124.7	0.0	25.2	0.0	26.6	68
MC CURDY 5596	M 2X	124.4	0.0	25.5	0.0	18.9	55
O'S GOLD 2545	L 2X	123.7	0.0	26.8	0.0	26.1	69
HOEGEMEYER SX2625	M 2X	122.7	0.0	25.6	0.0	19.6	62
FONTANELLE 4570	M 2X	122.7	0.0	10.5	0.0	18.7	40
PAG SX267	L 2X	122.6	0.0	23.9	0.0	21.1	63
SDAES CHECK 1	L 2X	122.4	0.0	27.8	0.0	24.8	70
FONTANELLE 427	M 2X	121.6	0.0	13.6	0.0	22.0	56
MC CURDY 7372	L 2X	120.8	0.0	33.1	0.0	25.7	74
STAUFFER S5260	M 2X	119.5	0.0	9.7	0.0	18.4	46

Table 7. (Continued)

BRAND AND VARIETY	TYPE AND CROSS	YIELD B/A	PCT ROOT LODGED	PCT STALK LODGED	PCT EARS DROPPED	PERCENT MOISTURE	PERFORMANCE SCORE RATING
NC+ 4303	M 2X	118.6	0.0	11.6	0.0	20.7	58
CARGILL 874	E 2X	118.3	0.0	7.8	0.0	19.1	49
HOEGEMEYER SX2570	M 2X	118.1	0.0	12.3	0.0	17.9	52
FONTANELLE 5230	L 2X	117.5	0.0	18.3	0.0	22.7	67
CARGILL 891	M 2X	117.4	0.0	10.6	0.0	20.3	59
NORTHRUP KING PX9353	M 2X	117.4	0.0	33.9	0.0	20.4	72
DEKALB DK587	M 2X	117.4	0.0	7.7	0.0	22.1	61
CURRY SC1485	L 2X	117.3	0.0	20.4	0.0	24.5	71
NORTHRUP KING PX9455	M 2X	117.2	0.0	20.8	0.0	20.5	65
NC+ 3653	M 2X	115.7	0.0	12.7	0.0	18.1	60
PRIDE X1123	L 2X	115.6	0.0	13.4	0.0	21.0	64
PRIDE 7759	L 2X	114.6	0.0	72.1	0.0	25.9	78
SUPERCROST 5438	L 2X	113.4	0.0	19.0	0.0	25.9	75
DISCO DS5429	M 2X	111.9	0.0	14.6	0.0	18.9	66
SDAES CHECK 10	M 2X	109.3	0.0	46.7	0.0	18.2	76
LYNKS LX4210	M 2X	105.7	0.0	15.7	0.0	17.9	73
LYNKS LX4225	M 2X	95.9	0.0	35.4	0.0	19.5	77
Means		129.8		17.8		21.0	
LSD (.05)		5.0				C.V. - % = 12.0	

Table 8. Area E 2-, 3-, and 4-year yield, moisture and stalk lodging averages of corn hybrids, 1981-1984.

BRAND AND VARIETY	ACRE YIELD, B/A			STK LODGING, PCT			GRAIN MOIST, PCT		
	4-YR	3-YR	2-YR	4-YR	3-YR	2-YR	4-YR	3-YR	2-YR
CARGILL 891			90			6			20
DEKALB T1100	118	112	97	8	9	2	20	21	20
FONTANELLE 427			91			7			21
FONTANELLE 435		122	116		23	12		21	21
FONTANELLE 4528			98			7			19
KELTGEN KS1070			103			10			19
KELTGEN KS114	116	112	102	20	26	12	21	21	21
LYNKS LX4210	104	96	86	17	23	9	18	19	18
LYNKS LX4225		96	71		38	20		20	19
LYNKS LX4315A		109	96		24	12		22	22
MC CURDY 5596			103			15			19
MC CURDY 7384			123			9			23
NC+ 2747			96			4			19
NC+ 3653			99			7			18
NORTHRUP KING PX9455			93			11			19
NORTHRUP KING PX9527		113	104		16	6		21	20
O'S GOLD 6982	116	108	100	13	17	9	21	21	21
P-A-G SX275			99			2			19
PIONEER 3377		116	127		21	9		21	21
PIONEER 3551			103			14			20
PRIDE X1123			91			7			20
PRIDE 6692		115	101		25	9		21	20
PRIDE 7759			88			38			26
SDAES CHECK 1	114	109	99	19	25	15	23	23	23
SDAES CHECK 9	112	111	108	26	32	19	19	19	19
STAUFFER S5260			97			5			18
STAUFFER S5340			107			11			19
WESTERN KX-6800			98			11			22
WILSON 1100B		106	104		14	9		19	19

Table 9. 1984 Corn Performance Trial, Area C1(dryland), James Valley Research Center, Redfield, SD

BRAND AND VARIETY	TYPE AND CROSS	YIELD B/A	PCT ROOT LUGGED	PCT STALK LUGGED	PCT EARS DROPPED	PERCENT MOISTURE	PERFORMANCE SCORE RATING
INTERSTATE 635	L 2X	129.9	0.0	1.7	0.0	21.4	1
PIONEER 3737	M 2X	129.0	0.0	9.5	0.0	17.9	2
CARGILL 874	E 2X	128.7	0.0	4.2	0.0	20.2	3
PIONEER 3747	M 2X	125.7	0.0	3.5	0.0	19.8	4
STAUFFER S3306	E 2X	125.6	0.0	6.9	0.0	19.1	5
PIONEER 3732	M 2X	124.3	0.0	3.3	0.0	19.7	6
KELTGEN KS1020	M 2X	124.2	0.0	4.4	0.0	20.4	7
PAYMASTER 1990	E 2X	122.2	0.0	4.3	0.0	18.4	8
KELTGEN KS1050	M 2X	121.7	0.0	6.8	0.0	20.0	10
HORIZON 202	M 2X	120.0	0.0	9.5	0.0	18.7	12
PAYMASTER 2890	E 2X	119.6	0.0	0.9	0.0	18.7	9
CARGILL 861	E 2X	118.7	0.0	1.7	0.0	19.2	11
SDAES CHECK 9	M 2X	116.4	0.0	8.1	0.0	21.4	20
SUPERCROST 2288	M 2X	115.1	0.0	0.9	0.0	18.4	13
CENEX 2096	E 2X	114.7	0.0	2.5	0.0	18.4	14
CARGILL 867	E 2X	114.6	0.0	10.3	0.0	20.6	24
CURRY SC1408	M 2X	113.9	0.0	2.5	0.0	18.3	15
PAG SX175	E 2X	113.1	0.0	5.1	0.0	18.8	19
DEKALB XL-8	E 2X	112.8	0.0	5.1	0.0	18.0	18
CENEX 2111	E 2X	112.5	0.0	13.3	0.0	18.8	27
NORTHRUP KING PX9242	E 2X	112.3	0.0	1.7	0.0	18.0	16
NORTHRUP KING PX9151	E 2X	112.0	0.0	2.6	0.0	17.7	17
KELTGEN KS1030	M 2X	111.8	0.0	3.4	0.0	19.3	22
TOP FARM SX1104	M 2X	110.8	0.0	1.7	0.0	18.3	21
DEKALB DK484	E 2X	110.2	0.0	7.1	0.0	18.6	26
TOP FARM SX104A	M 2X	109.7	0.0	27.0	0.0	19.8	45
PRIDE 5523	M 2X	109.5	0.0	8.3	0.0	19.6	30
PRIDE 3344	E 2X	109.3	0.0	0.8	0.0	17.7	23
SUPERCROST 1940	E 2X	108.9	0.0	3.5	0.0	18.2	25
ASGROW RX532	M 2X	108.7	0.0	7.9	0.0	18.4	29
STAUFFER S4330	E 3X	108.3	0.0	8.6	0.0	18.4	31
STAUFFER S4880	E 2X	107.9	0.0	18.3	0.0	19.1	38
PRIDE 4422	E 2X	107.8	0.0	1.7	0.0	18.2	28
STAUFFER S4402	E 2X	107.2	0.0	11.8	0.0	18.4	34
PAG SX195	E 2X	106.8	0.0	5.1	0.0	20.8	36
SEEDTEC 7971	M M2X	106.5	0.0	10.0	0.0	18.1	33
DEKALB DK447	E 2X	105.3	0.0	5.1	0.0	18.5	32
SDAES CHECK 4	M 2X	105.2	0.0	5.6	0.0	20.9	39
KELTGEN KS1070	M 2X	104.2	0.0	7.0	0.0	21.9	46
SIGCO 3106	M 3X	103.8	0.0	21.6	0.0	18.5	50
TOP FARM SX1101	M 2X	103.7	0.0	7.0	0.0	19.2	42
TOP FARM SX1096	E 2X	103.6	0.0	3.5	0.0	18.0	35
PIONEER 3906	E 2X	102.8	0.0	5.9	0.0	18.4	40
INTERSTATE 464	M 2X	102.1	0.0	1.8	0.0	18.1	37
PRIDE 3355	E 2X	101.3	0.0	2.7	0.0	18.2	41
CENEX 2106	E 2X	100.9	0.0	4.3	0.0	18.3	44
PAG SX180	E 2X	100.9	0.0	11.7	0.0	18.2	48
PRIDE X1044	E 2X	100.9	0.0	3.8	0.0	18.2	43
TOP FARM SX104	M 2X	99.3	0.0	3.5	0.0	18.3	47
ASGROW RX420	E 2X	97.4	0.0	2.7	0.0	17.9	49
CARGILL 829	E 2X	96.9	0.0	12.5	0.0	18.5	53
KELTGEN KS95	M 2X	96.5	0.0	11.5	0.0	18.5	54
DISCO DS5519	M 2X	96.3	0.0	7.1	0.0	19.8	52
SIGCO 2405	M M2X	93.8	0.0	0.9	0.0	18.3	51
INTERSTATE 434	E 2X	93.7	0.0	12.6	0.0	19.6	58
DISCO DS5614	E 2X	93.2	0.0	18.4	0.0	19.2	62
WESTERN KX-59	M 2X	92.5	0.0	5.4	0.0	19.9	55
PIONEER 3901	E 2X	90.7	0.0	7.1	0.0	18.3	57
SEEDTEC 7931	E M2X	90.0	0.0	9.2	0.0	17.8	59
ASGROW RX480	M 2X	89.1	0.0	2.0	0.0	18.2	56
WESTERN KX-42	M 2X	89.0	0.0	4.3	0.0	18.6	60

Table 9. (Continued)

BRAND AND VARIETY	TYPE AND CROSS	YIELD B/A	PCT ROCT LODGED	PCT STALK LODGED	PCT EARS DROPPED	PERCENT MOISTURE	PERFORMANCE SCORE RATING
DEKALB DK399	E 3X	88.7	0.0	11.7	0.0	17.8	63
HORIZON 90	E 2X	86.5	0.0	3.8	0.0	17.3	61
SDAES CHECK 10	E 2X	86.4	0.0	17.6	0.0	18.7	64
<b>Means</b>		<b>107.3</b>		<b>6.8</b>		<b>18.9</b>	
<b>LSD (.05)</b>		<b>5.6</b>		<b>C.V. - % = 14.7</b>			

Table 10. Area C1(dryland) 2-, 3-, and 4-year yield, moisture and stalk lodging averages of corn hybrids, 1981-1984

BRAND AND VARIETY	ACRE YIELD, B/A			STK LODGING, PCT			GRAIN MOIST, PCT		
	4-YR	3-YR	2-YR	4-YR	3-YR	2-YR	4-YR	3-YR	2-YR
ASGROW RX420			88			8			18
ASGROW RX532			92			8			18
CARGILL 861			98			7			18
CARGILL 867			91			12			19
CENEX 2106			95			9			18
CURRY SC-1408			97			9			18
DEKALB DK-484			93			5			18
DEKALB XL-8			98			5			18
INTERSTATE 434			87			14			19
INTERSTATE 635			109			7			20
KELTGEN KS1020	92	101	108	5	6	7	21	22	19
KELTGEN KS1030			103			6			19
KELTGEN KS95			94			10			18
P-A-G SX195			101			8			19
PIONEER 3732			101			6			18
PIONEER 3747			107			9			18
PIONEER 3901			90			6			18
PIONEER 3906			95			11			18
PRIDE 4422			98			3			18
PRIDE 5523			95			9			19
SDAES CHECK 10	84	87	87	7	9	12	19	19	18
SDAES CHECK 4	86	94	97	6	7	10	20	21	20
SEEDTEC 7971			100			13			18
SIGCO 3106			96			16			18
STAUFFER S3306			101			10			19
TOP FARM SX 104	83	89	87	7	7	8	18	20	18
TOP FARM SX 104A	84	90	96	13	14	20	21	22	18
TOP FARM SX 1101			93			5			18
WESTERN KX42			84			9			18

Table 11. 1984 Corn Performance Trial, Area C1(irrigated), James Valley Research Farm, Redfield, SD

BRAND AND VARIETY	TYPE AND CROSS	YIELD B/A	PCT ROOT LODGED	PCT STALK LODGED	PCT EARS DROPPED	PERCENT MOISTURE	PERFORMANCE SCORE RATING
HORIZON 202	M 2X	156.1	0.0	8.4	0.0	19.5	1
STAUFFER S3306	E 2X	149.5	0.0	16.2	0.0	19.3	3
INTERSTATE 635	L 2X	145.5	0.0	3.8	0.0	20.2	2
CURRY SC1466	L 2X	144.3	0.0	3.6	0.0	21.7	4
KELTGEN KS1050	M 2X	142.8	0.0	6.9	0.0	20.9	6
PIONEER 3732	M 2X	142.7	0.0	0.9	0.0	21.3	5
PIONEER 3747	M 2X	140.9	0.0	4.5	0.0	20.2	7
NORTHROP KING PX9410	M 2X	140.7	0.0	8.8	0.0	20.1	8
PIONEER 3737	M 2X	140.0	0.0	24.2	0.0	17.9	13
PAG SX175	E 2X	139.2	0.0	10.2	0.0	18.5	9
CURRY SC1477	L 2X	139.0	0.0	3.3	0.0	23.5	11
STAUFFER S4880	E 2X	137.6	0.0	22.4	0.0	19.9	18
INTERSTATE 468	M 2X	137.6	0.0	4.5	0.0	19.5	10
PAG SX193	E 2X	134.9	0.0	9.2	0.0	18.5	12
DISCO DS5520	M 2X	134.3	0.0	10.9	0.0	20.9	17
PAYMASTER 1990	E 2X	133.0	0.0	9.5	0.0	18.9	15
PIONEER 3901	E 2X	132.1	0.0	3.1	0.0	19.3	14
MC CURDY 4945	M 2X	131.8	0.0	24.2	0.0	21.0	27
O'S GOLD 2389	M 2X	129.3	0.0	4.4	0.0	18.2	16
PAYMASTER 2890	E 2X	129.3	0.0	15.4	0.0	18.6	22
KELTGEN KS1070	M 2X	128.7	0.0	3.5	0.0	24.1	23
NORTHROP KING PX9151	E 2X	128.7	0.0	8.6	0.0	17.8	20
PIONEER 3906	E 2X	127.1	0.0	7.6	0.0	18.8	21
CENEX 2106	E 2X	126.1	0.0	2.5	0.0	17.5	19
PAG SX239	E 2X	125.7	0.0	8.9	0.0	20.3	25
KELTGEN KS95	M 2X	125.5	0.0	16.5	0.0	19.1	29
KELTGEN KS104	M 2X	125.2	0.0	6.7	0.0	20.3	24
DISCO DS5519	M 2X	123.9	0.0	10.8	0.0	20.2	30
PAG SX180	E 2X	122.8	0.0	13.8	0.0	19.2	34
SUPERCROST 2410	M 2X	122.2	0.0	15.4	0.0	20.8	38
DISCO DS5614	E 2X	121.9	0.0	19.3	0.0	21.7	41
DEKALB DK447	E 2X	121.9	0.0	6.9	0.0	20.7	32
SUPERCROST 2288	M 2X	121.4	0.0	3.6	0.0	18.4	26
WESTERN KX-42	M 2X	121.3	0.0	6.6	0.0	18.1	28
CARGILL 874	E 2X	120.5	0.0	9.4	0.0	19.3	35
CARGILL 867	E 2X	120.2	0.0	19.8	0.0	20.0	42
KELTGEN KS1030	M 2X	119.9	0.0	4.3	0.0	19.5	31
TOP FARM SX1101	M 2X	119.4	0.0	16.5	0.0	22.5	48
SEEDTEC 7931	E 2X	118.4	0.0	12.0	0.0	17.8	37
DEKALB XL-8	E 2X	117.9	0.0	24.7	0.0	18.3	49
NORTHROP KING PX9242	E 2X	117.2	0.0	5.0	0.0	18.2	36
WESTERN KX-5400	M 2X	117.1	0.0	2.2	0.0	18.0	33
TOP FARM SX104A	M 2X	116.8	0.0	14.5	0.0	20.1	47
MC CURDY 4855	M 2X	116.0	0.0	13.9	0.0	19.3	45
SIGCO 1300	M 2X	114.6	0.0	5.6	0.0	17.7	39
PAG SX195	E 2X	114.4	0.0	16.8	0.0	20.9	53
CARGILL 829	E 2X	113.6	0.0	8.1	0.0	19.2	44
O'S GOLD 2330	M 2X	113.4	0.0	4.8	0.0	18.2	40
TOP FARM SX1100	M 2X	112.9	0.0	6.7	0.0	18.7	43
STAUFFER S4402	E 2X	111.9	0.0	16.2	0.0	18.0	51
ASGROW RX480	M 2X	110.5	0.0	16.4	0.0	18.4	57
SIGCO 2405	M M2X	109.5	0.0	5.7	0.0	18.1	50
SUPERCROST 1940	E 2X	109.4	0.0	11.9	0.0	18.3	54
NORTHROP KING PX9353	M 2X	109.3	0.0	2.0	0.0	17.7	46
SEEDTEC 7971	M 2X	107.8	0.0	6.4	0.0	18.0	52
DEKALB DK484	E 2X	106.9	0.0	23.7	0.0	18.4	61
CENEX 2105	M 2X	106.7	0.0	3.0	0.0	24.0	60
TOP FARM SX1104	E 2X	106.6	0.0	5.0	0.0	18.5	55
TOP FARM SX104	M 2X	106.2	0.0	6.5	0.0	17.9	56
HORIZON 90	E 2X	105.2	0.0	8.2	0.0	17.8	59
NORTHROP KING PX9290	E 2X	105.2	0.0	5.3	0.0	18.5	58

Table 11. (Continued)

BRAND AND VARIETY	TYPE AND CROSS	YIELD B/A	PCT ROOT LODGED	PCT STALK LODGED	PCT EARS DROPPED	PERCENT MOISTURE	PERFORMANCE SCORE RATING
CARGILL 861	E 2X	103.7	0.0	15.8	0.0	19.1	62
SDAES CHECK 4	M 2X	100.2	0.0	13.4	0.0	20.0	65
MC CURDY 4771	E 2X	97.8	0.0	10.5	0.0	19.1	66
ASGROW RX420	E 2X	95.6	0.0	5.4	0.0	18.4	64
SIGCO 1507	L 2X	95.6	0.0	7.7	0.0	20.5	67
INTERSTATE 464	M 2X	95.2	0.0	4.3	0.0	17.8	63
SDAES CHECK 10	E 2X	86.7	0.0	20.6	0.0	19.0	68
Means		121.2		10.0		19.4	
LSD (.05)		7.5				C.V. - % = 18.1	

Table 12. Area C1(irrigated) 2-, 3-, and 4-year yield, moisture and stalk lodging averages of corn hybrids, 1981-1984

BRAND AND VARIETY	ACRE YIELD, B/A			STK LODGING, PCT			GRAIN MOIST, PCT		
	4-YR	3-YR	2-YR	4-YR	3-YR	2-YR	4-YR	3-YR	2-YR
ASGROW RX420			77			5			18
CARGILL 861		127	107		8	11		21	19
CARGILL 867			100			12			19
CENEX 2106	122	125	109	2	2	3	19	19	17
DEKALB XL-8		114	100		9	13		19	18
INTERSTATE 468			115			3			19
INTERSTATE 635			118			3			20
KELTGEN KS104	131	129	115	4	5	6	22	22	19
KELTGEN KS95	127	124	106	5	6	9	20	20	18
MC CURDY 4855	120	117	100	6	7	10	22	22	18
NORTHROP KING PX9353			123		2	2		20	18
O'S GOLD 2330	122	122	104	3	3	5	19	19	17
P-A-G SX193			117			7			18
P-A-G SX239			112			6			19
PIONEER 3732		133	116		3	3		22	20
PIONEER 3747		127	115		3	4		21	19
PIONEER 3901		121	100		3	4		19	18
PIONEER 3906		115	102		3	5		18	17
SDAES CHECK 10	102	97	70	11	12	18	19	19	18
SIGCO 1300			100			7			17
SIGCO 2405			100			5			18
STAUFFER S4402			99			11			18
TOP FARM SX 104	118	115	92	3	4	6	19	20	17
TOP FARM SX 104A	124	118	107	5	6	9	23	23	19
TOP FARM SX1100			106			5			18
TOP FARM SX1101			109			11			20
WESTERN KX-5400			106			2			18



Table 13. 1984 Corn Performance Trial, Area C2, John Biddle Farm, Geddes, SD

BRAND AND VARIETY	TYPE AND CROSS	YIELD B/A	PCT RDQT LODGED	PCT STALK LODGED	PCT EARS DROPPED	PERCENT MOISTURE	PERFORMANCE SCORE RATING
PIONEER 3551	M 2X	104.4	0.0	3.1	0.0	17.6	1
KELTGEN KS1050	M 2X	86.4	0.0	2.3	0.0	16.9	2
PIONEER 3378	L 2X	80.0	0.0	0.8	0.0	17.3	3
DISCO DS5445	M 2X	79.8	0.0	9.1	0.0	17.5	4
CENEX 2108A	M 2X	78.3	0.0	13.3	0.0	17.1	7
CARGILL 921	M 2X	77.3	0.0	2.3	0.0	18.8	6
TOP FARM SX1104	M 2X	76.8	0.0	3.1	0.0	16.2	5
HOEGEMEYER SX2667	L 2X	75.7	0.0	5.3	0.0	18.1	8
PIONEER 3377	L 2X	75.1	0.0	2.9	0.0	18.0	9
PAYMASTER 6990	M 2X	74.9	0.0	2.2	0.0	18.3	10
SUPERCROST 4337	L 2X	74.1	0.0	2.8	0.0	17.9	13
DEKALB DK587	M 2X	73.8	0.0	1.7	0.0	18.7	14
DEKALB DK556	M 2X	73.7	0.0	3.2	0.0	17.0	12
WILSON 1700	L 2X	73.5	0.0	3.2	0.0	18.9	16
PAG SX241	M 2X	73.5	0.0	4.0	0.0	16.2	11
DISCO DS5433	L 2X	72.8	0.0	0.8	0.0	18.8	17
KELTGEN KS95	M 2X	71.9	0.0	1.4	0.0	15.9	15
GREEN ACRES 457	L 2X	71.6	0.0	5.5	0.0	20.6	20
TOP FARM SX1098	M 2X	70.8	0.0	4.6	0.0	15.7	18
WILSON 1100B	E 2X	69.8	0.0	2.3	0.0	17.0	19
CARGILL 889	M 2X	68.5	0.0	1.5	0.0	17.6	21
GREEN ACRES 3000	M 4X	68.3	0.0	5.0	0.0	18.8	27
KELTGEN KS1090	L 2X	68.2	0.0	5.5	0.0	17.3	23
KALTENBERG KX64	M 2X	68.0	0.0	8.3	0.0	17.1	28
NORTHRUP KING PX9410	M 2X	67.6	0.0	2.2	0.0	16.6	22
KELTGEN KS1070	M 2X	67.4	0.0	4.0	0.0	17.2	24
PIONEER 3475	M 2X	67.3	0.0	2.5	0.0	17.8	26
DEKALB T1100	L 2X	67.2	0.0	2.2	0.0	17.6	25
PAYMASTER 2890	M 2X	66.2	0.0	2.2	0.0	16.4	29
WILSON 15008	M 2X	65.9	0.0	8.9	0.0	17.7	34
TOP FARM SX1100	M 2X	65.3	0.0	8.8	0.0	16.1	31
PAYMASTER 2990	M 2X	64.9	0.0	7.1	0.0	16.6	33
SDAES CHECK 9	L 2X	64.9	0.0	1.6	0.0	17.1	30
CARGILL 891	M 2X	64.1	0.0	3.8	0.0	18.0	36
NORTHRUP KING PX9455	M 2X	64.0	0.0	3.1	0.0	17.3	35
PAG SX267	M 2X	63.4	0.0	8.3	0.0	18.5	43
LYNKS LX4115	E 2X	63.3	0.0	7.1	0.0	17.5	42
TOP FARM SX1096	E 2X	63.2	0.0	0.0	0.0	15.6	32
WESTERN KX-60	L 2X	63.1	0.0	2.4	0.0	17.3	37
HOEGEMEYER SX2570	M 2X	62.7	0.0	5.3	0.0	16.1	40
SDAES CHECK 4	M 2X	62.6	0.0	3.2	0.0	16.3	38
HOEGEMEYER SX2595	M 2X	62.5	0.0	0.9	0.0	17.1	39
KELTGEN KS104	M 2X	62.2	0.0	2.1	0.0	16.7	41
GREEN ACRES 374	M 4X	61.2	0.0	7.8	0.0	19.0	49
PAYMASTER 4790	M 2X	60.7	0.0	2.2	0.0	17.3	44
DISCO DS5519	M 2X	60.1	0.0	1.6	0.0	17.1	46
PIONEER 3540	M 2X	60.0	0.0	2.4	0.0	16.1	45
LYNKS LX4210	M 2X	59.4	0.0	1.5	0.0	16.6	47
HOEGEMEYER SX2565	E 2X	59.2	0.0	8.1	0.0	17.3	52
WILSON 1440	M 2X	59.2	0.0	1.8	0.0	17.6	48
DISCO DS5520	M 2X	59.0	0.0	11.3	0.0	17.6	53
CENEX 2109	M 2X	58.8	0.0	7.4	0.0	16.6	51
ASGROW RX532	M 2X	57.5	0.0	1.7	0.0	15.9	50
ASGROW RX480	M 2X	56.2	0.0	5.6	0.0	16.0	55
TOP FARM SX104	M 2X	55.8	0.0	3.3	0.0	15.8	54
SUPERCROST 2989	M 2X	55.6	0.0	15.4	0.0	17.2	61
DISCO DS5429	M 2X	54.6	0.0	3.5	0.0	16.3	56
PAG SX275	M 2X	54.1	0.0	4.0	0.0	17.2	57
WESTERN KX-5800	M 2X	54.0	0.0	4.6	0.0	16.8	58
LYNKS LX4225	M 2X	53.3	0.0	2.4	0.0	17.3	59
GREEN ACRES 910	L 3X	52.8	0.0	11.0	0.0	19.2	62

Table 13. (Continued)

BRAND AND VARIETY	TYPE AND CROSS	YIELD B/A	PCT ROCT LODGED	PCT STALK LODGED	PCT EARS DROPPED	PERCENT MOISTURE	PERFORMANCE SCORE RATING
DEKALB DK505	M 2X	52.5	0.0	4.8	0.0	15.4	60
PAG SX243	M 2X	46.2	0.0	5.8	0.0	17.4	64
SDAES CHECK 10	E 2X	45.5	0.0	7.0	0.0	15.8	65
ASGROW RX420	E 2X	45.3	0.0	0.8	0.0	15.4	63
<b>Means</b>		<b>65.4</b>		<b>4.4</b>		<b>17.2</b>	
<b>LSD (.05)</b>		<b>5.4</b>		<b>C.V. - % = 23.2</b>			

Table 14. Area C2 2-, 3-, and 4-year yield, moisture and stalk lodging averages of corn hybrids, 1981-1984.

BRAND AND VARIETY	ACRE YIELD, B/A			STK LODGING, PCT			GRAIN MOIST, PCT		
	4-YR	3-YR	2-YR	4-YR	3-YR	2-YR	4-YR	3-YR	2-YR
CARGILL 921	69	64	55	22	29	2	21	23	21
GREEN ACRES 3000	62	60	53	10	10	3	20	22	18
KELTGEN KS104	67	60	51	7	8	2	17	18	16
KELTGEN KS1070			60			2			16
KELTGEN KS95	64	66	59	15	17	3	15	17	15
LYNKS LX4115			48			5			16
LYNKS LX4210	56	53	48	3	3	1	17	18	17
LYNKS LX4225		50	40		7	1		20	18
NORTHROP KING PX9455			55			5			17
P-A-G SX243			46			3			17
P-A-G SX275			48			3			17
PIONEER 3377		69	62		14	2		20	19
PIONEER 3551			79			2			17
SDAES CHECK 10	58	53	43	12	13	4	14	16	15
SDAES CHECK 4	55	57	52	13	18	2	16	19	16
SDAES CHECK 9	63	64	54	5	4	1	17	19	17
TOP FARM SX104	61	59	46	8	8	2	14	17	15
TOP FARM SX1098			52			2			15
WESTERN KX-5800			40			4			17
WILSON 1100B		57	52		7	3		19	16

Table 15. 1984 Corn Performance Trial, Area D1, John Heaton Farm, Gary, SD

BRAND AND VARIETY	TYPE AND CROSS	YIELD B/A	PCT ROOT LODGED	PCT STALK LODGED	PCT EARS DROPPED	PERCENT MOISTURE	PERFORMANCE SCORE RATING
DEKALB DK484	E 2X	87.8	0.0	0.7	0.0	19.7	1
DEKALB DK556	M 2X	87.7	0.0	2.8	0.0	23.1	4
PAG SX180	E 2X	87.3	0.0	0.7	0.0	21.8	3
KELTGEN KS89	E 2X	86.6	0.0	0.6	0.0	19.2	2
KELTGEN KS1020	M 2X	84.8	0.0	2.2	0.0	22.7	6
STAUFFER S4330	E 3X	84.4	0.0	1.3	0.0	20.2	5
O'S GOLD 2330	E 2X	83.1	0.0	2.0	0.0	21.2	8
TOP FARM SX94	E 2X	82.8	0.0	3.6	0.0	19.4	7
STAUFFER S3306	E 2X	82.8	0.0	5.3	0.0	21.7	9
PIONEER 3540	M 2X	81.9	0.0	0.7	0.0	21.9	10
PIONEER 3906	E 2X	79.8	0.0	0.7	0.0	20.1	11
STAUFFER S4880	E 2X	79.2	0.0	1.4	0.0	22.1	13
SIGCO 2405	M M2X	79.1	0.0	0.6	0.0	19.7	12
STAUFFER S4402	E 2X	77.8	0.0	1.3	0.0	20.0	14
LYNKS LX4075	E 2X	76.9	0.0	1.4	0.0	21.5	16
NORTHRUP KING PX9242	E 2X	76.6	0.0	0.0	0.0	19.9	15
KELTGEN KS101	M 2X	74.5	0.0	1.4	0.0	21.0	18
NORTHRUP KING PX9151	E 2X	74.1	0.0	2.5	0.0	18.9	17
GOLDEN VALLEY GV2500	E 2X	73.6	0.0	1.4	0.0	20.4	20
CENEX 2106	E 2X	73.3	0.0	0.0	0.0	20.1	19
LYNKS LX4225	M 2X	72.1	0.0	2.6	0.0	24.8	21
DEKALB DK587	M 2X	71.9	0.0	1.4	0.0	28.5	23
PAG SX195	E 2X	70.4	0.0	2.0	0.0	23.2	22
SDAES CHECK 9	L 2X	69.1	0.0	0.7	0.0	27.3	29
TOP FARM SX1193	E 2X	67.2	0.0	2.9	0.0	20.2	24
KELTGEN KS95	M 2X	67.0	0.0	4.5	0.0	22.8	30
INTERSTATE 375	E 2X	67.0	0.0	1.4	0.0	20.6	25
O'S GOLD 2389	E 2X	66.9	0.0	3.5	0.0	22.6	28
PIONEER 3732	M 2X	66.9	0.0	2.1	0.0	23.6	31
PIONEER 3737	M 2X	66.4	0.0	5.3	0.0	20.4	26
LYNKS LX4102	E 2X	66.4	0.0	0.8	0.0	25.3	32
SEEDTEC 7931	E M2X	65.0	0.0	3.3	0.0	19.3	27
SEEDTEC 7971	M M2X	63.8	0.0	4.1	0.0	20.2	33
CENEX 2096	E 2X	63.5	0.0	3.3	0.0	20.7	34
SUPERCROST 2288	M 2X	63.1	0.0	3.4	0.0	21.5	36
KELTGEN KS93	E 2X	62.5	0.0	0.7	0.0	20.8	35
PIONEER 3901	E 2X	61.4	0.0	1.4	0.0	22.1	37
SUPERCROST 1940	E 2X	61.3	0.0	1.4	0.0	23.0	38
SDAES CHECK 10	E 2X	59.0	0.0	9.4	0.0	21.0	41
TOP FARM SX104	M 2X	58.5	0.0	3.3	0.0	21.9	40
LYNKS LX4115	E 2X	57.8	0.0	5.7	0.0	23.2	45
SDAES CHECK 4	M 2X	57.7	0.0	2.6	0.0	21.3	42
DISCO DS5708	E 2X	57.5	0.0	2.1	0.0	19.1	39
TOP FARM SX1096	E 2X	56.9	0.0	0.8	0.0	21.0	43
DEKALB DK505	M 2X	56.8	0.0	3.0	0.0	20.8	44
LYNKS LX4210	M 2X	56.2	0.0	2.0	0.0	24.9	46
TOP FARM SX1100	M 2X	53.3	0.0	4.4	0.0	22.0	47
SIGCO 2400	M M2X	50.9	0.0	3.6	0.0	22.2	49
DISCO DS5712	E 2X	50.4	0.0	4.4	0.0	20.6	48
WESTERN KX-3400	E 2X	45.8	0.0	0.8	0.0	20.7	50
INTERSTATE 434	E 2X	43.5	0.0	4.1	0.0	21.9	51
SDAES CHECK 11	E 2X	36.0	0.0	1.6	0.0	19.9	52
CENEX 2090	E 2X	30.7	0.0	2.8	0.0	18.9	53
WESTERN KX-3100	E 2X	29.9	0.0	7.0	0.0	19.1	54
<b>Means</b>		<b>66.8</b>		<b>2.5</b>		<b>21.5</b>	
<b>LSD (.05)</b>		<b>7.0</b>				<b>C.V. - % = 26.8</b>	

Table 16. Listing of Hybrid Corn Entries Harvested and the Tables where the Results Appear.

Company and Brand	Entry	Tables	Company and Brand	Entry	Tables
Arrowhead, Inc	AH950	5	Hoegemeyer Hybrids	SX2560	5
PO Box 667	AH1010	5	RR 2	SX2565	5
Watertown, SD 57102			Hooper, NE 68031	SX2570	5,7,13
"Arrowhead"			"Hoegemeyer"	SX2595	15
				SX2625	7,13
Asgrow Seed Company	RX420	5,9,10,11,12,13		SX2630	7
7000 Portage Road	RX480	5,9,11,13		SX2667	13
Kalamazoo, MI 49001	RX532	5,6,9,10,13		SX2684	7
"Asgrow"	RX777	7			
			Horizon Seeds, Inc.	90	5,9,11
Cargill Seeds	829	9,11	PO Box 81823	202	5,9,11
PO BOX 5645	861	5,6,9,10,11,12	Lincoln, NE 68501		
Minneapolis, MN 55440	867	5,6,9,10,11,12	"Horizon"		
"Cargill"	874	5,9,11			
	889	7,13	Interstate Seed Co.	375	5,15
	891	7,8,13	PO Box 470	434	5,9,10,15
	921	13,14	Fargo, ND 58107	464	9,10
	937	7	"Interstate"	468	11,12
	974	7		635	9,10,11,12
			Kaltenberg Seed Farm	KX64	13
Genex	2090	15	PO Box 278		
Box 65089	2096	15,9	Waunakee, WI 53597		
St. Paul, MN 55164	2105	5,11	"Kaltenberg"		
"Genex"	2106	4,5,6,9,10,11,12			
	2108A	5,13	Keltgen Seed Company	KS89	15
	2109	13	PO Box A	KS93	15
	2111	9	Olivia, MN 56277	KS95	5,6,9,10,11,12,13,14,15
Curry Seed Co.	SC1408	9,10	"Keltgen"	KS101	5,6,15
PO Box 517	SC1426	5		KS1020	5,6,9,10,15
Elk Point, SD 57025	SC1461	5,7,11		KS1030	9,10,11
"Curry"	SC1477	5,7,11		KS104	5,6,11,12,13,14
	SC1485	7		KS1050	5,7,9,11,13
				KS1070	7,8,9,11,13,14
DeKalb-Pfizer Genetics	XL-8	9,10,11,12		KS114	7,8
3100 Sycamore Road	DK399	9		KS1090	7,13
DeKalb, IL 60115	DK447	9,11	King's Western Seeds	KX-42	5,9,10,11
"DeKalb"	DK484	5,6,9,10,11,15	PO Box 947	KX-59	9
	DK505	5,13,15	Huron, SD 57350	KX-60	13
	DK556	5,6,13,15	"Western"	KX-3100	15
	DK587	5,7,14,15		KX-3400	15
	DK656	7		KX-5400	5,6,11,12
	T1100	7,8,13		KX-5800	5,13,14
				KX-6800	7,8
Disco Seeds	DS5429	7,13	Lynks Seeds	LX4075	15
PO Box 640	DS5433	7,13	PO Box 637	LX4102	15
Mitchell, SD 57301	DS5519	9,11,13	Marshalltown, IA 50158	LX4115	5,6,13,14,15
"Disco"	DS5570	11,13	"Lynks"	LX4210	5,6,7,8,13,14,15
	DS5614	9,11		LX4225	5,6,7,8,13,14,15
	DS5708	15		LX5235	5,7
	DS5712	15		LX4315A	7,8
	DS5445	13			
Fontanelle Hybrids	370	5,6	McCurdy Seed Co.	4771	11
Rt. 1, Box 18	427	7,8	PO Box 66	4855	11,12
Nickerson, NE 68044	435	7,8	Fremont, IA 52561	4945	5,11
"Fontanelle"	4230	5	"McCurdy"	5596	5,6,7,8
	4528	7,8		5750	5,7
	4570	7		7372	7
	5230	7		7384	7,8
Golden Valley Seed Co.	GV2500	15	NC+ Hybrids	2747	7,8
RR 2, Box 105			PO Box 4408	3440	7
Milbank, SD 57252			Lincoln, NE 68504	3653	7,8
"Golden Valley"			"NC+"	4303	7
				4710	7
Green Acres	374	13			
Hartington, NE 68739	457	13			
"Green Acres"	910	13			
	3000	13,14			

Table 16 (Cont.).

Company and Brand	Entry	Tables	Company and Brand	Entry	Tables
Northrup King Co. 1754 Park Blvd. Fargo, ND 58103 "Northrup King"	PX9151 PX9242 PX9290 PX9353 PX9410 PX9455 PX9527	5,9,11,15 5,9,11,15 5,11 7,11,12 7,11,13 7,8,13,14 7,8	Quality Plus Seeds PO Box 64089 St. Paul, MN 55164 "Quality Plus"	Q+ 1082 Q+ 1102 Q+ 1132 Q+ 1152	7 7 7 7
O's Gold Seed Co. PO Box 460 Parkersburg, IA 50665 "O's Gold"	2330 2389 2450 2545 6880 6882	11,12,15 11,15 5 7 5,6 7,8	SeedTec Int'l, Inc. PO Box 5522 Fargo, ND 58105 "SeedTec"	7931 7971	9,11,15 5,9,10,11,15
Paymaster Seeds PO Box 9493 Minneapolis, MN 55440 "Paymaster"	1990 2890 2990 4790 6990 7190	5,9,11 5,9,11,13 5,13 7,13 7,13 7	Sigco Research Box 289 Breckenridge, MN 56520 "Sigco"	1300 1507 2400 2405 3106	5,11,12 5,11,12 15 5,6,9,11,15 9,10
PAG Seeds PO Box 9480 Minneapolis, MN 55440 "PAG"	SX175 SX180 SX193 SX195 SX239 SX241 SX243 SX267 SX275	9,11 5,9,11,15 11,12 9,10,12,15 5,6,11,12 5,7,13 13,14 5,7,13 5,6,7,8,13,14	SDAES Plant Science, SDSU Brookings, SD 57007	Check 1 Check 4 Check 9 Check 10 Check 11	7,8 14,5,6,9,10,11,13,14 5,6,7,8,13,14,15 5,6,7,9,10,11,12,13,14,15 5,15
Pioneer Hi-Bred, Int'l 7000 Pioneer Parkway Johnston, IA 50131 "Pioneer"	3377 3378 3475 3540 3551 3732 3737 3747 3901 3906	7,8,13,14 7,13 7,13 5,7,13,15 7,8,13,14 5,6,9,10,11,12,15 5,9,11,15 9,10,11,12 5,6,9,10,11,12,15 5,6,9,10,11,12,15	Stauffer Seeds 2622 Blaney Road Madison, WI 53711 "Stauffer"	S3306 S4330 S4402 S4880 S5260 S5340 S5650	9,10,11,15 9,15 5,6,9,11,12,15 5,9,11,15 5,6,7,8 5,6,7,8 7
Pride Company, Inc. RFD Box 58 Glen Haven, WI 53810 "Pride"	3344 3355 4422 5523 6692 7759 X1044 X1094 X1123 EXP115	5,9 5,9 9,10 5,6,9,10 5,7,8 7,8 9 5,7 7,8 7	Supercroft Seeds Box 793 Norfolk, NE 68701 "Supercroft"	1940 2288 2410 2989 4339 5438	5,9,11,15 5,9,11,15 11 7,13 13 7
			Top Farm Hybrids Box 850 Cokato, MN 55321 "Top Farm"	SX94 SX104 SX104A SX1096 SX1098 SX1100 SX1101 SX1104 SX1193	15 5,6,9,10,11,13,14,15 9,10,11,12 5,9,13,15 5,6,13,14 11,12,13,15 9,10,11,12 5,9,11,13 5,6,15
			Wilson Hybrids, Inc. Box 391 Harlan, IA 51537 "Wilson"	1100b 1440 1500b 1700	7,8,13,14 7,13 7,13 7,13