1-1981

1980 Corn Performance Trials

J. J. Bonnemann
South Dakota State University

1980 Corn Performance Trials

Circular 235
January 1981

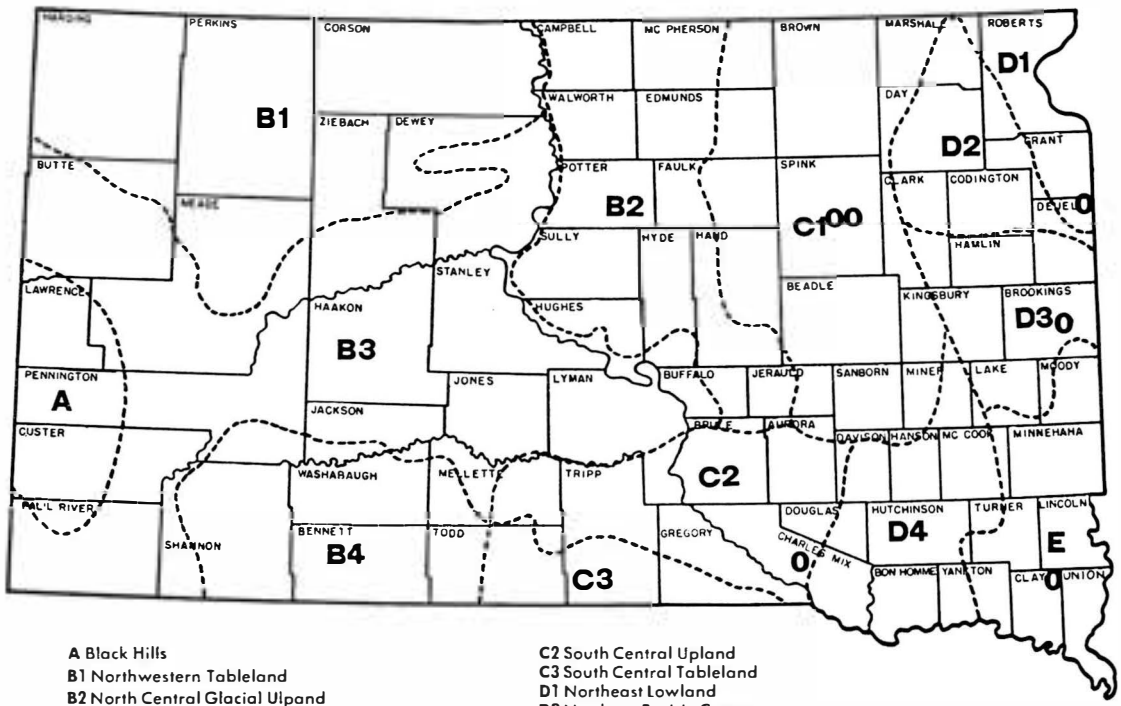
Agricultural Experiment Station
South Dakota State University
Brookings

Listing of Tables

CROP ADAPTATION AREAS OF

SOUTH DAKOTA

O INDICATES SITE OF 1980 CORN PERFORMANCE TRIAL



A Black Hills
B1 Northwestern Tableland
B2 North Central Glacial Upland
B3 Pierre Plain
B4 Southwestern Tableland
C1 Northern James Valley
C2 South Central Upland
C3 South Central Tableland
D1 Northeast Lowland
D2 Northern Prairie Coteau
D3 Central Prairie Coteau
D4 Southern James Flatland
E Southeast Prairie Upland

Published in accordance with an Act passed in 1881 by the 14th Legislative Assembly, Dakota Territory, establishing the Dakota Agriculture College and with the Act of re-organization passed in 1887 by the 17th Legislative Assembly, which established the Agricultural Experiment Station at South Dakota State University.
File: 1.4-1.1--5,000 printed at estimated 36¢ each--2-81mb--7545A

1980 Corn Performance Trials

J. J. Bonnemann, Assistant Professor

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

The relative performance of corn hybrids grown in 1980 under similar environmental conditions 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 1980 and available two-, three-, and four-year averages of yield, moisture and stalk lodging percentages are also presented. The trials reported were conducted under the Plant Science Department program in Crop Performance Testing, Agricultural Experiment Station, SDSU.

Location of the 1980 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 trial in Area D4 was discontinued in 1980. The soil classification, laboratory analyses of soil samples taken and fertility applied at each site are given in Table 2.

Weather and Climatic Conditions

1980 climatic data (Table 3) for the corn growing season, May-October, are based upon information obtained from a U.S. Weather Bureau station reasonably near each trial. The Milbank recording station is closest to the trial site north of Gary in Deuel County. Stations are located at or near the other trial sites; the Armour 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.

Most of the May precipitation occurred early during the month and the total was above normal. One-third of the total corn acreage in the state was seeded by May 10. The trials were seeded from May 5 through May 19. Most of the May rain fell during the period May 8-10.

Adequate soil moisture was present to assure uniform germination at all but one site, Redfield irrigated. A late May rain at this site aided in overcoming the initial problems. The corn grew rapidly after emergence but began to suffer in the central and southern portion of the state by mid-June. Rainfall was very limited in these areas until nearly mid-August. Temperatures were very high with many days above 90°F, especially during July and early August at the peak of pollination. Corn at these locations was short, stunted, and generally poor. Pollen failed to form and fertilization was restricted. The trial at Beresford

The assistance of the following individuals is appreciated: D. B. Shank, Z. W. Wicks and G. W. Erion of the Plant Science Department; Albert Dittman, Burt Lawrensen, Herb Lund, Kevin Kirby, Delbert Robbins and Lucian Edler of the stations; and cooperators William Fijala and John Heaton.

Table 1. Location of Trials, Dates of Seeding and Harvesting of the 1980 Corn Performance Trials, South Dakota.

Area	County	Location	Post Office	Dates Seeded	Dates Harvested
C1-dry	Spink	James Valley Res. Farm, 6E	Redfield	May 15	Oct. 29
C1-irr.	Spink	James Valley Res. Farm, 6E	Redfield	May 15	Oct. 28
C2	Charles Mix	Wm. Fijal Farm, 2E, 1N	Geddes	May 19	Oct. 22
D1	Deuel	John Heaton, 1W, 5N	Gary	May 5	Oct. 14
D3	Brookings	Plant Science Farm, 2NE	Brookings	May 6	Oct. 27
E	Clay	Southeast Exp. Farm, 7W, 3S	Beresford	May 7	Oct. 30

suffered from two hail storms; in early June and late August. The second storm caused so much variation in yield that the trial results are not presented in this circular.

Total precipitation for the season was normal or below at all sites. Crops at locations with normal precipitation suffered from drought because the critical filling period in September was dry. This dry period had an undesirable affect on grain quality in some trials. At the drier sites some hybrids were still at a stage of growth that enabled them to make good use of the August rains and, combined with the warm September and absence of a killing freeze, produced grain of fair quality and yield.

In the northeastern area of the state where moisture was adequate and temperatures near normal the warm, dry September permitted corn to mature and the moisture level to drop to very acceptable percentages. The trial plots were harvested between October 14 and 30. Statewide, the dry fall permitted corn harvest to be 98% complete by November 10, about 13% more than usual by that date.

Lodging was not a serious problem at most sites. The delayed freeze had not killed the stalks by the time the corn was harvested. Corn borers were present in some areas but generally were not a serious cause of loss in the trials. Only in the extreme southeastern area of the state was excessive ear droppage caused by high corn borer infestations. The drouth and stress conditions weakened the ear shanks; consequently, ear droppage was a problem in the eastern third of the state. This weakness was most noticeable during the 24-hour period of October 10 when winds in excess of 40 mph blew during the entire period causing ear losses in most fields of standing corn.

Table 2. Laboratory analyses, soil classification and fertilizer applied to the 1980 corn performance trial fields.

Area	Classification	O.M.	P lb/A	K lb/A	pH	Preparation and method	lb/A N	lb/A P	lb/A K
C1-dry	Beotia SiCl	3.0	98	850	7.3	Plowed and harrowed(wheat)	80	40	0
C1-Irr.	Beotia SiCl	3.2	34	760	7.3	Plowed and harrowed(sorghum)	80	40	0
C2	Highmore SiCl	3.8	200	1000	7.1	Plowed and harrow(wheat)Man.	+26	13	6
D1	Forman SiCl	3.2	48	430	7.6	Plowed and disked(soybeans)	80	60	30
D3	Lismore SiL	3.0	76	430	6.3	Plowed and disked(sudan)	90	25	0
E	Egan SiL	2.8	40	730	6.3	Plowed and harrow(oats)	80	40	20

Table 3. Temperature and Precipitation Data for the 1980 Corn Growing Season in South Dakota.

		Temperature, °F				Precipitation, inches		
District	Month	Mean av.	Departure from normal	Av. depar. ture	Days 90°+	Month total	Departure from normal	Total departure
Armour[a]	May	60.8	+1.1		0	1.41	-1.47	
	June	72.3	+3.2		10	2.45	-1.82	
C2	July	79.5	+4.0		25	0.64	-2.05	
	August	74.4	+0.3		14	5.95	+3.20	
	Sept.	66.2	+2.9		6	0.18	-2.06	
	Oct.	49.5	-2.8	+1.5	2	1.99	+0.53	-3.67
First freeze		10/3 - 27°				12.62		
Brookings	May	56.8	+0.6		0	1.09	-2.11	
2 NE	June	65.7	0.0		0	9.28	+4.70	
	July	70.4	-0.7		6	2.58	-0.26	
D3	August	67.9	-1.7		1	3.93	+1.07	
	Sept.	59.7	+0.7		2	0.42	-1.82	
	Oct.	43.9	-4.8	-0.9	0	-0.84	-0.63	+0.95
First freeze		9/26 - 27°						
Centerville	May	60.5	-0.2		2	2.17	-1.31	
6 SE	June	69.3	-0.9		5	2.12	-2.58	
	July	75.8	+0.5		19	1.25	-1.86	
E	August	71.6	-2.3		6	6.49	+3.45	
	Sept.	62.7	-1.0		4	0.86	-1.82	
	Oct.	45.8	-7.4	-1.9	0	1.18	-0.47	-4.59
First freeze		10/3 - 25°				14.07		
Milbank	May	59.6	+1.9		2	1.56	-1.49	
2 SSW	June	65.9	-1.4		2	6.74	+2.43	
	July	71.0	-1.8		8	2.81	-0.01	
D1	August	67.6	-3.9		5	3.68	+1.11	
	Sept.	65.5	+4.4		3	0.85	-1.18	
	Oct.	49.5	-1.3	-0.3	0	0.87	-0.68	+0.18
First freeze		9/23 - 29°				16.51		
Redfield	May	58.6	[b]		2	1.85	[b]	[b]
6 E	June	66.0			2	4.74		
	July	73.2			14	3.20		
C1(irr.)	August	69.7			10	3.88		
	Sept.	60.6			2	0.50		
	Oct.	45.6			1	1.19		
First freeze		10/3 - 30°				15.36		

[a] - Based upon reports of Monthly Climatological Data, National Climatic Center, Ashville, NC.

[b] - Departures are figures from 30 years data. This station has not been in operation for that period of time.

The irrigated trial at Redfield received two applications of water. The yield average for the irrigated over the dryland trial was 96 and 71 B/A, respectively. Hot, dry winds during July affected pollination of both trials.

The growing season was longer than normal at most sites. The last hard freeze occurred on May 8 for most crop producing areas of the state and the first killing freeze was on September 23 at Brookings and as late as October 3 at Redfield. Lighter frost occurred earlier at these sites but barely nipped the upper leaves.

Hybrid Entry Procedure

Hybrids entered are submitted by participating commercial companies and they designate the locations where their entries are to be grown. Hybrids registered with the South Dakota State Department of Agriculture prior to March 24, 1980 were eligible for entry. As of July 1, 1980 hybrids no longer have to be registered. 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 are eligible and each was allowed to be entered once in each adaptation area. No more than seven entries from one company were accepted for each location. A listing of the firms, with brands and varieties harvested, is presented in Table 16.

Beginning in 1975 check entries used in the trials are made up of inbreds frequently used by the industry. These are indicated in the trials as SDAES Check 2, 4, 9, etc. The identities of the checks are as follows:

Check 1 - B73 x Mo17Ht	Check 9 - Mo17 x A634
Check 2 - A632Ht x A619Ht	Check 10 - A632 x W153R
Check 4 - W64Ht x W117Ht	Check 11 - A554 x CM105

Experimental Procedure

The entries included in each trial were seeded in four or more replications. Two population levels were included at sites where climatic conditions generally are 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 the 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 the insecticide used in the past years. A recommended short-residue preemergence herbicide was banded over the row at seeding at all sites. Atrazine was sprayed over the entire plot area at Brookings for grassy weed control.

The trials were seeded as drilled corn using 31-cell cone seeders mounted above commercial flexi-planter units with double disk openers. The seeding rate was 15% more kernels than the number of plants desired. Plots were thinned to the desired stands when necessary.

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. Variations of equal potential may yield differently because

Table 4. Field methods for the 1980 corn trial sites.

Area	Table No.	Number of Replications Harvested	Method of Seeding	Final Population Obtained	Row Number of	Row Width, inches	Row Length feet
C1-dry	9	4	drilled	13,720	1	36	36
C1-irr.	12	3	drilled	22,090	1	36	36
C1-irr.	12	3	drilled	24,815	1	36	36
C2	14	4	drilled	10,925	1	40	37
D1	6	4	drilled	14,550	1	38	36
D3	7	2	drilled	12,210	1	36	32
D3	7	2	drilled	15,665	1	36	32

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 1980 coefficients of variation were quite high at many locations. The trials at Brookings and Beresford were damaged by hail; two separate storms at Beresford necessitated abandonment of the trial. Drouth affected the trial at Geddes, many entries producing only nubbins. The trials at Redfield were within the acceptable statistical limitations (5-15%).

A significant difference was noted for the higher population at Brookings. The population differences were not significant for the irrigated trial at Redfield, in part due to early non-uniform germination problems.

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 = 2.741 acres; so, 54 x .454 x 2.471 = 60.6 x B/A = kilograms per hectare

II. or assuming a yield of 60.6 B/A from the tables
Step 1 = 60.6 B/A x 54 lb/B = 3272 lb/acre
Step 2 = 3272 lb/acre x 1.121 = 3668 kilograms/hectare or 36.7 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 (Table 5). 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 entries.

Table 5. Harvest methods and moisture determinations for the 1980 corn trials.

Area	Harvest methods	Samples used for Moisture Determinations	Moisture Determined
C1-dry	Picker-sheller	Shelled corn	Electronically
C1-irr.	Picker-sheller	Shelled corn	Electronically
C2	Hand picked	Ear sections	Oven-dried
D1	Picker-sheller	Shelled corn	Electronically
D3	Plot combine	Shelled corn	Electronically
E	Picker-sheller	Shelled corn	Electronically

The very early maturity varieties suffered the greatest ear droppage at the Gary and Brookings sites. Hybrids of various maturity ranges are intermingled in the trials and the earlier hybrids that may have been ready for harvest could not be taken until the entire field was harvested mechanically at the same time.

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 operations 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. The cash grain operator who does not turn livestock into his fields after harvest will receive greater returns when the stalks remain upright so that the ears will go through his 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:

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

Use of 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 manner or fashion.

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 6. 1980 Corn Performance Trial, Area D1, John Heaton Farm, Gary

BRAND AND VARIETY	TYPE AND CROSS	YIELD B/A	PCT ROOT LODGED	PCT STALK LODGED	PCT EARS DROPPED	PERCENT MOISTURE	PERFORMANCE SCORE RATING
KELTGEN KS99	E 2X	92.4	0.0	9.2	0.0	15.2	2
TROJAN TXS 99	E 2X	92.4	0.0	13.0	0.0	14.8	3
TOP FARM SX99	M 2X	91.8	0.0	7.4	0.0	13.6	1
TOP FARM SX103	M 2X	87.8	0.0	4.5	0.0	15.0	4
TROJAN TXS 94	E 2X	86.4	0.0	1.9	0.0	14.9	5
CENEX 2119	E 2X	86.1	0.0	8.4	0.0	13.2	7
DE KALB XL-25A	M 2X	85.4	0.0	0.0	0.0	15.1	6
TOP FARM SX97	M 2X	85.0	0.0	9.7	0.0	13.9	8
KELTGEN KS100	E 2X	82.7	0.0	20.0	0.0	14.3	17
CENEX 2093	E 2X	82.5	0.0	5.2	0.0	12.4	9
P-A-G SX189	E 2X	81.8	0.0	3.8	0.0	15.6	12
SOKOTA 420	E 2X	81.8	0.0	6.5	0.0	13.5	11
ASGROW RX40	E M2X	81.2	0.0	1.9	0.0	13.3	10
TOP FARM SX98	M 2X	80.8	0.0	9.2	0.0	12.9	13
PAYCO SX680	E 2X	79.8	0.0	4.6	0.0	14.8	16
CHECK 11	E 2X	79.6	0.0	7.1	0.0	12.9	15
CURRY SC-1424	M 2X	79.1	0.0	0.0	0.0	17.2	18
TOP FARM SX101	M 2X	79.0	0.0	1.3	0.0	13.5	14
KELTGEN KS103	M M2X	77.9	0.0	1.2	0.0	15.5	19
LYNKS LX4120	M 2X	77.8	0.0	4.5	0.0	15.3	20
P-A-G SX181	E 2X	77.4	0.0	7.8	0.0	14.8	21
FONTANELLE 330	E 2X	76.7	0.0	7.5	0.0	14.3	22
SOKOTA TS-58	M 2X	75.7	0.0	7.6	0.0	14.6	23
CHECK 10	M 2X	73.9	0.0	18.1	0.0	13.9	29
SIGCO 075	E 2X	73.8	0.0	42.9	0.0	12.6	41
SOKOTA 450	E 2X	73.7	0.0	2.4	0.0	13.7	24
CARGILL 834	E 2X	72.4	0.0	3.8	0.0	14.3	25
KELTGEN KS94	E 2X	72.0	0.0	3.8	0.0	15.7	27
PAYCO SX637	E 2X	71.8	0.0	3.8	0.0	13.5	26
JACQUES JX52	M 2X	71.3	0.0	4.1	0.0	15.2	30
JACQUES JX97	M 2X	71.0	0.0	4.4	0.0	14.1	28
KELTGEN KS102	M 2X	70.8	0.0	8.9	0.0	16.5	35
KALTENBURG KX58	M 2X	70.7	0.0	5.5	0.0	16.8	33
WESTERN KX-35	M 2X	70.5	0.0	4.0	0.0	16.0	31
CURRY SC-1411	E 2X	70.0	0.0	2.5	0.0	15.8	32
LYNKS LX4100	E 2X	69.8	0.0	10.3	0.0	15.1	37
LYNKS LX4220A	M 2X	69.6	0.0	5.5	0.0	15.3	34
CHECK 2	M 2X	68.9	0.0	3.9	0.0	16.1	36
KELTGEN KS106	M 2X	68.0	0.0	0.6	0.0	16.8	38
ASGROW RX511	E 2X	67.4	0.0	3.1	0.0	15.5	39
TROJAN TXS 103	M M2X	67.3	0.0	6.5	0.0	15.7	40
PRIDE 3310	E 2X	63.8	0.0	9.9	0.0	13.5	42
ACCO UC3002	M 2X	63.4	0.0	9.8	0.0	15.3	43
PRIDE 3320	E 2X	60.4	0.0	8.1	0.0	13.9	45
ACCO UC2951	M 2X	60.1	0.0	2.6	0.0	14.8	44
SOKOTA TS-62A	M 2X	60.0	0.6	4.5	0.0	15.5	46
DE KALB XL-13	E 2X	58.5	0.0	5.3	0.0	14.3	48
CURRY SC-1406	E 2X	58.3	0.0	4.1	0.0	13.5	47
ACCO UC2981	M 2X	56.1	0.0	4.8	0.0	17.3	50
KALTENBURG KX55	M 2X	55.2	0.0	3.8	0.0	13.9	49
DE KALB XL-14AA	E 2X	53.4	0.0	2.0	0.0	14.3	52
LYNKS LX4075	E 2X	53.4	0.0	2.5	0.0	13.7	51
SOKOTA TS-60	M 2X	46.8	0.0	0.7	0.0	13.4	53
CENEX 2106	M 2X	45.1	0.0	3.4	0.0	13.6	54
PRIDE 4440	M 2X	43.1	0.0	7.2	0.0	16.6	55
SIGCO 078	E 3X	38.6	0.0	32.0	0.0	12.8	56
Means		71.3		6.7		14.6	
LSD (.05)		22.6			C.V. =	22.7%	

Table 7. 1980 Corn Performance Trial, Area D3, Plant Science Farm, Brookings,

BRAND AND VARIETY	TYPE AND CROSS	YIELD B/A	PCT ROOT LODGED	PCT STALK LODGED	PCT EARS DROPPED	PERCENT MOISTURE	PERFORMANCE SCORE RATING
TOP FARM SX104	M 2X	101.4	0.0	0.8	5.7	16.7	1
ACCO UC3002	M 2X	86.3	0.0	1.6	1.6	19.2	2
TROJAN TXS 102	M 2X	85.2	0.0	0.8	0.0	19.7	3
SDAES CHECK 2	M 2X	84.4	0.0	4.0	1.6	19.5	4
KELTGEN KS102	E 2X	84.0	0.0	2.4	0.0	19.9	5
CURRY SC-1424	M 2X	84.0	0.0	0.9	1.7	20.5	6
CURRY SC-1421	M 2X	82.4	0.0	3.2	1.6	20.4	8
ASGROW RX511	E 2X	81.9	0.0	4.1	3.3	19.0	7
LYNKS LX4100	E 2X	81.3	0.0	2.4	1.6	19.8	10
CENEX 2108	M 2X	81.3	0.0	1.7	0.8	19.4	9
KALTENBURG KX61	M 2X	80.9	0.0	3.2	3.2	19.2	11
O S GOLD SX6880	M 2X	80.1	0.0	0.0	0.8	19.4	12
WESTERN KX-52	M 2X	79.5	0.0	0.8	0.8	21.0	14
MIGRO M 2022X	M 2X	79.5	0.0	1.6	0.8	21.3	16
MC CURDY 4855	M 2X	79.2	0.0	2.5	0.8	19.7	13
MC CURDY 5572	M 2X	77.8	0.0	0.8	2.4	20.9	22
CENEX 2157	M 2X	77.8	0.0	5.0	4.1	21.4	23
SOKOTA TS-62A	M 2X	77.6	0.0	0.0	3.3	18.9	17
CURRY SC-1414	E 2X	76.9	0.0	2.4	3.2	18.5	21
SOKOTA 420	E 2X	76.8	0.0	1.6	0.8	16.4	15
MC CURDY 4664	E 2X	76.5	0.0	2.4	0.8	17.4	19
LYNKS LX4075	E 2X	76.4	0.0	2.4	5.6	16.6	18
FUNKS G-4224	M M2X	76.2	0.0	1.6	3.2	17.3	20
DE KALB XL-25A	M 2X	75.8	0.0	5.6	0.8	18.8	27
P A G SX189	E 2X	75.7	0.0	1.6	3.2	19.2	24
NORTHRUP KING PX59	M 2X	75.5	0.0	1.6	0.0	20.6	31
MC CURDY 5225	M 2X	75.1	0.0	0.8	0.0	18.6	26
KELTGEN KS94	E 2X	75.0	0.0	1.6	8.7	18.0	25
BLANEY B507	M 2X	74.6	0.0	1.6	4.1	18.4	29
PAYCO SX888	L 2X	74.4	0.0	3.3	3.3	19.6	35
MC CURDY 5596	M 2X	74.4	0.0	8.5	0.0	22.7	50
PRIDE 4488	M 2X	74.4	0.0	2.4	3.2	18.7	33
KELTGEN KS99	E 2X	74.4	0.0	2.5	2.5	17.7	28
P A G SX181	E 2X	74.1	0.0	2.4	6.3	17.5	30
SOKOTA TS-58	M 2X	73.9	0.0	4.0	1.6	18.5	36
BLANEY 8606	M 2X	73.7	0.0	0.0	2.4	20.5	40
MIGRO HP23	M 2X	73.5	0.0	0.0	10.3	20.1	38
CARGILL 834	E 2X	73.5	0.0	1.6	1.6	17.3	32
PRIDE 4440	M 2X	73.4	0.0	3.2	6.5	18.8	39
NORTHRUP KING PX49	M 2X	73.3	0.0	3.2	1.6	19.7	41
KALTENBURG KX58	M 2X	73.0	0.0	1.8	4.5	21.6	47
FUNKS G-4256	M 3X	73.0	0.0	1.6	4.8	17.3	34
SDAES CHECK 9	M 2X	72.8	0.0	0.8	1.6	19.8	42
BLANEY B506WX	M 2X	72.6	0.0	1.7	2.6	20.5	44
CURRY SC-1430	M 2X	72.4	0.0	2.5	0.8	20.1	46
LYNKS LX4120	M 2X	72.4	0.0	1.8	2.8	19.1	43
FUNKSG-4323	L M2X	72.0	0.0	3.3	4.9	19.8	48
WESTERN KX60	L 2X	71.9	0.0	0.8	4.1	19.9	45
FUNKS G-4143	E M2X	71.5	0.0	2.4	4.8	15.5	37
KELTGEN KS103	M M2X	70.8	0.0	0.8	4.0	19.1	49
TROJAN T 1058	M 2X	70.5	0.0	3.3	1.6	21.2	55
MIGRO HP27	M 2X	70.3	0.0	1.6	2.4	21.3	54
DE KALB XL-18	M 2X	70.0	0.0	3.2	0.8	18.3	52
TOP FARM SX99	M 2X	69.3	0.0	3.7	0.9	16.8	51
PRIDE 5578	M 2X	69.3	0.0	2.4	1.6	19.8	56
KELTGEN KS106	M 2X	68.9	0.0	0.8	5.6	20.7	58
ACCO UC2981	M 2X	68.8	0.0	2.5	0.8	20.4	59
PAYCO SX756	M M2X	68.8	0.0	7.1	4.0	19.9	63
KALTENBURG KX68	M 2X	68.6	0.0	0.0	2.4	20.3	57
CARGILL 872	M 2X	68.5	0.0	1.6	3.2	21.2	61
TROJAN T 1069	M M2X	67.6	0.0	0.0	3.3	20.4	62

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
LYNKS LX4220A	M 2X	67.5	0.0	0.8	3.2	19.9	60
CURRY SC-1406	E 2X	67.5	0.0	0.9	2.6	16.9	53
P A G 529	E 3X	67.3	0.0	1.6	2.4	20.5	66
SOAES CHECK 10	M 2X	66.9	0.0	11.1	4.0	16.7	67
BLANEY B605WX	M 2X	66.9	0.0	3.2	3.2	18.9	65
MIGRO HP20	E 2X	66.0	0.0	2.4	5.6	17.3	64
SIGCO 090	M 2X	65.2	0.0	4.9	5.7	16.8	68
NORTHRUP KING PX39	M 2X	65.1	0.0	4.1	6.5	19.4	72
DISCO SX16AA	M 2X	65.0	0.0	4.8	4.8	18.3	71
PAYCO SX844	L 2X	64.6	0.0	2.6	1.7	20.2	75
PAYCO SX775	M 2X	64.5	0.0	2.5	3.3	19.7	73
NORTHRUP KING PX37	M 2X	64.2	0.0	4.0	7.1	18.9	74
TOP FARM SX103	M 2X	63.7	0.0	0.0	2.4	17.3	70
SOKOTA 450	E 2X	63.7	0.0	0.0	8.1	16.9	69
CENEX 2119	E 2X	63.5	0.0	4.8	5.6	18.4	76
CARGILL 436	E 3X	62.8	0.0	3.2	4.0	20.0	78
KELTGEN KS109	M M2X	62.2	0.0	0.0	5.0	23.9	81
CARGILL 862	E 2X	61.8	0.0	0.8	4.8	19.3	80
MIGRO SPX305	E 3X	61.8	0.0	0.0	3.2	19.5	79
MIGRO HP16	E 2X	61.1	0.0	1.6	7.3	15.9	77
MC CURDY 37	E 2X	58.8	0.0	3.2	7.9	18.3	82
SOKOTA TS-44	E 2X	57.4	0.0	2.6	2.6	17.3	83
DE KALB XL-13	E 2X	57.4	0.0	5.6	3.2	16.4	84
CENEX 2106	M 2X	55.0	0.0	0.8	5.0	17.1	85
TOP FARM SX97	M 2X	54.4	0.0	5.7	7.4	17.4	87
TOP FARM SX98	M 2X	53.3	0.0	4.3	0.0	15.9	86
DEKALB XL-14AA	E 2X	51.0	0.0	4.9	3.9	18.0	89
SOKOTA TS-60	M 2X	49.6	0.0	1.8	14.9	16.6	88
DISCO SX24	M 2X	46.2	0.0	3.2	6.4	20.5	90
Means		71.0		2.4		19.0	
LSD (.05)		14.1			C.V. =	14.3%	

Table 8. Area D1 2-, 3-, and 4-year yield, moisture and stalk lodging averages of corn hybrids, 1977-1980.

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
ACCO UC 2951		85	80		3	4		24	24
ACCO UC 3002			83			6			24
ASGROW RX 40			94			2			20
CENEX 2119			106			9			22
JACQUES JX52			89			4			21
KALTENBURG KX58			96			4			26
PAYCO SX 680	94	94	96	3	4	5	22	21	21
PRIDE 3320			87			7			21
SOKOTA TS-58			80			4			23
TROJAN TXS 103			89			4			23
TROJAN TXS 94			100			2			21
TROJAN TXS 99			103			7			21
WESTERN KX-35			95			4			22

Table 9. 1980 Corn Performance Trial, Area C1 (dryland) James Valley Research Farm, Redfield

BRAND AND VARIETY	TYPE AND CROSS	YIELD B/A	PCT ROOT LODGED	PCT STALK LODGED	PCT EARS DROPPED	PERCENT MOISTURE	PERFORMANCE SCORE RATING
CURRY SC-1455	M 2X	93.0	0.0	1.7	0.0	23.6	2
TROJAN TXS 102	M 2X	91.0	0.0	2.4	0.0	19.8	1
CURRY SC-1424	M 2X	88.6	0.0	4.1	0.0	22.5	3
KELTGEN KS102	M 2X	86.5	0.0	3.3	0.0	20.4	4
NORTHRUP KING PX49	M 2X	85.0	0.0	6.0	0.0	22.8	6
ASGROW RX40	E M2X	83.2	0.0	2.5	0.0	17.0	5
KELTGEN KT105	M 3X	81.8	0.0	3.2	0.0	21.9	9
CARGILL 862	E 2X	81.1	0.0	3.7	0.0	20.3	7
WESTERN KX55	M 2X	80.9	0.0	4.7	0.0	22.0	10
CURRY SC-1422	M 2X	80.8	0.0	1.7	0.0	24.6	16
CENEX 2119	E 2X	80.5	0.0	0.0	0.0	20.9	8
PRIDE 5578	M 2X	80.1	0.0	6.3	0.0	21.8	15
PAYCO SX 637	E 2X	79.2	0.0	0.8	0.0	21.1	11
NORTHRUP KING PX37	M 2X	78.4	0.0	0.0	0.0	21.2	14
ASGROW RX511	E 2X	78.3	0.0	1.7	0.0	20.4	13
P-A-G SX189	E 2X	77.6	0.0	1.7	0.0	18.7	12
SOKOTA TS-62A	M 2X	77.3	0.0	3.4	0.0	20.3	20
PRIDE 4488	M 2X	77.0	0.0	1.6	0.0	19.7	18
DE KALB XL-25A	M 2X	76.8	0.0	1.7	0.0	20.8	21
DE KALB XL-15	E 2X	76.5	0.0	3.3	0.0	17.8	17
FUNKS G-4256	M 3X	75.9	0.0	2.5	0.0	17.6	19
NORTHRUP KING PX449	E 3X	73.3	0.0	2.5	0.0	16.9	22
KELTGEN KS106	M 2X	73.3	0.0	0.8	0.0	23.3	30
CARGILL 834	E 2X	73.0	0.0	4.4	0.0	19.0	25
CHECK 10	M 2X	72.7	0.0	1.7	0.0	17.0	23
CENEX 3123	E 3X	72.3	0.0	0.8	0.0	18.9	24
SOKOTA TS-58	M 2X	71.6	0.0	2.5	0.0	19.7	28
TOP FARM SX103	M 2X	71.4	0.0	0.9	0.0	19.9	27
CURRY SC-1411	E 2X	71.0	0.0	2.6	0.0	21.7	34
DE KALB XL-18	E 2X	70.9	0.0	0.8	0.0	19.5	29
TOP FARM SX104	M 2X	70.6	0.0	2.4	0.0	18.0	26
P-A-G SX181	E 2X	69.7	0.0	2.6	0.0	18.7	31
CARGILL 436	E 3X	69.6	0.0	1.7	0.0	21.9	39
NORTHRUP KING PX39	M 2X	69.6	0.0	1.7	0.0	21.1	36
JACQUES JX97	M 2X	69.4	0.0	0.8	0.0	19.1	32
KELTGEN KS103	M M2X	69.2	0.0	1.6	0.0	21.1	38
CHECK =4	M 2X	69.2	0.0	1.6	0.0	19.3	35
WESTERN KX52	M 2X	68.4	0.0	4.4	0.0	21.5	41
SOKOTA 420	E 2X	68.1	0.0	3.5	0.0	16.4	33
P-A-G 529	E 3X	67.9	0.0	2.5	0.0	22.2	44
PRIDE 3320	E 2X	67.6	0.0	3.3	0.0	17.9	37
SIGCO 090	M 2X	66.1	0.0	4.2	0.0	17.3	40
TROJAN TXS 99	E 2X	65.8	0.0	3.3	0.0	18.1	42
DE KALB XL-14AA	E 2X	65.2	0.0	0.8	0.0	18.4	43
TROJAN TXS 103	M M2X	64.4	0.0	3.8	0.0	20.3	46
JACQUES JX52	M 2X	63.8	0.0	6.5	0.0	18.2	45
KELTGEN KS99	E 2X	62.3	0.0	4.1	0.0	18.5	48
CENEX 2106	E 2X	61.4	0.0	2.6	0.0	17.5	47
SOKOTA 450	E 2X	61.3	0.0	2.4	0.0	19.3	49
SOKOTA SS-67	M M2X	61.1	0.0	4.3	0.0	20.0	50
PAYCO SX680	E 2X	60.5	0.0	4.9	0.0	19.4	52
FUNKS G-4195	M 3X	58.1	0.0	1.7	0.0	16.6	51
PAYCO SX756	M M2X	58.1	0.0	2.5	0.0	22.0	55
SIGCO 085	E 2X	55.5	0.0	2.6	0.0	15.5	53
CHECK 11	E 2X	54.1	0.0	0.8	0.0	15.9	54
FUNKS G-4065	E 3X	49.3	0.0	8.3	0.0	15.8	56
Means		71.9		2.7		19.7	
LSD (.05)		9.8			C.V. =	9.8%	

Table 10. Area D3 2-, 3-, and 4-year yield, moisture and stalk lodging averages of corn hybrids, 1977-1980.

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
ACCO UC 3002		122	114		3	3		20	21
BLANEY B507			103			2			20
BLANEY B605WX			100			4			20
BLANEY B606			100			0			22
CARGILL 872			105			7			22
CENEX 2119			104			4			19
CENEX 2157		126	111		7	6		22	22
CURRY SC-1421		127	117		3	4		21	22
DE KALB XL-25A			104			4			20
DISCO SX-16AA			95			4			20
DISCO SX-24			89			2			23
FUNKS G-4224		103	98		2	2		18	19
FUNKS G-4323		108	101		3	3		21	21
KALTENBURG KX58			110			1			23
KALTENBURG KX68			95			1			22
MC CURDY 37	109	111	99	12	14	18	19	18	19
MC CURDY 5596			106			5			24
NORTHRUP-KING PX 37		111	102		2	3		20	21
NORTHRUP-KING PX 49		117	108		3	3		20	21
PAYCO SX 756			98			4			22
PAYCO SX 775	111	115	109	3	4	3	21	20	21
PAYCO SX 844		105	98		2	1		21	22
PRIDE 4488	112	116	107	1	1	1	21	21	21
PRIDE 5578		117	108		4	4		20	21
SOKOTA TS-44		94	84		2	2		18	19
SOKOTA TS-60			98			2			20
SOKOTA TS-62A		110	106		2	2		20	20
TOP FARM SX 103		99	93		1	0		19	20
TOP FARM SX 97	98	99	93	4	4	4	19	18	19
TROJAN T 1058			99			2			22
TROJAN TXS 102	114	119	111	3	3	0	22	21	22

Table 11. Area C1 (dryland) 2-, 3-, and 4-year yield, moisture and stalk lodging averages of corn hybrids, 1977-1980.

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
CENEX 2119			87			6			19
CENEX 3123			85			4			18
CURRY SC-1422		98	95		11	13		20	22
CURRY SC-1424			90			5			20
DE KALB XL-15			84			5			17
DE KALB XL-25A			77			4			20
FUNKS G-4195	70	72	72	9	12	17	17	16	17
JACQUES JX52			69			6			18
NORTHRUP-KING PX 37		84	82		1	2		19	20
NORTHRUP-KING PX 49		96	95		5	8		20	21
PAYCO SX 637			87			4			19
PAYCO SX 680	77	76	75	3	4	6	18	18	19
PAYCO SX 756			75			4			21
PRIDE 4488	84	87	88	0	1	1	20	19	19
SOAES CHECK 4			77			4			19
SOKOTA SS-67		86	78		5	8		19	20
SOKOTA TS-58			90			6			19
SOKOTA TS-62A		87	88		5	8		19	19
TROJAN TXS 102	94	96	94	5	7	9	20	19	20
WESTERN KX-55		91	93		4	6		20	21

Table 12. 1980 Corn Performance Trial, Area C1 (irrigated), James Valley Research Farm, Redfield

BRAND AND VARIETY	TYPE AND CROSS	YIELD B/A	PCT ROOT LODGED	PCT STALK LODGED	PCT EARS DROPPED	PERCENT MOISTURE	PERFORMANCE SCORE RATING
CURRY SC-1422	M 2X	123.6	0.0	3.2	0.0	28.0	3
CURRY SC-1424	M 2X	123.5	0.0	2.4	0.0	26.9	1
CENEX 2108	M 2X	120.5	0.0	3.6	0.0	24.1	2
P-A-G SX397	M 2X	120.4	0.0	4.9	0.0	27.8	6
KELTGEN KS102	M 2X	120.3	0.0	1.5	0.0	26.1	4
CURRY SC-1455	M 2X	117.6	0.0	4.2	0.0	28.4	8
MC CURDY 5596	M 2X	115.6	0.0	4.7	0.0	28.3	11
MC CURDY 4664	E 2X	114.7	0.0	3.5	0.0	19.7	5
TROJAN TXS 102	E 2X	113.6	0.0	2.1	0.0	26.1	9
WESTERN KX-55	M 2X	113.1	0.0	3.8	0.0	26.6	13
FUNKS G-4224	M M2X	112.1	0.0	4.6	0.0	20.7	7
DE KALB XL-25A	M 2X	111.4	0.0	2.5	0.0	24.8	12
CARGILL 838	E 2X	109.2	0.0	6.1	0.0	20.3	10
TOP FARM SX104A	M 2X	108.4	0.0	5.1	0.0	23.6	14
ACCO UC3002	M 2X	106.6	0.0	5.8	0.0	27.1	21
PAYCO SX888	L 2X	106.2	0.0	2.7	0.0	26.0	16
MC CURDY 79-56	M 2X	106.1	0.0	1.9	0.0	27.6	20
MC CURDY 4855	M 2X	104.8	0.0	5.9	0.0	24.3	18
ACCO UC2981	M 2X	103.9	0.0	4.7	0.0	25.3	22
ASGROW RX511	E 2X	103.2	0.0	6.1	0.0	24.7	23
CENEX 2119	E 2X	101.6	0.0	3.9	0.0	21.5	19
DE KALB XL-18	M 2X	101.5	0.0	2.9	0.0	24.4	24
SOKOTA 420	E 2X	101.4	0.0	4.2	0.0	19.5	15
SDAES CHECK =2	M 2X	100.9	0.0	3.8	0.0	24.5	25
NORTHRUP KING PX39	M 2X	100.9	0.0	3.9	0.0	29.3	33
NORTHRUP KING PX449	E 3X	100.9	0.0	4.0	0.0	19.6	17
SDAES CHECK =9	L 2X	99.8	0.0	3.5	0.0	29.4	36
CURRY SC-1411	E 2X	98.3	0.0	3.0	0.0	28.0	37
P-A-G 529	M 3X	98.0	0.0	6.0	0.0	25.7	35
NORTHRUP KING PX49	M 2X	97.4	0.0	6.0	0.0	23.3	29
CARGILL 862	E 2X	97.1	0.0	5.5	0.0	24.7	34
P-A-G SX189	E 2X	96.7	0.0	3.8	0.0	24.5	31
KELTGEN KS103	M M2X	96.1	0.0	4.9	0.0	24.9	38
PAYCO SX844	L 2X	95.8	0.0	4.1	0.0	28.3	47
PRIDE 5578	M 2X	95.7	0.0	11.0	0.0	23.9	41
PRIDE 4440	M 2X	95.4	0.0	4.3	0.0	25.0	40
ASGROW RX40	E M2X	95.3	0.0	3.1	0.0	20.0	27
PAYCO SX637	E 2X	95.1	0.0	3.0	0.0	20.7	28
SOKOTA TS-62A	M 2X	94.9	0.0	2.5	0.0	26.1	43
TROJAN TXS 99	E 2X	94.8	0.0	5.4	0.0	21.2	30
MC CURDY 46	M 2X	94.5	0.0	2.6	0.0	26.2	45
FUNKS G-4141A	E M2X	94.4	0.0	5.4	0.0	17.9	26
KELTGEN KS106	M 2X	94.4	0.0	1.0	0.0	28.5	51
CENEX 2106	M 2X	93.5	0.0	3.1	0.0	21.2	32
MC CURDY 37	E 2X	92.7	0.0	4.9	0.0	21.6	39
TROJAN TXS 103	M M2X	92.2	0.0	6.9	0.0	22.7	46
SDAES CHECK =10	M 2X	91.3	0.0	7.0	0.0	20.5	42
SOKOTA TS-60	M 2X	90.9	0.0	6.3	0.0	22.0	48
PAYCO SX 756	M M2X	90.1	0.0	3.6	0.0	26.4	59
NORTHRUP KING PX37	M 2X	90.0	0.0	3.9	0.0	22.9	53
KELTGEN KS99	E 2X	89.8	0.0	5.6	0.0	22.1	52
TOP FARM SX104	M 2X	89.7	0.0	6.3	0.0	21.0	50
SOKOTA TS-58	M 2X	89.2	0.0	8.0	0.0	21.0	54
DE KALB XL-14AA	E 2X	88.8	0.0	1.6	0.0	19.6	44
SOKOTA SS-67	M M2X	88.0	0.0	6.6	0.0	22.6	56
TOP FARM SX103	M 2X	87.8	0.0	6.9	0.0	22.5	58
ACCO UC1905	E 2X	87.6	0.0	7.9	0.0	19.7	55
FUNKS G-4143	E M2X	87.0	0.0	5.6	0.0	18.0	49
P-A-G SX181	M 2X	86.1	0.0	5.2	0.0	20.9	57
DISCO SX16AA	M 2X	84.5	0.0	4.6	0.0	22.6	61
PRIDE 4488	M 2X	84.3	0.0	4.7	0.0	26.7	66

Table 12. (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 436	E 3X	83.8	0.0	5.6	0.0	23.9	64
DISCO SX24	M 2X	83.5	0.0	5.7	0.0	27.4	68
PRIDE 3310	E 2X	83.3	0.0	4.2	0.0	19.9	60
KELTGEN KS94	E 2X	82.5	0.0	3.3	0.0	22.5	62
CARGILL 834	E 2X	80.9	0.0	5.2	0.0	21.4	65
DE KALB XL-13	E 2X	79.0	0.0	6.6	0.0	17.8	63
KELTGEN KT105	M 3X	77.7	0.0	4.8	0.0	23.1	69
OS GOLD SX1005	E 2X	76.9	0.0	4.9	0.0	18.6	67
MC CURDY 4436	E 2X	73.0	0.0	5.3	0.0	18.3	70
SOKOTA 450	E 2X	72.5	0.0	4.6	0.0	21.0	72
SIGCO 090	M 2X	71.8	0.0	6.2	0.0	19.3	71
Means		96.7		4.6		23.5	
LSD (.05)		15.4			C.V. =	14.0%	

Table 13. Area C1 (irrigated) 2-, 3-, and 4-year yield, moisture and stalk lodging averages of corn hybrids, 1977-1980.

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
ACCO UC 1905			90			7			19
ACCO UC 3002			100			4			24
ASGROW RX 40	107	103	97	3	3	3	17	17	18
CARGILL 838	107	105	102	4	3	4	19	18	19
CENEX 2119			100			4			19
CURRY SC-1424			114			2			23
DE KALB XL-25A			106			2			22
DISCO SX-16AA			86			6			20
DISCO SX-24		103	90		4	5		24	24
FUNKS G-4141A			89			5			17
FUNKS G-4224		99	94		4	4		19	20
MC CURDY 37	105	107	92	6	6	6	19	18	19
MC CURDY 46	106	105	96	3	3	2	23	23	23
MC CURDY 5596			107			6			24
NORTHRUP-KING PX 37		104	90		2	2		21	21
NORTHRUP-KING PX 49		108	97		4	4		20	21
P-A-G SX 189	103	99	94	3	4	3	22	21	22
P-A-G SX 397			111			5			25
PAYCO SX 637			94			3			18
PAYCO SX 756			92			4			24
PAYCO SX 844		104	95		3	3		24	25
PRIDE 4488	106	103	92	2	3	3	23	23	24
SDAES CHECK 2			101			4			23
SOKOTA SS-67	105	99	88	5	4	5	23	22	23
SOKOTA TS-58			91			6			20
SOKOTA TS-60			94			5			21
SOKOTA TS-62A			96			5			22
TOP FARM SX 103		94	87		4	4		20	20
TOP FARM SX 104A		105	104		4	4		20	20
TROJAN TXS 102	106	102	101	3	2	2	23	23	24

Table 14. 1980 Corn Performance Trial, Area C2, William Fijala Farm, Geddes

BRAND AND VARIETY	TYPE AND CROSS	YIELD B/A	PCT ROOT LODGED	PCT STALK LODGED	PCT EARS DROPPED	PERCENT MOISTURE	PERFORMANCE SCORE RATING
WESTERN KX52	M 2X	55.2	0.0	1.6	2.5	23.5	1
PAYCO SX844	L 2X	35.0	0.0	0.0	4.9	21.1	2
GREEN ACRES 2X+	L 2X	34.2	0.0	3.3	0.0	37.1	6
NORTHRUP KING PX59	M 2X	33.5	0.0	1.7	0.0	30.2	3
NORTHRUP KING PX69A	L 2X	33.0	0.0	1.7	0.0	31.3	5
SDAES CHECK 11	E 2X	30.4	0.0	0.8	4.2	15.4	4
TOP FARM SX104	M 2X	29.3	0.0	0.8	0.8	20.5	7
GREEN ACRES 3000	M 4X	29.3	0.0	2.4	6.3	24.0	8
DE KALB XL-25A	M 2X	28.4	0.0	0.8	0.8	22.1	9
LYNKS LX4220A	M 2X	26.6	0.0	1.8	0.0	23.1	13
CENEX 2106	M 2X	26.5	0.0	2.8	4.6	17.0	10
CURRY SC-1406	E 2X	26.3	0.0	5.8	0.8	20.6	14
ACCO UC3002	M 2X	26.3	0.0	4.1	0.8	24.5	15
CURTIS 464	M 2X	26.3	0.0	1.7	1.7	19.7	11
YW 3737	E 2X	26.2	0.0	5.0	1.7	19.3	12
DE KALB XL-362AA	L 3X	25.3	0.0	1.6	1.6	36.0	22
CURRY SC-1430	M 2X	25.0	0.0	2.5	0.8	25.5	18
CURRY SC-1451	M 2X	24.5	0.0	0.8	0.8	23.3	17
SDAES CHECK 9	L 2X	24.3	0.0	0.8	3.3	22.2	16
GREEN ACRES 2000	L 4X	24.3	0.0	1.6	1.6	27.3	21
PRIDE 7710	L 2X	24.0	0.0	2.6	0.9	35.1	26
CURTIS 444	M 2X	23.8	0.0	0.0	0.0	22.2	19
ASGROW RX511	E 2X	23.4	0.0	0.9	0.9	22.8	20
MIGRO HP27	M 2X	22.6	0.0	0.0	1.6	34.6	29
JACQUES JX179	M 2X	22.0	0.0	0.8	0.0	22.8	23
KALTENBURG KX68	M 2X	22.0	0.0	0.8	0.8	22.9	24
LYNKS LX4075	E 2X	21.4	0.0	0.8	3.2	21.0	25
DISCO SX-24	M 2X	21.3	0.0	0.8	2.5	28.1	30
PAYCO SX888	L 2X	21.3	0.0	6.8	0.8	24.6	27
ACCO UC4201	M 2X	21.0	0.0	0.0	0.0	25.8	28
JACQUES JX177	M 2X	20.9	0.0	2.4	0.0	33.6	36
WILSON 1400A	M 2X	20.8	0.0	1.7	2.5	25.9	31
CURRY SC-1422	M 2X	20.8	0.0	0.9	0.0	27.3	32
ACCO UC4660	M 2X	20.5	0.0	1.7	0.0	26.0	33
PRIDE 7715	L 2X	20.0	0.0	1.7	0.8	34.8	42
FONTANELLE 420	M 2X	20.0	0.0	0.0	0.8	26.8	34
LYNKS LX4305	L 2X	19.5	0.0	0.0	0.0	34.4	47
DISCO SX-18	M 2X	19.0	0.0	2.5	3.4	22.9	35
KELTGEN KS103	M M2X	18.9	0.0	0.8	0.8	24.4	38
TROJAN T 1069	M M2X	18.8	0.0	0.8	2.5	23.7	37
WILSON 1800	L 2X	18.7	0.0	0.0	0.8	36.2	53
TOP FARM SX104A	M 2X	18.7	0.0	0.0	0.0	25.3	40
DE KALB XL-32A	M 2X	18.5	0.0	0.0	1.7	24.8	41
CENEX 2119	E 2X	18.5	0.0	1.7	2.5	23.5	39
CURRY SC-1411	E 2X	18.2	0.0	1.7	1.7	28.3	48
PRIDE 5578	M 2X	18.2	0.0	0.0	0.0	26.4	44
MIGRO HP 47	L 2X	17.7	0.0	0.0	0.0	26.6	49
KALTENBURG KX61	M 2X	17.5	0.0	2.5	0.0	25.3	50
PRIDE 4488	M 2X	17.5	0.0	0.8	0.0	22.9	45
MIGRO HP23	M 2X	17.4	0.0	0.0	0.8	22.2	43
CENEX 2157	M 2X	17.3	0.0	5.1	0.0	24.6	51
ASGROW RX40	E M2X	17.2	0.0	1.8	0.0	21.4	46
FONTANELLE 400	M 2X	16.6	0.0	5.2	0.0	26.2	55
NORTHRUP KING PX39	L 2X	16.5	0.0	0.0	0.0	25.0	54
CENEX 2108	M 2X	16.5	0.0	10.9	1.8	24.1	56
KALTENBURG KX58	M 2X	16.3	0.0	0.0	1.8	27.0	57
SDAES CHECK 4	M 2X	16.0	0.0	0.8	0.0	20.5	52
CARGILL 924	M 2X	15.8	0.0	1.7	0.0	32.8	62
KELTGEN KT105	M 2X	15.4	0.0	0.9	0.0	30.0	61
TOP FARM SX103	M 2X	15.3	0.0	0.0	0.8	29.1	59
MIGRO HP 419	L 3X	15.0	0.0	0.8	0.8	30.4	64

Table 14. (continued)

BRAND AND VARIETY	TYPE AND CROSS	YIELD B/A	PCT ROOT LODGED	PCT STALK LODGED	PCT EARS DROPPED	PERCENT MOISTURE	PERFORMANCE SCORE RATING
KELTGEN KS106	M 2X	14.8	0.0	0.8	0.8	29.5	63
CURRY SC-1424	M 2X	14.6	0.0	0.9	0.9	25.7	60
SDAES CHECK 10	M 2X	14.5	0.0	0.0	2.5	20.8	58
LYNKS LX4100	E 2X	13.9	0.0	2.6	0.0	26.7	66
MIGRO SPX 34	L 2X	13.8	0.0	3.2	0.0	31.5	68
KELTGEN KS109	M M2X	13.5	0.0	0.8	0.8	31.1	69
YW 3838	E 2X	13.5	0.0	2.6	0.9	27.1	67
PAYCO SX808	L 2X	13.0	0.0	1.6	1.6	21.9	65
KELTGEN KS102	M 2X	12.8	0.0	6.7	1.7	29.6	71
KELTGEN KS115	L 2X	12.8	0.0	0.0	0.0	37.6	73
MIGRO M 2022X	M 2X	12.5	0.0	0.0	0.0	33.2	72
YW 6060	M 2X	11.7	0.0	0.0	0.8	26.0	70
TROJAN T 1120	L 2X	11.3	0.0	1.7	0.0	30.6	74
JACQUES JX180	L 2X	11.1	0.0	4.2	1.7	46.7	78
CURRY SC-1455	M 2X	10.3	0.0	2.5	0.0	34.5	75
MIGRO SPX 49	L 2X	9.3	0.0	0.0	0.0	36.5	77
SDAES CHECK 2	M 2X	8.1	0.0	3.4	0.0	28.8	76
TROJAN T 1110	L 2X	5.8	0.0	2.4	0.8	48.1	79
Means		20.1		1.7		27.1	
LSD (.05)		15.8			C.V. =	56.6%	

Drouth severly limited growth of most hybrids; many produced only nubbins

Table 15. Area C2 2-, 3-, and 4-year yield, moisture and stalk lodging averages of corn hybrids, 1977-1980.

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
ACCO UC 4201			42			17			27
ASGROW RX 40			39			3			16
CARGILL 924			37			2			29
CENEX 2119			43			3			19
CENEX 2157		71	41		6	4		19	20
CURRY SC-1422			46			2			25
CURRY SC-1451			46			0			21
CURRY SC-1455			37			3			28
DE KALB XL-25A			46			1			19
DE KALB XL-32A			45			0			23
DE KALB XL-362AA			53			1			33
DISCO SX-24		63	43		2	2		23	26
JACQUES JX180			32			3			40
LYNKS LX4220A			48			2			21
LYNKS LX4305			43			1			28
NORTHRUP-KING PX 69A			47			1			27
PAYCO SX 844		65	50		1	0		20	21
PRIDE 557B		68	40		5	3		20	22
PRIDE 7710			45			2			35
PRIDE 7715	74	64	40	2	1	2	29	30	33
SDAES CHECK 2	62	50	36	7	5	4	19	18	22
TOP FARM SX 104A			46			0			22
TROJAN T 1120		64	41		2	1		25	28

Table 16. Listing of the hybrid corn entries and the tables where the results appear.

Company and Brand	Variety	Tables
Cargill, Inc.	436	7,9,12
PO Box 9300-Dept. 16	834	6,7,9,12
Minneapolis, MN 55440	838	12,13
"Cargill	862	7,9,12
	872	7,10
	924	14,15
DeKalb AgResearch, Inc.	XL-13	6,7,12
Sycamore Road	XL-14AA	6,7,9,12
DeKalb, IL 60115	XL-15	9,11
"DeKalb"	XL-18	7,9,12
	XL-25A	6,7,8,9,10,11,12,13,14,15
	XL-32A	14,15
	XL-362AA	14,15
Disco Seeds	SX16AA	7,10,12,13
PO Box 640	SX18	14
Mitchell, SD 57301	SX24	7,10,12,13,14
"Disco"		
Green Acres	2000	14
Hartington, NB 68739	3000	14
"Green Acres"	2X+	14
Wilson Hybrids	1400A	14
Box 391	1800	14
Harlan, IA 51537		
Northrup King Co.	PX 37	7,9,10,11,12,13
PO Box 959	PX 39	7,9,12,14
Minneapolis, MN 55440	PX 49	7,9,10,11,12,13
"NK"	PX 59	7,14
	PX 69A	14,15
	PX 449	9,12
Clay Co. Seed Co.	444	14
Vermillion, SD 57069	464	14
"Curtiss"		
Sokota Hybrids	420	6,7,9,12
PO Box 250	450	6,7,9,12
Brookings, SD 57006	TS-44	7,10
"Sokota"	TS-58	6,8,9,11,12,13
	TS-60	6,7,10,12,13
	TS-62A	6,7,9,10,11,12,13
	SS-67	9,11,12,13
Asgrow Seed Co.	RX 40	6,8,9,12,13,14,15
7000 Portage Road	RX 511	6,7,9,12,14
Kalamazoo, MI 49001		
Curry Seed Co.	SC-1406	6,7,14
PO box 517	SC-1411	6,9,12,14
Elk Point, SD 57025	SC-1414	7
"Curry"	SC-1421	7,10
	SC-1422	9,11,12,14,15
	SC-1424	6,7,9,11,12,13,14
	SC-1430	7,14
	SC-1451	14,15
	SC-1455	9,12,14,15
McCurdy Seed Co.	37	7,10,12,13
Fremont, IA 52561	46	12,13
"McCurdy"	4436	12
	4664	7,12
	4855	7,12
	5225	7
	5572	7
	5590	7,10,12,13
	79-56	12
P-A-G Seeds	529	7,9,12
PO Box 9480-Dept. 16	SX181	6,7,9,12
Minneapolis, MN 55440	SX189	6,7,9,12,13
"P-A-G"	SX397	12,13
Kings Western Seeds	KX-35	6,8
205 Wyoming Ave., SW	KX-52	7,9,14
Huron, SD 57350	KX-55	9,11,12
"Western"	KX-60	7
O's Gold Seed Co.	SX 1005	12
PO Box 460	SX 6880	7
Parkersburg, IA 50665		
Pfizer Genetics, Inc.	TXS 94	6,8
PO Box 166	TXS 99	6,8,9
Olivia, MN 56277	TXS 102	7,9,10,11,12,13
"Trojan"	TXS 103	6,8,9
	T 1058	7,10,12
	T 1069	7,12,14
	T 1110	14
	T 1120	14,15
Pride Co. Inc.	3310	6,12
PO Box 8	3320	6,8,9
Glen Haven, WI 53810	4440	6,7,12
"Pride"	4488	7,9,10,11,12,13
	5578	7,9,10,12,13,14,15
	7710	14,15
	7715	14,15

Table 16 (Cont'd)

Company and Brand	Variety	Tables
ACCO Seeds	UC 1905	14,15
PO Box 9	UC 2951	6,8
Belmond, IA 50421	UC 2981	6,7,12
"ACCO"	UC 3002	6,7,8,10,12,13,14
	UC 4201	14,15
	UC 4660	14
Fontanelle Hybrids	330	6
Nickerson, NB 68044	400	14
"Fontanelle"	420	14
Payco Seeds	SX 637	6,7,9,11,12,13
PO Box 70	SX 680	6,8,9,11
Dassel, MN 55325	SX 756	7,9,10,11,12,13
"Payco"	SX 775	7,10
	SX 808	14
	SX 844	7,10,12,13,14,15
	SX 888	7,12,14
Funks Seeds, Intl.	G-4065	9
PO Box 2911	G-4141A	12,13
Bloomington, IL 61701	G-4143	7,12
"Funks"	G-4195	9,11
	G-4224	7,12,13
	G-4256	7,9
	G-4323	7,10
YW Hybrids	YW 3737	14
Box 185	YW 3838	14
Grand Junction, IA 50107	YW 6060	14
Cenex Seeds	2093	6
PO Box 43089	2106	6,7,9,12,14
St. Paul, MN 55164	2108	7,12,14
"Cenex"	2119	6,7,8,9,10,11,12,13,14,15
	2157	7,10,14,15
	3123	9,11
Kaltenburg Seeds	KX 55	6
RR #2	KX 58	6,7,8,10
Waunakee, WI 53597	KX 61	7,14
"Kaltenburg"	KX 68	7,10,14
South Dakota	Check 2	6,7,12,13,14,15
Agricultural	Check 4	9,11,14
Experiment Station	Check 9	7,14
"SDAES"	Check 10	6,7,9,12,14
	Check 11	6,9,14

Company and Brand	Variety	Tables
Lynks Hybrids	LX 4075	6,7,14
PO Box 637	LX 4100	6,7,14
Marshalltown, IA 50158	LX 4120	6,7
"Lynks"	LX 4220A	6,7,14,15
	LX 4305	14,15
Blaney Farms, Inc.	B506wx	7
Rt. 4	B507	7,10
Madison, WI 53711	B605wx	7,10
"Blaney"	B606	7,10
Jacques Seed Co.	JX 52	6,8,9,11
720 St. Croix St.	JX 97	6,9
Prescott, WI 54021	JX 177	14
"Jacques"	JX 179	14
	JX 180	14,15
Migro Seeds	HP 16	7
PO Box 237	HP 20	7
Tekamah, NB 68061	HP 23	7,14
"Migro"	HP 27	7,14
	SPX 34	14
	HP 47	14
	SPX 49	14
	SPX 305	7
	HP 419	14
	M2022 X	7,14
Sigco Research	075	6
Box 150	078	6
Breckenridge, MN 56520	085	9
"Sigco"	090	7,9,12
Keltgen Seed Co.	KS 94	6,7,12
Box 143	KS 99	6,7,9,12
Olivia, MN 56277	KS 100	6
"Keltgen"	KS 102	6,7,9,12,14
	KS 103	6,7,9,12,14
	KT 105	9,12,14
	KS 106	6,7,9,12,14
	KS 109	7,14
	KS 115	14
Top Farm Hybrids	SX 97	6,7,10
PO Box 850	SX 98	6,7
Cokato, MN 55321	SX 99	6,7
"Top Farm"	SX 100	6
	SX 101	6
	SX 103	7,9,10,12,13,14
	SX 104	7,9,12,14
	SX 104A	12,13,14,15