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1977 Corn Performance Trials

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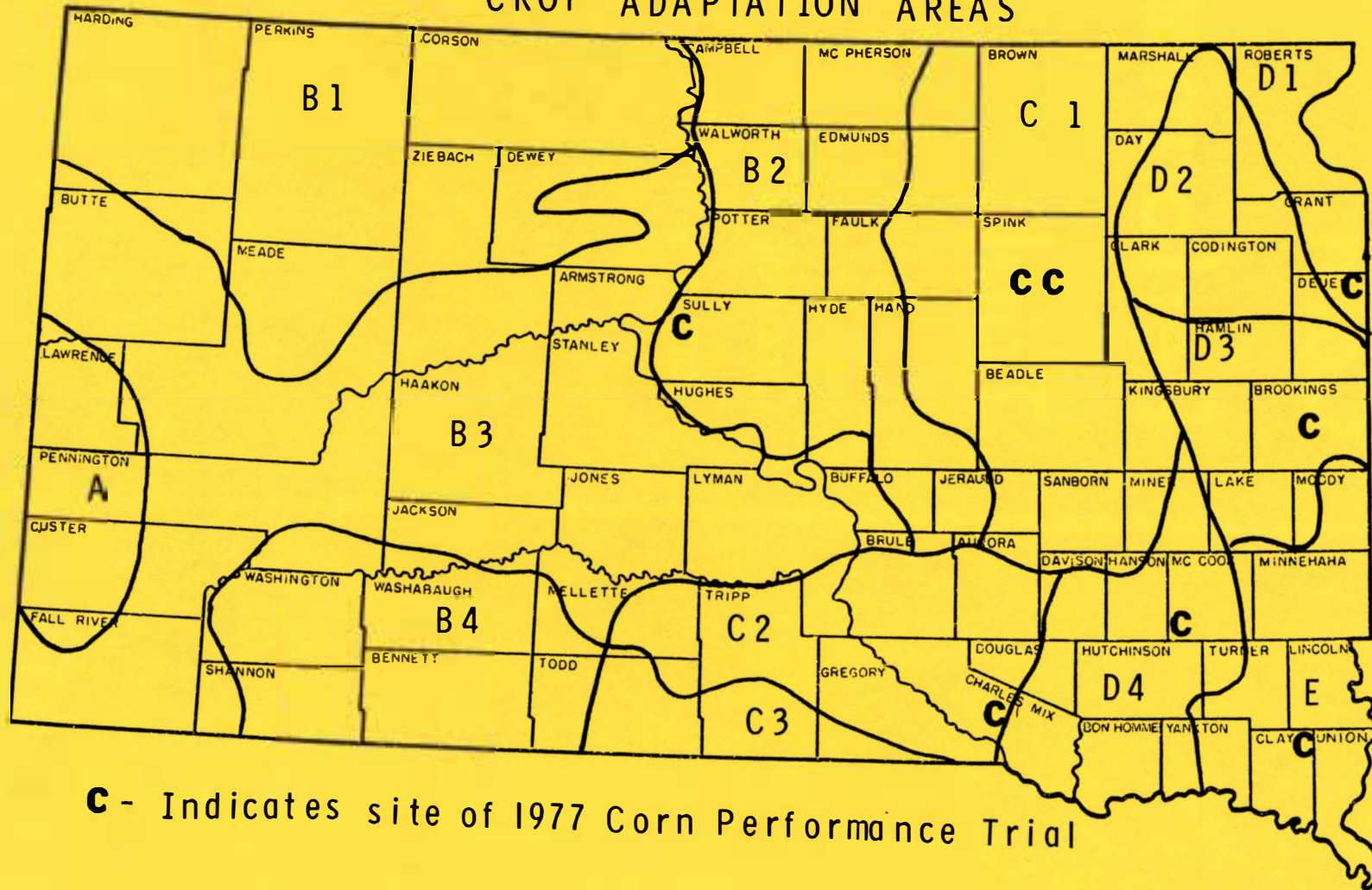


**1977
Corn
Performance
Trials**

**Circular 221
January 1978**

**Agricultural Experiment Station
South Dakota State University
Brookings**

CROP ADAPTATION AREAS



C - Indicates site of 1977 Corn Performance Trial

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1977 Corn Performance Trials

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The relative performances of corn hybrids grown in 1977 under similar environmental conditions are evaluated in this report. Information in the accompanying tables includes grain yields in bushels per acre, moisture percentage of either ear corn or shelled corn at harvest, performance scores and other related information. Records of the corn hybrids harvested in 1977 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, South Dakota State University.

Location of the 1977 Trials

Trials were located in the crop adaptation areas marked on the accompanying South Dakota map. The exact location of each trial and dates of seeding and harvesting are included in Table 1. The trial at Agar was abandoned in late August. Limited precipitation and extremely warm days in July and early August did not permit growth or pollination of most hybrids. The soil classification, laboratory analyses of soil samples taken and fertilizer applied at each site are given in Table 2.

Weather and Climatic Conditions

Climatic data (Table 3) for the 1977 corn growing season, May-October, are based upon information obtained from a U.S. Weather Bureau station reasonably near each trial. The closest stations to the Agar and Gary trials are Onida 4NW and Milbank, respectively. Stations are located at all other trial sites. Precipitation quantities would vary from the actual site to the recording station but temperatures are comparative over a much wider area and considered applicable to the trial area.

Recorded precipitation totals at all sites exceeded their seasonal averages. May precipitation was spotty and limited at most locations in the state until late in the month. Generally soil moisture at seeding was adequate for germination and growth. June moisture amounts varied widely but were adequate to maintain growth, even at the higher temperatures that hastened growth to knee-high levels by the end of June.

Corn suffered from drouth stresses in many areas during July. The larger plants required more moisture earlier in the crop year, precipitation was often limited and temperatures were above 90° F. much of July.

The assistance of the following individuals is appreciated: D. B. Shank and J. R. Jenison of the Plant Science Department; Joe Giles, Burt Lawrensen, Herb Lund, Robert Morris, Delbert Robbins and Lucuan Edler of the stations; and cooperators William Fijala, John Heaton, Clifford Hofer and Mike Mikkelsen.

Table 1. Location of the 1977 Corn Performance Trials.

Area	County	Location	Post Office	Dates	
				Seeded	Harvested
B2	Sully	M. Mikkelson Farm, 7W, 1N	Agar	May 11	-----
C1-dry	Spink	James Valley Res. Farm, 6E	Redfield	May 25	Nov. 4
C1-irr.	Spink	James Valley Res. Farm, 6E	Redfield	May 25	Nov. 3
C2	Charles Mix	Wm. Fijala Farm, 2E, 1N	Geddes	May 12	Oct. 17
D1	Deuel	John Heaton Farm, 1W, 8N	Gary	May 10	Oct. 12
D3	Brookings	Plant Science Farms, 2NE	Brookings	May 11	Oct. 24
D4	McCook	Clifford Hofer Farm, 1S	Bridgewater	May 9	Oct. 6
E	Clay	SE Experiment Farm, 7W, 3S	Beresford	May 16	Oct. 20

Precipitation was limited also in early August but temperatures were well below normal much of the month and eased the demand for moisture. Temperatures remained below normal at most sites during the rest of the crop season and the lack of heat units slowed plant growth. Precipitation was quite adequate during September and October. The cooler temperatures from mid-August to harvest permitted good to excellent growth with the moisture available and above average yields were quite common; especially for varieties that missed the extreme heat and high-velocity drying winds during the crucial stages of tasseling and pollination.

The timeliness of precipitation and cooler, often cloudy conditions the later part of the growing season contributed to the success of the trials. The trial at Redfield that was to be irrigated received only one irrigation, 3 inches in early July, because of limited flow in the river used as the farm water source.

The cloudy, cooler conditions that contributed to the higher yields also caused delays in harvesting as the crop, generally physiologically mature in late September, did not dry down to acceptable moisture levels for harvest until mid-October. Lodging or stalk breakage occurred in limited amounts as the stalks remained green at many sites until harvest.

The growing season was longer than usual as the last killing frosts in the spring occurred in late April. Seeding was done after May 9 and escaped any killing spring frosts. The quality of the crop was generally good because most corn hybrids had reached physiological maturity well before fall freezing temperatures occurred.

Table 2. Laboratory analyses, soil classification and fertilizer applied to the 1977 corn performance trial fields.

Area	Soil Classification	% O.M.	P K		pH	Preparation or method	lb/A		
			lb/A				N	P	K
B2	Agar SiCl	2.6	39	990	6.8	Spring plowed and disced(alf)	0	0	0
C1-dry	Beotia SiCl	2.8	44	900	7.9	Plowed, chiseled & disced	40	0	0
C1-irr.	Beotia SiCl	3.3	106	1000+	7.5	Plowed, chiseled & disced	100	0	0
C2	Highmore SiCl	3.0	12	910	6.3	Plowed and disced (sorghum)	0	0	0
D1	Forman SiL	3.3	47	590	7.5	Plowed and disced (oats)	0	0	0
D4	Clarno SiCl	2.7	26	810	6.5	Plowed and disced (soybeans)	60	0	0
E	Egan SiCl	3.8	97	1000	7.0	Plowed and disced (sm. gr)	80	40	0

Hybrid Entry Procedure

Hybrids entered are submitted by participating commercial concerns 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 25, 1977, were eligible to be entered. A fee was charged for each entry in each area except for hybrids included by Agricultural Experiment Station personnel. Either closed or open pedigree hybrids were eligible and each was allowed to be entered once in each adaptation area. No more than seven entries from one concern were accepted for each location. A listing of the firms, with brands and varieties entered, is presented in Table 17.

In prior years check entries used were released hybrids of the South Dakota Agricultural Experiment Station. A change was made in 1975 to include hybrids made up of released inbreds commonly used by the industry. Several of these were included in each trial as Check 1, 4, 7, etc. The identities are as follows:

Check 1	B73 x Mo17HT	Check 6	(W64Ht x W117Ht)(W153R x A632Ht)
Check 2	A632Ht x A619Ht	Check 7	(A641 x A635)(W153R)
Check 3	W153R x A632Ht	Check 8	A632Ht x C0109
Check 4	W64Ht x W117Ht		

Seed of the check hybrids was secured from Clyde Black & Sons, Inc., Ames, Iowa.

Several experimental hybrids have been included by Agricultural Experiment Station personnel for several years and have shown promise. The pedigrees of the hybrids included over a period of years are listed below:

SDAES Ex 102 (W117 x SD25)	SDAES Ex 204A (SDP236mxSDP309)(A632)
SDAES Ex 103 (SD25 x A632)	SDAES Ex 209 (SDP232xSDP2A)(CM169)
SDAES Ex 105 (SD22 x A632)	SDAES Ex 210 (SDP236mxSDP2A)(CM169)
SDAES Ex 107 (A632x6A4E4A)	SDAES Ex 211 (W64A x 534-213)
SDAES Ex 147 (SD10xA632)(SDP232xSDP2)	SDAES Ex 212 (W64A x 538-224)
SDAES Ex 199 (SDP236mxSDP2)(A632)	SEAES Ex 213 (A619 x 538-224)

Experimental Procedure

The entries included in each trial were seeded in four or more replications. 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 insecticide used in past years. A recommended short-residue preemergence herbicide was banded over the row at seeding at all but one site. Atrazine was sprayed over the entire plot area at Brookings for grassy weed control.

The trials were seeded as drilled corn using 3l-cell cone seeders mounted above commercial flexi-planter units with double disc openers. The planting rate was 15% more kernels than the number of plants desired. Plots were thinned to the desired stands when necessary. The stands of most trials were intended to be less in 1977 than 1976 because of known deficits of sub-soil moisture due to the general drought over much of the state during 1975 and 1976. The reduction in numbers was most beneficial during the early part of the growing season. No significant differences could be noted when the two populations (Table 4) of the same hybrids were included in the trials.

Table 4. Field methods for the 1977 corn trial sites

Area	Table No.	Number of Replications Harvested	Method of Seeding	Population Obtained	Row		
					Number of	Width, inches	Length, feet
B2	--	--	hand	11,200	1	38	36
C1-dry	13	5	drilled	9,615	1	36	36
C1-irr.	9	3	drilled	15,250	1	36	32
C1-irr.	9	3	drilled	17,730	1	36	32
C2	11	4	drilled	11,040	1	40	37
D1	6	2	drilled	10,825	1	38	36
D1	6	2	drilled	13,075	1	38	36
D3	7	2	drilled	11,060	1	36	32
D3	7	2	drilled	14,460	1	36	32
D4	12	3	drilled	12,730	1	38	36
D4	12	3	drilled	16,480	1	38	36
E	16	2	drilled	13,615	1	36	32
E	16	2	drilled	16,805	1	36	32

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 variations at Bridgewater were higher than desired in 1977 but the remaining trials were within acceptable statistical limits (5-15%).

To convert data in these tables to the metric system of kilograms or quintals per hectare use the following methods:

- I - 1 bu. #2 shelled corn = 54 lb.; 1 lb. = .454 kilograms; 1 hectare = 2.471 acres
so: $54 \times .454 \times 2.471 = 60.6 \times B/A = \text{kilograms per hectare}$
- II - or assuming a yield of 60.3 B/A from the tables
Step 1 = $60.3 B/A \times 54 \text{ lb/B} = 3258 \text{ lb/acre}$
Step 2 = $3258 \text{ lb/acre} \times 1.121 = 3652 \text{ kilograms/hectare or } 36.5 \text{ quintals/hectare}$

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 (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 evaluation of the entries.

Some varieties began dropping ears in late September before any harvesting was considered. High winds coupled with early maturity were the primary cause. No effort was made to include these ears as it is a penalty of machine harvesting in commercial operations.

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. To the cash grain operator who does not turn livestock into his fields after harvest the better stalks stand so that the ears will go through

Table 5. Harvest methods and moisture determinations for the 1977 corn trials.

Area	Harvest method	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
D2	Picker-sheller	Shelled corn	Electronically
D3	Picker-sheller	Shelled corn	Electronically
D4	Picker-sheller	Shelled corn	Electronically
E	Picker-sheller	Shelled corn	Electronically

his harvesting machinery, the higher will be his return per acre. Because of the importance of the three factors--yield, dry mater 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 of 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 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 higher 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.

In choosing a hybrid, first check those yielding 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. 1977 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
SOKOTA TS-64	2X	108.7	0.0	2.6	0.0	29.0	3
SOKOTA TS-67	2X	105.7	0.0	1.9	0.0	25.1	2
SDAES CHECK =3	2X	103.2	0.0	2.6	0.0	19.7	1
PRIDE 3388	2X	102.7	0.0	2.0	0.0	24.5	7
PAYCO SX 775	2X	102.1	0.0	0.6	0.0	23.2	5
SDAES EX 105	2X	100.9	0.0	0.6	0.0	21.9	6
TROJAN TXS 99	2X	100.5	0.0	0.6	0.0	20.9	4
FUNKS G-4321	2X	99.0	0.0	0.6	0.0	24.3	11
PAYCO SX 865	2X	98.4	0.0	0.7	0.0	24.7	13
TROJAN TXS 94	2X	98.2	0.0	2.5	0.0	22.7	10
SOKOTA SS-51	M2X	97.7	0.0	1.9	0.0	21.3	8
TROJAN TXS 102	2X	97.1	0.0	1.9	0.0	24.2	15
SDAES EX 103	2X	97.0	0.0	1.2	0.0	21.5	9
PAYCO SX 680	2X	95.5	0.0	0.0	0.0	22.5	14
FUNKS G-4288	3X	95.3	0.0	3.2	0.0	23.5	16
PIONEER 3975A	M2X	94.2	0.0	0.0	0.0	19.5	12
KALTENBURG KX 68	2X	93.4	1.4	0.0	0.0	24.7	21
PRIDE 3315	2X	92.3	0.0	0.0	0.0	21.7	18
PRIDE 2206	2X	92.0	0.0	0.7	0.0	20.4	17
FUNKS G-4275	3X	91.9	0.0	2.7	0.0	21.8	20
PAYCO 3X 811	3X	91.7	0.0	0.0	0.0	25.9	24
SDAES CHECK =4	2X	90.5	0.0	4.0	0.0	21.9	23
FUNKS G-4141	2X	89.9	0.0	0.0	0.0	19.4	19
SDAES EX 102	2X	88.8	0.0	0.0	0.0	19.6	22
MASTER FARMER MF 94	2X	88.3	0.0	1.3	0.0	22.4	25
MASTER FARMER MF 100	3X	88.2	0.0	0.7	0.0	22.7	26
ACCO UC 1901	2X	86.6	1.4	3.5	0.0	21.1	27
FUNKS G-4180	3X	85.0	0.0	2.5	0.0	20.7	28
SDAES EX 147	4X	84.2	4.8	2.0	0.0	20.5	29
SDAES EX 199	3X	83.6	0.0	0.7	0.0	20.6	30
MASTER FARMER MF 92	3X	82.9	2.7	2.7	0.0	20.2	31
FUNKS G-4195	3X	82.4	2.1	6.4	0.0	20.3	32
KALTENBURG KX 43	2X	82.3	0.0	2.8	0.0	21.8	33
ACCO UC 3301	2X	79.7	0.0	1.2	0.0	25.5	37
PIONEER 3978	2X	76.2	0.0	1.3	0.0	19.4	34
FUNKS G-4085	3X	75.6	0.0	2.0	0.0	19.0	35
SDAES CHECK =7	2X	74.4	6.0	1.3	0.0	18.0	36
MASTER FARMER MF 85	3X	65.0	0.0	2.1	0.0	18.9	38
MASTER FARMER MF 80	3X	64.0	0.0	5.4	0.0	19.1	39
Means		90.4		0.5		21.9	

LSD (.05)

19.7

CV - 15.6 %

Table 7. 1977 Corn Performance Trial, Area D3, Plant Science Farm, Brookings

BRAND AND VARIETY	TYPE AND CROSS	YIELD 8/A	PCT ROOT LODGED	PCT STALK LODGED	PCT EARS DROPPED	PERCENT MOISTURE	PERFORMANCE SCORE RATING
CENEX 2201	2X	110.3	0.0	0.0	0.0	24.5	1
O'S GOLD SX 1111	2X	109.9	0.0	0.0	0.0	24.4	2
SOKOTA TS-64	2X	109.8	0.0	5.4	0.0	26.0	5
CURRY SC-141	2X	108.3	0.0	0.0	0.0	24.3	3
KALTENBURG KX 68	2X	107.7	0.0	1.7	0.0	24.7	4
MC CURDY MSX 44A	2X	107.5	0.0	3.7	0.0	24.3	6
ACCO UC 3301A	2X	105.8	0.9	2.8	0.0	27.2	14
SDAES EX 211	2X	105.7	0.0	5.3	0.0	24.4	9
SDAES EX 105	2X	104.4	0.0	9.8	0.0	21.9	11
MC CURDY MSP 111	3X	104.0	0.0	3.5	0.0	21.5	7
ASGROW RX 2345	2X	103.8	0.0	3.4	0.0	21.4	8
SDAES EX 107	2X	103.5	0.0	1.7	0.0	23.3	10
CARGILL 838	M2X	101.4	0.0	2.8	0.0	21.9	12
TOP FARM SX 100	2X	101.2	0.0	1.8	0.0	22.0	13
PIONEER 3709	M2X	101.1	0.0	3.6	0.0	22.2	17
SOKOTA SS-51	M2X	100.6	0.0	3.5	0.0	21.5	16
TROJAN TXS 94	2X	100.6	0.0	1.8	0.0	21.9	15
MC CURDY 76-14	2X	100.6	0.0	5.4	0.0	22.6	20
NORTHRUP-KING PX 26	2X	100.3	0.0	0.9	0.0	22.2	18
TROJAN TXS 102	2X	99.9	0.0	4.5	0.0	25.3	31
CURRY SC-141-2	2X	99.8	0.0	0.9	0.0	23.9	21
PAYCO SX 775	2X	99.2	0.0	1.8	0.0	23.5	25
PRIDE 4488	2X	99.1	0.0	2.7	0.0	22.8	23
CARGILL 863	M2X	98.8	0.0	1.8	0.0	23.3	26
O'S GOLD SX 949	2X	98.6	0.0	0.0	0.0	21.0	19
FUNKS G-4444A	2X	98.6	0.0	4.3	0.0	25.4	42
MC CURDY 73-91	3X	98.6	0.0	1.8	0.0	25.4	37
ACCO UC 3002	2X	98.3	0.0	0.0	0.0	24.5	28
PRIDE 4417	2X	98.0	0.0	0.0	0.0	22.6	24
P-A-G SX 189	2X	98.0	0.0	0.0	0.0	23.6	27
CENEX 3139A	3X	97.9	0.0	0.0	0.0	24.5	30
MC CURDY MSX 42	2X	97.7	0.0	3.5	0.0	25.7	43
SDAES EX 212	2X	97.7	0.0	1.8	0.0	23.9	33
ACCO UC 3301	2X	96.9	0.0	4.5	0.0	26.0	47
ASGROW RX 40	2X	96.4	0.0	0.9	0.0	20.0	22
CENEX 2155	2X	95.9	0.0	0.9	0.0	24.9	45
SDAES EX 204A	M2X	95.9	0.0	0.9	0.0	22.3	35
SOKOTA TS-44	2X	95.6	0.0	2.7	0.0	21.4	34
FUNKS G-4321	2X	95.4	0.0	5.2	0.0	23.4	46
TOP FARM SX 97	2X	95.3	0.0	2.7	0.0	21.7	39
NORTHRUP-KING PX 46	2X	95.3	0.0	1.8	0.0	23.8	44
SDAES CHECK =4	2X	95.2	0.0	0.9	0.0	22.0	38
TROJAN TXS 99	2X	95.0	0.0	0.9	0.0	20.8	29
ASGROW RX 2222	2X	94.9	0.9	1.8	0.0	20.5	32
SOKOTA TS-49	2X	94.8	0.0	0.9	0.0	21.8	41
DISCO SX 98	2X	94.5	0.0	0.0	0.0	21.3	36
O'S GOLD SX 1100	2X	94.3	0.0	2.7	0.0	24.9	50
PIONEER 3710	2X	93.8	0.0	0.0	0.0	20.8	40
P-A-G SX 210	2X	93.4	0.0	3.8	0.0	23.3	49
PAYCO SX 680	2X	92.4	0.0	2.8	0.0	21.9	48
NORTHRUP-KING PX 48	2X	91.8	0.0	4.4	0.0	25.6	60
PAYCO SX 865	2X	91.7	0.0	1.8	0.0	25.3	57
FUNKS G-4288	3X	91.2	1.8	6.4	0.0	24.7	62
MC CURDY MSX 46	2X	90.7	0.9	0.9	0.0	23.8	55
NORTHRUP-KING PX 32	2X	90.5	0.0	0.0	0.0	22.0	51
PAYCO 3X 811	2X	89.8	0.0	1.7	0.0	23.1	58
SDAES EX 199	3X	89.7	0.0	2.7	0.0	20.5	52
TOP FARM SX 106	2X	89.7	0.0	1.8	0.0	22.0	54
FUNKS G-4272	3X	88.8	0.0	1.8	0.0	21.8	56
NORTHRUP-KING PX 585	3X	88.7	0.0	2.7	0.0	23.3	63
FUNKS G-4195	3X	88.3	0.9	6.1	0.0	19.9	59

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
PIONEER 3975A	M2X	86.5	0.0	0.9	0.0	18.6	53
MASTER FARMER MF 94	2X	85.9	0.0	1.8	0.0	21.3	64
P-A-G 534	3X	85.8	0.0	2.6	0.0	23.7	69
PRIDE 3315	2X	85.4	0.0	0.0	0.0	20.1	61
P-A-G SX 177	2X	84.7	0.0	3.6	0.0	21.9	68
FUNKS G-4180	3X	83.9	0.0	1.7	0.0	20.7	65
TOP FARM SX 95	M2X	83.2	0.0	3.6	0.0	19.7	66
MASTER FARMER MF 92	3X	83.2	0.0	1.8	0.0	20.5	67
SDAES EX 213	2X	81.9	0.0	3.6	0.0	24.9	73
SDAES CHECK =3	2X	81.2	0.0	4.4	0.0	19.0	71
SDAES EX 147	4X	80.1	0.0	5.4	0.0	19.2	72
CARGILL 810	M2X	79.8	0.0	0.9	0.0	17.7	70
SDAES CHECK =7	2X	74.3	0.0	0.9	0.0	16.9	74
SOKOTA TS-46	2X	74.3	0.0	3.6	0.0	21.3	76
MASTER FARMER MF 85	3X	71.7	0.0	0.9	0.0	18.3	75
Mean		94.7		2.4		22.6	
LSD (.05)		11.4				CV - 10.9%	

Table 8. Area D3 2-, 3-, and 4-year yield, moisture and stalk lodging averages of corn hybrids, 1974-1977

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 3301	76	86	81	5	7	9	25	26	25
ASGROW RX2222			82			2			19
ASGROW RX2345			85			7			20
CARGILL 863	74	83	78	3	3	4	22	24	21
CHECK =3		73	76		4	5		19	18
CHECK =4		81	81		2	2		21	20
CHECK =7		61	63		1	1		16	16
DISCO SX-98			79			2			19
FUNKS G-4180	65	72	73	1	1	2	18	19	18
FUNKS G-4195			69			9			18
FUNKS G-4288	71	80	75	5	7	10	22	24	23
FUNKS G-4321			79			4			22
FUNKS G-4444A			80			4			24
KALTENBURG KX 68			77			1			24
MC CURDY MSX 111			82			5			20
MC CURDY MSX 42		80	77		2	3		25	23
MC CURDY MSX 44A	77	87	83	3	4	5	23	25	23
MC CURDY MSX 46	67	74	73	1	1	2	23	25	22
C'S GOLD SX 1100	76	82	79	3	3	4	23	25	23
L'S GOLD SX949			80			1			19
P-A-G SX 210		78	76		4	5		25	22
P-A-G 534			68			10			22
PAYCO SX 680	72	79	78	1	1	2	19	21	20
PAYCO SX 775	74	81	80	2	2	2	22	24	22
PAYCO SX 865	73	80	77	4	4	6	24	26	24
PAYCO 3X 811			72			2			22
PICNEER 3710			82			3			20
SOKOTA SS-51	76	84	78	3	4	4	20	21	19
SOKOTA TS-49	70	77	79	0	0	1	19	21	20
TROJAN TXS 102		87	81		3	4		25	23
TROJAN TXS 94	64	68	76	1	1	2	17	18	19
TROJAN TXS 99		80	81		1	2		20	19

Table 9. 1977 Corn Performance Trial, Area C1(irrigated), James Valley Research Center, Redfield

BRAND AND VARIETY	TYPE AND CROSS	YIELD B/A	PCT ROOT LODGED	PCT STALK LODGED	PCT EARS DROPPED	PERCENT MOISTURE	PERFORMANCE SCORE RATING
SOKOTA TS-67	2X	129.8	0.0	3.4	0.0	24.0	1
ACCO UX 3301A	2X	123.9	0.0	5.6	0.0	24.8	4
SOKOTA SS-67	M2X	121.8	0.0	5.0	0.0	23.2	5
PIONEER 3710	2X	121.5	0.0	1.7	0.0	21.4	2
TROJAN TXS 102	2X	119.2	0.0	5.9	0.0	23.5	7
ASGROW RX 40	2X	118.5	0.0	2.4	0.0	18.1	3
SDAES EX 107	2X	117.2	0.0	6.2	0.0	21.5	8
MC CURDY MSX 44A	2X	116.7	0.0	4.0	0.0	23.5	13
NORTHRUP-KING PX 46	2X	116.5	0.0	2.7	0.0	21.7	6
CENEX 2155	2X	115.8	0.0	4.2	0.0	24.4	20
PRIDE 4488	2X	115.8	0.0	0.9	0.0	22.2	10
ACCO UC 3301	2X	115.4	0.0	7.1	0.0	24.3	25
P-A-G SX 189	2X	115.3	0.0	3.1	0.0	21.9	11
PIONEER 3709	M2X	115.2	0.0	0.9	0.0	23.0	12
PIONEER 3780	2X	115.1	0.0	1.3	0.0	21.1	9
CARGILL 838	M2X	113.9	0.0	6.6	0.0	21.0	16
CURRY SC-142	2X	113.6	0.0	3.5	0.0	23.5	23
SDAES EX 105	2X	113.2	4.7	11.2	0.0	19.7	21
SOKOTA TS-44	2X	113.2	0.0	6.1	0.0	20.2	15
FUNKS G-4444A	2X	112.7	0.0	2.5	0.0	22.7	22
MC CURDY MSP 111	3X	112.6	0.0	2.2	0.0	20.5	14
P-A-G SX 177	2X	111.6	0.0	2.8	0.0	20.1	17
ASGROW RX 2222	2X	111.6	0.0	3.9	0.0	20.0	19
MASTER FARMER MF 94	2X	110.9	0.0	1.9	0.0	21.5	26
TROJAN 105A	2X	110.8	0.0	3.5	0.0	21.4	28
PAYCO SX 775	2X	110.8	0.0	3.1	0.0	21.7	30
NORTHRUP-KING PX 26	2X	110.4	0.0	2.9	0.0	21.8	31
SOKOTA SS-51	M2X	110.3	0.0	1.3	0.0	19.3	18
O'S GOLD SX1100	2X	109.8	0.0	3.0	0.0	21.9	32
MC CURDY MSX 46	2X	109.3	0.0	2.8	0.0	23.7	38
PRIDE 3315	2X	109.1	0.0	1.4	0.0	19.6	24
SDAES CHECK =3	2X	109.0	0.0	2.2	0.0	19.8	27
FUNKS G-4321	2X	108.9	0.0	3.1	0.0	21.8	35
SDAES CHECK =2	2X	108.8	0.0	5.1	0.0	23.7	42
FUNKS G-4272	3X	108.5	0.0	6.3	0.0	20.8	37
PAYCO SX 680	2X	107.7	0.0	1.4	0.0	20.5	33
O'S GOLD SX1111	2X	107.7	0.0	0.9	0.0	23.9	41
ASGROW RX 2345	2X	107.3	0.0	9.8	0.0	20.4	40
PIONEER 3975A	M2X	106.9	0.0	1.0	0.0	18.3	29
TOP FARM SX 106	2X	106.4	0.0	2.4	0.0	21.0	39
DISCO SX 9B	2X	106.0	0.0	0.9	0.0	20.1	36
MASTER FARMER MF 105	2X	106.0	0.0	6.8	0.0	22.9	49
ACCO UC 2901	2X	105.7	0.0	9.7	0.0	21.2	45
PRIDE 4417	2X	105.2	0.0	1.7	0.0	21.2	43
NORTHRUP-KING PX 20	2X	105.1	0.0	2.7	0.0	17.6	34
NORTHRUP-KING PX 32	2X	105.0	0.0	4.5	0.0	21.3	44
SOKOTA TS-64	2X	104.9	0.0	4.0	0.0	24.9	51
CENEX 2201	2X	102.7	0.0	1.4	0.0	24.9	52
TROJAN TXS 94	2X	102.3	0.0	1.3	0.0	20.7	46
ACCO UX 3002	2X	102.3	0.0	5.4	0.0	23.3	53
MC CURDY 76-14	2X	101.8	0.5	6.4	0.0	20.8	50
MASTER FARMER MF 92	3X	101.3	0.0	4.4	0.0	18.7	47
FUNKS G-4141	2X	100.2	0.0	3.1	0.0	18.1	48
CENEX 3139A	3X	97.3	0.0	2.1	0.0	23.7	57
TOP FARM SX 110	2X	96.7	0.0	8.6	0.0	25.1	63
P-A-G SX 210	2X	96.6	0.0	15.1	0.0	21.5	61
MASTER FARMER MF 100	3X	96.2	0.0	3.2	0.0	21.9	56
PRIDE 2206	2X	95.7	0.0	2.3	0.0	17.6	54
SOKOTA TS-49	2X	93.8	0.0	3.3	0.0	21.3	59
CURRY SC-140	2X	93.5	0.0	5.3	0.0	19.8	58
CARGILL 810	M2X	93.3	0.0	7.0	0.0	17.5	55

Table 9. 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 863	M2X	93.2	0.0	9.0	0.0	21.1	62
NORTHRUP-KING PX 585	3X	92.9	0.0	3.6	0.0	24.1	64
NORTHRUP-KING PX 15	2X	89.7	0.0	3.8	0.0	18.2	60
FUNKS G-4085	3X	85.7	0.0	2.9	0.0	17.7	65
MC CURDY 76-10	2X	85.3	0.0	4.5	0.0	18.1	66
Mean		107.4		4.1		21.4	
LSD (.05)		13.9				CV - 11.4 %	

Table 10. Area C1(irrigated) 2-, 3-, and 4-year yield, moisture and stalk lodging averages of corn hybrids, 1974-1977

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 2501	100	102	93	3	4	5	20	21	21
ACCO UC 3301			98			4			26
ASGROW RX2222			91			2			20
CARGILL 863			88			5			22
CHECK =2		114	103		2	3		24	24
CHECK =3		104	98		2	1		20	20
FUNKS G-4141		94	82		1	2		18	17
FUNKS G-4321			93			2			23
FUNKS G-4444A			102			2			24
MC CURDY MSP 111			94			1			21
MC CURDY MSX 46		99	87		1	1		23	23
MC CURDY 44A	108	110	94	1	1	2	24	24	24
C'S GOLD SX1100	105	107	100	1	1	2	24	24	23
P-A-G SX 177			93			2			19
PAYCO SX 680	98	100	91	0	0	1	21	21	21
PAYCO SX 775	96	102	93	1	1	2	21	22	22
PIONEER 3710			101			1			22
PIONEER 3780	105	109	104	0	0	1	20	21	21
PRIDE 2206			79			1			18
PRIDE 3315		97	87		1	1		19	19
SDAES EX 105		114	106		4	6		20	20
SOKOTA SS-51	105	105	96	0	1	1	19	20	20
SOKOTA SS-67	102	102	97	1	2	3	24	24	24
SOKOTA TS-49	90	91	81	1	1	2	21	21	21
SOKOTA TS-67		116	110		2	2		24	24
TROJAN TXS 102		117	105		2	3		24	24
TROJAN TXS 94	102	104	93	0	1	1	20	21	20

Table 11. 1977 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
TROJAN TXS 111	2X	107.1	0.0	2.9	1.5	21.6	1
TROJAN TXS 102	2X	104.9	0.0	10.4	2.4	20.5	2
FUNKS G-4507	2X	104.2	0.0	3.3	0.0	25.9	4
PRIDE 7715	2X	103.5	0.0	3.8	3.1	26.8	5
TROJAN TXS 115A	2X	101.4	0.0	2.4	0.0	29.2	11
FUNKS G-4321	2X	101.1	0.0	15.4	2.4	20.5	6
DISCO SX 26A	2X	100.4	0.0	7.9	4.0	17.6	3
CENEX 2155	2X	99.3	0.0	14.6	0.0	20.2	8
CURRY TC-348	2X	99.1	0.0	1.6	7.0	23.3	7
FUNKS G-4445	2X	98.6	0.0	11.9	0.0	22.0	10
FUNKS G-4444A	2X	98.4	0.0	15.7	1.7	21.8	15
SOKOTA SK-79	3X	97.8	0.0	10.0	1.7	24.8	19
SDAES CHECK =2	2X	97.8	0.0	12.1	1.7	20.5	9
ACCO UC 3301	2X	97.2	0.0	13.0	4.9	21.0	13
PIONEER 3388	M2X	95.8	0.0	3.4	0.0	26.1	20
NORTHRUP-KING PX 46	2X	95.3	0.0	8.8	0.0	20.6	16
WILSON 1016	2X	95.1	0.0	25.7	2.7	18.9	21
PRIDE R-777	3X	95.0	0.0	4.7	0.0	27.6	22
TROJAN TXS 108A	M2X	94.6	0.0	3.2	7.1	21.9	17
FUNKS G-4503	2X	94.4	0.0	9.1	3.3	25.7	23
ACCO UC 3301A	2X	93.4	0.0	21.1	4.1	22.6	26
WILSON 1400	2X	93.1	0.0	4.2	0.8	18.6	12
CURRY SC-145-1	2X	91.1	0.0	6.5	2.4	17.2	18
PAYCO SX 1093	2X	89.5	0.0	4.0	0.0	26.9	30
PRIDE 4488	2X	89.4	0.0	0.8	2.5	16.0	14
NORTHRUP-KING PX 585	3X	89.2	0.0	10.4	0.0	19.7	24
NORTHRUP-KING PX 74	2X	88.1	0.0	8.1	5.1	29.2	38
SDAES CHECK =4	2X	87.3	0.0	6.9	1.5	20.5	27
ASGROW RX 58	2X	87.1	0.0	22.1	2.3	31.9	45
CENEX 2201	2X	87.0	0.0	2.8	0.0	20.1	25
SOKOTA SS-67	M2X	86.6	0.0	10.6	1.8	22.9	35
CENEX 3139A	3X	85.7	0.0	6.9	3.4	22.0	31
NORTHRUP-KING PX 48	2X	85.3	0.0	24.1	2.7	25.0	44
PIONEER 3709	M2X	85.1	0.0	4.2	0.0	19.3	28
SOKOTA TS-74	2X	84.8	0.0	3.5	0.9	23.7	36
DISCO SX 30	2X	84.4	0.0	7.2	4.0	27.6	42
NORTHRUP-KING PX 606	3X	84.0	0.0	4.0	4.0	26.2	40
PAYCO 3X 811	3X	83.3	0.0	4.0	0.0	24.6	37
FUNKS G-4449	2X	82.8	0.0	9.0	0.8	34.1	46
ASGROW RX 61A	2X	81.6	0.0	2.6	0.9	18.8	32
MASTER FARMER MF 92	3X	81.5	0.0	16.5	4.7	13.9	34
ASGROW RX 2345	2X	80.8	0.0	6.2	0.9	14.7	29
SDAES CHECK =3	2X	79.6	0.0	9.9	4.1	13.9	33
SDAES EX 199	3X	76.1	0.0	7.5	0.0	15.3	41
SDAES EX 147	4X	74.4	0.0	8.6	0.0	12.2	39
SDAES EX 210	3X	72.7	0.0	13.8	0.0	11.9	43
CENEX 3138	3X	65.8	0.0	11.7	0.9	20.8	48
SDAES EX 209	3X	65.7	0.0	17.1	0.9	12.9	47
Mean		89.9		9.0		21.6	
LSD (.05)		12.6				CV - 10.0 %	

Table 12. 1977 Corn Performance Trial, Area D4, Clifford Hofer Farm, Bridgewater

BRAND AND VARIETY	TYPE AND CROSS	YIELD B/A	PCT ROOT LODGED	PCT STALK LODGED	PCT EARS DROPPED	PERCENT MOISTURE	PERFORMANCE SCORE RATING
KALTENBURG KX 68	2X	98.8	0.0	2.3	0.0	23.8	1
TROJAN TXS 111	2X	91.6	0.0	0.9	0.0	27.3	2
CARGILL 920	2X	91.1	0.0	6.0	0.0	25.8	4
P-A-G SX 397	2X	90.6	0.0	3.5	0.0	26.1	5
PRIDE 4488	2X	88.9	0.0	3.4	0.0	23.4	3
CURRY SC-147	2X	87.9	0.0	2.1	0.0	26.6	7
NORTHRUP-KING PX 74	2X	87.6	0.0	2.9	0.0	28.9	8
NORTHRUP-KING PX 585	3X	86.7	0.0	2.1	0.0	23.3	6
PIONEER 3388	M2X	84.4	0.0	2.3	0.0	27.3	11
SOKOTA SK-79	3X	84.3	0.0	4.3	0.0	28.0	13
PRIDE 5525	2X	84.0	0.0	5.2	0.0	23.1	9
TROJAN TXS 115A	2X	82.6	0.0	1.7	0.0	28.8	16
ASGROW RX 2345	2X	82.2	0.0	3.1	0.0	22.8	10
MC CURDY MSX 46	2X	81.9	0.0	3.5	0.0	24.4	12
MC CURDY MSX 44A	2X	81.6	0.0	5.2	0.0	23.8	14
CARGILL 890	M2X	81.1	0.0	7.0	0.0	24.9	17
NORTHRUP-KING PX 65	2X	80.8	0.0	3.0	0.0	27.0	18
WILSON 1400	2X	80.0	0.0	0.4	0.0	24.6	15
P-A-G SX 424	2X	79.0	0.0	6.8	0.0	26.0	20
ASGROW RX 61A	2X	77.4	0.0	7.6	0.0	23.1	19
DISCO SX 27	M2X	77.3	0.0	1.6	0.0	28.6	26
FUNKS G-4449	2X	76.8	0.0	2.1	0.0	26.2	22
SOKOTA TS-67	2X	76.6	0.0	6.8	0.0	23.6	21
ACCO UC 3301A	2X	76.3	0.0	10.2	0.0	24.9	28
FUNKS G-4321	2X	75.3	0.0	6.8	0.0	23.0	25
TROJAN TXS 102	2X	74.8	0.0	5.1	0.0	23.8	27
TROJAN TXS 108A	M2X	74.6	0.0	2.1	0.0	26.1	30
FONTANELLE 400SC	2X	74.6	0.0	6.3	0.0	23.8	29
ACCO U 370	3X	74.4	0.0	4.8	0.0	26.0	31
O'S GOLD SX 1100	2X	74.3	0.0	10.9	0.0	24.0	32
CURRY SC-150	2X	74.2	0.0	2.3	0.0	29.0	34
CARGILL 863	M2X	74.2	0.0	3.4	0.0	22.3	24
NORTHRUP-KING PX 606	3X	72.9	0.0	1.7	0.0	27.1	33
MC CURDY 76-14	2X	72.8	0.0	1.8	0.0	20.8	23
FUNKS G-4444A	2X	70.4	0.0	4.7	0.0	24.3	35
FUNKS G-4445	2X	70.1	0.0	3.9	0.0	24.8	36
SOKOTA TS-74	2X	69.6	0.0	2.1	0.0	25.4	37
P-A-G 314	2X	67.4	0.0	4.0	0.0	27.3	44
WILSON 1016	2X	67.4	0.0	5.8	0.0	23.7	39
PAYCO SX 865	2X	67.3	0.0	4.5	0.0	24.3	40
MASTER FARMER MF 114	2X	67.0	0.0	2.7	0.0	28.6	48
DISCO SX 30	2X	67.0	0.0	3.4	0.0	29.0	49
FUNKS G-4288	3X	66.9	0.0	8.7	0.0	22.6	41
NORTHRUP-KING PX 48	2X	66.5	0.0	3.8	0.0	25.7	43
PRIDE 4417	2X	66.2	0.0	1.8	0.0	22.4	38
SDAES CHECK =2	2X	65.1	0.0	12.0	0.0	23.6	51
O'S GOLD SX 2199	2X	64.3	0.0	5.0	0.0	24.5	50
MASTER FARMER MF 92	3X	64.1	0.0	6.6	0.0	19.9	42
MASTER FARMER MF 100	3X	63.4	0.0	7.0	0.0	21.9	47
MC CURDY MSX 42	2X	63.3	0.0	7.4	0.0	24.9	56
PAYCO 3X 811	3X	62.9	0.0	1.7	0.0	24.3	52
SDAES CHECK =3	2X	62.7	0.0	4.7	0.0	21.0	45
PIONEER 3709	M2X	62.6	0.0	2.5	0.0	22.1	46
ASGROW RX 58	2X	62.5	0.0	6.3	0.0	23.5	54
CARGILL 434	3X	62.5	0.0	8.0	0.0	23.7	57
MC CURDY MSP 333	3X	61.9	0.0	4.9	0.0	22.7	53
MASTER FARMER MF 105	2X	61.3	0.0	8.0	0.0	24.2	58
MASTER FARMER MF 94	2X	60.6	0.0	5.0	0.0	21.3	55
NORTHRUP-KING PX 46	2X	58.5	0.0	2.7	0.0	24.2	59
Mean		74.1		4.5		24.7	
LSD (.05)		19.1				CV - 22.5 %	

Table 13. 1977 Corn Performance Trial, Area C1(dryland), James Valley Research Center, Redfield

BRAND AND VARIETY	TYPE AND CROSS	YIELD 8/A	PCT ROOT LODGED	PCT STALK LODGED	PCT EARS DROPPED	PERCENT MOISTURE	PERFORMANCE SCORE RATING
TROJAN TXS 102	2X	90.4	0.0	1.7	0.0	24.2	2
CARGILL 838	M2X	89.7	0.0	3.1	0.0	20.1	1
FUNKS G-4444A	2X	84.8	0.0	1.5	0.0	25.2	3
SOKOTA SS-67	M2X	83.1	0.0	1.8	0.0	24.1	6
FUNKS G-4288	3X	82.4	0.0	0.0	0.0	22.6	5
PAYCO SX 775	2X	82.3	0.0	0.7	0.0	22.1	4
ACCO UC 1901	2X	79.0	0.0	1.6	0.0	19.5	8
NORTHRUP-KING PX 20	2X	78.6	0.0	0.8	0.0	17.7	7
ACCO UC 2301	2X	78.4	0.0	0.0	0.0	21.0	11
SDAES EX 199	3X	78.4	0.0	0.8	0.0	20.2	9
PAYCO SX 680	2X	77.6	0.0	0.0	0.0	20.3	12
PRIDE 4488	2X	77.4	0.0	0.0	0.0	22.1	13
SDAES CHECK =4	2X	76.8	0.0	0.9	0.0	20.9	14
PRIDE 2206	2X	76.7	0.0	0.0	0.0	17.7	10
CURRY SC-142	2X	76.6	0.0	2.8	0.0	25.5	28
SOKOTA TS-44	2X	76.3	0.0	2.7	0.0	19.7	15
SOKOTA TS-64	2X	76.3	0.0	2.9	0.0	26.4	29
TOP FARM SX 100	2X	75.8	0.0	0.8	0.0	20.9	17
PRIDE 4417	2X	75.1	0.0	0.8	0.0	20.1	18
PIONEER 3975A	M2X	74.9	0.0	0.0	0.0	18.6	16
TROJAN TXS 94	2X	74.7	0.0	0.8	0.0	20.2	20
ACCO UC 1151	2X	74.3	0.0	0.8	0.0	18.9	19
CENEX 3015	3X	74.2	0.0	1.6	0.0	19.7	23
TOP FARM SX 97	2X	74.1	0.0	2.5	0.0	18.8	22
TROJAN TXS 99	2X	73.1	0.0	0.9	0.0	20.2	25
ASGROW RX 2222	2X	73.1	0.0	2.6	0.0	19.5	26
NORTHRUP-KING PX 15	2X	73.0	0.0	0.8	0.0	18.9	24
SDAES EX 210	3X	72.9	0.0	0.8	0.0	17.3	21
PRIDE 3315	2X	71.9	0.0	0.0	0.0	19.0	27
CENEX 3121	3X	71.7	0.0	0.0	0.0	20.1	30
PIONEER 3965	3X	69.1	0.0	0.8	0.0	18.6	31
FUNKS G-4085	3X	68.4	0.0	3.4	0.0	17.3	32
CURRY SC-140	2X	67.5	0.0	0.8	0.0	20.6	34
PIONEER 3710	2X	67.4	0.0	0.0	0.0	21.4	35
SDAES EX 147	4X	67.2	0.0	0.8	0.0	18.7	33
SDAES CHECK =8	2X	65.9	0.0	4.1	0.0	17.9	37
FUNKS G-4195	3X	65.1	0.0	0.0	0.0	19.7	38
CARGILL 810	M2X	64.6	0.0	0.0	0.0	17.1	36
MASTER FARMER MF 92	3X	63.1	0.0	3.4	0.0	19.1	40
ASGROW RX 29	4X	62.6	0.0	2.6	0.0	17.5	39
ASGROW RX 32	2X	59.8	0.0	1.7	0.0	18.4	42
MASTER FARMER MF 85	3X	59.7	0.0	0.9	0.0	18.0	41
CENEX 2010	2X	59.3	0.0	0.9	0.0	18.5	43
CENEX 3120	3X	59.1	0.0	3.6	0.0	19.7	44
SOKOTA TS-46	2X	58.6	0.0	0.9	0.0	20.0	45
FUNKS G-4180	3X	57.3	0.0	2.6	0.0	19.2	46
MASTER FARMER MF 80	3X	55.2	0.0	0.8	0.0	17.6	47
SDAES EX 209	3X	54.6	0.0	0.8	0.0	17.1	48
Means		71.8		1.3		19.9	
LSD (.05)		10.8				CV - 12.1 %	

Table 14. Area D4 2-, 3-, and 4-year yield, moisture and stalk lodging averages of corn hybrids, 1974-1977

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 U 370	45	55	62	3	3	4	23	22	23
ASGROW RX 58	39	46	55	2	3	4	22	20	20
ASGROW RX2345			66			2			19
CARGILL 434		49	55		4	4		20	20
CARGILL 863		60	68		3	2		19	19
DISCO SX -27			64			1			27
DISCO SX-30		55	53		2	2		26	27
FUNKS G-4288		46	54		5	6		19	19
FUNKS G-4321			65			4			20
FUNKS G-4444A			49			3			20
FUNKS G-4445	50	56	57	2	1	2	23	21	21
FUNKS G-4449			57			1			23
KALTENBURG KX68			69			1			22
MC CURDY MSP 333		45	52		3	3		19	20
MC CURDY MSX 42			55			4			21
MC CURDY MSX 44A	42	51	63	4	5	3	22	20	20
MC CURDY MSX 46	46	56	65	1	1	2	21	20	20
G,S GOLD SX 1100	44	54	64	4	5	6	21	20	19
PAYCO SX 865	40	49	57	4	5	3	22	21	20
PAYCO 3X 811			50			1			21
PIONEER 3709			58			2			18
PRIDE 5525		53	62		3	3		20	21
SDAES CHECK =2		44	53		5	6		20	20
SDAES CHECK =3		55	66		3	3		18	18
SOKOTA SK-79			61			3			27
TROJAN TXS 102	43	54	63	5	6	3	22	20	20
TROJAN TXS 108A	45	55	64	2	2	2	23	21	23
TROJAN TXS 111	50	63	73	0	0	0	24	23	24
WILSON 1016	43	51	63	2	3	3	22	21	20
WILSON 1400			66			0			22

Table 15. Area C1(dryland) 2-, 3-, and 4-year yield, moisture and stalk lodging averages of corn hybrids, 1974-1977

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 1151	54	59	51	0	0	0	22	23	25
ACCO UC 1901			55			1			25
ACCO UC 2301	54	58	53	0	0	0	22	23	26
GENEX 3015			52			1			24
CHECK =4		58	54		0	0		24	25
CHECK =8		45	42		2	3		21	23
FUNKS G-4180			41			1			24
FUNKS G-4195			45			1			25
FUNKS G-4288	53	54	50	1	1	2	25	26	28
FUNKS G-4444A			49			1			30
PAYCO SX 680			58			0			25
PAYCO SX 775	50	57	51	1	1	1	24	25	28
PIONEER 3710			48			0			28
PIONEER 3965			55			1			22
PRIDE 2206			50			0			24
PRIDE 3315		52	48		0	0		23	25
SDAES EX 147	52	56	51	1	1	1	20	21	23
SDAES EX 199	54	59	58	1	1	1	21	22	24
SOKOTA SS-67	54	59	51	0	1	1	27	27	30
TROJAN TXS 94	49	58	52	1	1	0	22	24	26
TROJAN TXS 99		55	52		0	0		22	24

Table 16. 1977 Corn Performance Trial, Area E, Southeast Experiment Farm, Centerville

BRAND AND VARIETY	TYPE AND CROSS	YIELD B/A	PCT ROOT LODGED	PCT STALK LODGED	PCT EARS DROPPED	PERCENT MOISTURE	PERFORMANCE SCORE RATING
CARGILL 920	2X	117.6	0.7	16.1	0.0	21.7	1
CENEX 2333	2X	115.6	0.0	28.8	0.0	20.2	2
FUNKS G-4449	2X	104.1	2.2	10.1	0.0	23.0	3
MC CURDY 76-93	2X	103.3	0.0	15.2	0.0	22.0	4
SDAES CHECK =1	2X	101.6	0.0	6.4	0.0	24.4	5
FUNKS G-4445	2X	101.2	3.8	27.5	0.0	21.8	10
FUNKS G-4503	2X	99.5	0.8	10.6	0.0	25.3	8
PIONEER 3388	M2X	99.0	0.0	8.4	0.0	22.2	6
TROJAN TXS 111	2X	97.6	0.0	6.7	0.0	21.6	7
P-A-G 314	2X	96.7	0.0	8.0	0.0	24.3	12
NORTHRUP-KING PX 48	2X	95.8	0.0	25.6	0.0	22.7	35
PRIDE R-793	3X	95.6	0.7	7.3	0.0	23.9	14
TROJAN TXS 108A	M2X	95.4	0.0	8.3	0.0	21.3	9
NORTHRUP-KING PX 585	3X	94.8	0.0	13.4	0.0	19.9	11
MC CURDY 76-94	2X	94.7	0.7	23.4	0.0	21.1	30
TRUJAN TXS 115A	2X	94.7	0.0	5.8	0.0	25.5	18
MC CURDY 76-74	2X	93.9	0.0	7.0	0.0	25.5	23
CARGILL 890	M2X	93.7	0.0	18.4	0.0	21.5	26
ACCO UC 6601	2X	93.4	0.0	15.2	0.0	22.2	24
DISCO SX 26A	2X	93.3	0.0	11.2	0.0	19.7	15
NORTHRUP-KING PX 74	2X	92.8	0.0	5.1	0.0	24.8	22
PIONEER 3709	M2X	92.6	0.0	6.5	0.0	19.9	13
MC CURDY MSX 84	2X	92.4	0.7	3.6	0.0	24.7	19
PAYCO SX 990	2X	92.4	0.0	14.0	0.0	21.6	28
FUNKS G-4507	2X	92.3	0.7	6.6	0.0	24.8	32
PRIDE 7715	2X	92.0	0.0	2.2	0.0	25.0	21
SOKOTA TS-74	2X	91.8	0.0	8.2	0.0	20.7	17
MC CURDY MSX 60	2X	91.8	0.0	6.4	0.0	22.9	20
ASGROW RX61A	2X	91.6	0.0	21.3	0.0	17.7	27
CARGILL 863	M2X	91.6	3.9	25.0	0.0	20.1	42
CENEX 2201	2X	91.3	0.0	13.5	0.0	20.7	31
NORTHRUP-KING PX 606	3X	91.1	0.0	10.1	0.0	22.7	34
MC CURDY MSX 50	2X	91.0	0.7	5.0	0.0	20.2	16
WILSON 1016	2X	90.9	3.1	35.2	0.0	21.8	54
P-A-G SX 424	2X	90.7	0.0	14.6	0.0	21.3	37
MASTER FARMER MF 114	2X	89.9	0.7	6.6	0.0	26.2	47
ASGROW RX 58	2X	89.9	0.0	27.6	0.0	21.9	52
NORTHRUP-KING PX 46	2X	89.8	0.0	16.0	0.0	19.7	38
FONTANELLE 450SC	2X	89.3	0.0	5.8	0.0	22.8	36
CURRY SC-147	2X	89.2	0.0	6.8	0.0	22.9	39
SOKOTA TS-82	2X	89.2	0.0	3.6	0.0	25.7	43
YW 49	2X	88.4	2.2	4.3	0.0	20.5	29
ACCO UC 3301A	2X	88.1	1.5	28.6	0.0	22.8	63
WILSON 1400	2X	87.9	0.7	2.2	0.0	20.5	25
KALTENBURG KX 68	2X	87.6	0.0	6.6	0.0	19.3	33
PRIDE R-803	3X	87.5	0.7	7.9	0.0	22.1	44
GREEN ACRES L17	4X	87.1	0.0	13.0	0.0	23.3	50
DISCO SX 27	M2X	87.0	0.0	14.8	0.0	23.7	53
FONTANELLE 440ASC	2X	87.0	0.0	10.0	0.0	21.1	45
CENEX 2300	2X	86.9	0.8	20.6	0.0	20.3	51
PAYCO SX 865	2X	86.6	3.4	21.0	0.0	22.6	58
YW 48C	M2X	86.1	0.0	7.0	0.0	19.9	41
PAYCO 3X 811	3X	86.0	0.0	6.1	0.0	19.6	40
P-A-G SX 397	2X	85.7	0.7	21.0	0.0	21.1	56
FONTANELLE 400SC	2X	85.0	0.8	26.9	0.0	22.1	68
CURRY SC-145-1	2X	84.6	0.0	5.1	0.0	20.1	46
ACCO UC 3301	2X	84.3	0.8	34.9	0.0	22.4	74
PRIDE R-777	3X	84.2	0.7	11.7	0.0	22.9	57
GREEN ACRES 7723	4X	84.0	0.0	11.9	0.0	22.5	55
MC CURDY MSX 42	2X	83.9	0.0	22.3	0.0	21.0	66
ASGROW RX 2345	2X	83.5	0.0	17.2	0.0	16.8	49

Table 16. Continued

BRAND AND VARIETY	TYPE AND CROSS	YIELD B/A	PCT ROOT LODGED	PCT STALK LODGED	PCT EARS DROPPED	PERCENT MOISTURE	PERFORMANCE SCORE RATING
DISCO SX 30	2X	83.5	0.0	9.1	0.0	24.5	62
CURRY TC-348	3X	83.3	0.0	9.4	0.0	23.3	59
SOKOTA SK-79	3X	83.2	0.8	7.9	0.0	24.1	60
TROJAN TXS 102	2X	82.7	0.0	26.5	0.0	22.3	71
MASTER FARMER MF 94	2X	82.3	0.0	7.3	0.0	18.9	48
FUNKS G-4444A	2X	82.3	0.7	22.4	0.0	22.3	70
GREEN ACRES M414	4X	82.1	0.0	16.4	0.0	23.6	69
SDAES CHECK =2	2X	81.3	0.8	25.4	0.0	22.4	75
FUNKS G-4321	2X	81.2	0.0	27.6	0.0	20.4	72
GREEN ACRES 447	M3X	81.1	0.0	9.0	0.0	22.2	64
CENEX 3139A	3X	80.5	0.0	10.7	0.0	20.2	61
MASTER FARMER MF 100	3X	79.2	0.8	22.2	0.0	20.6	73
NORTHRUP-KING PX 65	2X	78.4	0.0	8.1	0.0	20.6	67
YW 35A	M2X	76.3	0.9	10.3	0.0	16.0	65
GREEN ACRES 774C	4X	76.1	0.0	16.3	0.0	26.2	78
MASTER FARMER MF 105	2X	70.7	0.0	27.6	0.0	22.3	80
MASTER FARMER MF 92	3X	70.5	0.0	8.8	0.0	18.1	76
SDAES CHECK =3	2X	69.3	0.0	14.3	0.0	16.8	77
YW 490	3X	67.0	0.0	6.1	0.0	20.5	79
Means		88.8		13.6		21.8	
LSD (.05)		15.2				CV - 12.2 %	

Table 17. (Continued from back cover)

Company & Brand	Variety	Tables
Wilson Hybrids, Inc.	1016	11,12,14,16
PO Box 391	1400	11,12,14,16
Harlan, IA 51537		
"Wilson"		
South Dakota	Check 1	16
Agricultural	Check 2	9,10,11,12,14,16
Experiment	Check 3	6,7,8,9,10,11,12,14,16
Station	Check 4	6,7,8,11,13,15
"SDAES"	Check 7	6,7,8
	Check 8	13,15
	Ex 102	6
	Ex 103	6
	Ex 105	6,7,9,10
	Ex 107	7,9
	Ex 147	6,7,11,13,15
	Ex 199	6,7,11,13,15
	Ex 204A	7
	Ex 209	11,13
	Ex 210	11,13
	Ex 211	7
	Ex 212	7
	Ex 213	7

Table 17. Listing of hybrid corn entries harvested and the tables where the results appear.

Company & Brand	Variety	Tables	Company & Brand	Variety	Tables	Company & Brand	Variety	Tables
Cenex Seed	2010	13	Rauenhorst, Bellows Assoc.	MF 80	6,13	Funk Seeds, Intl.	G-4085	6,9,13
PO Box "C"	2155	7,9,11	American Bank Building	MF 85	6,7,13	1300 W. Washington	G-4141	6,9,10
St. Paul, MN 55165	2201	7,9,11,16	Olivia, MN 56277	MF 92	6,7,9,11,12,13,16	PO Box 2911	G-4180	6,7,8,13,15
"Cenex"	2300	16	"Master Farmer"	MF 94	6,7,9,12,16	Bloomington, IL	G-4195	6,7,8,13,15
	2333	16		MF 100	6,9,12,16	"Funks"	G-4272	6,7,9
	3015	13,15		MF 105	9,12,16		G-4288	6,7,8,12,13,14,15
	3120	13		MF 114	12,16		G-4321	6,7,8,9,10,11,12,14,16
	3121	13					G-4444A	7,8,9,10,11,12,13,14,15,16
	3138	11	Kaltenburg Seed Farms	KX 43	6		G-4445	11,12,14,16
	3139A	7,9,11,16	Waunakee, WI	KX 68	6,7,8,12,14,16		G-4449	11,12,14,16
							G-4503	11,16
							G-4507	11,16
Curry Seed Co.	SC-140	9,13	ACCO Seeds	U 370	12,14			
Box 517	SC-141	7	PO Box 9	UC 1151	13,15			
Elk Point, SD	SC-142	9,13	Belmond, IA 50421	UC 1901	6,13,15	Payco Seeds	SX 680	6,7,8,9,10,13,15
57025	SC-142-1	7	"ACCO"	UC 2301	13,15	PO Box 70	SX 775	6,7,8,9,10,13,15
"Curry"	SC-145-1	11,16		UC 2901	9,10	Dassel, MN	SX 865	6,7,8,12,15,16
	SC-147	12,16		UC 3002	7,9	"Payco"	SX 990	16
	SC-150	11,12		UC 3301	6,7,8,9,10,11,16		SX 1093	11
	TC-348	16		UC 3301A	7,9,11,12,16		3X 811	6,7,8,11,12,14,16
				UC 6601	16			
Disco Seed	SX-9B	7,8,9,13				Pfizer Genetics	TXS 94	6,7,8,9,10,13,15
Box 640	SX-26A	11,16	Asgrow Seed Co.	RX 29	13	Box 166	TXS 99	6,7,8,13,15
Mitchell, SD	SX-27	12,14,16	PO Box 1059	RX 32	13	Olivia, MN 56277	TXS 102	6,7,8,10,11,12,13,14,15,16
"Disco"	SX-30	11,12,14,16	Dea Moines, IA 50053	RX 40	7,9	"Trojan"	TXS 105A	9
			"Asgrow"	RX 58	11,12,14		TXS 108A	11,12,14,16
Fontanelle Hybrids	400	12,16		RX 61A	11,12,16		TXS 111	11,12,14,16
Nickerson, NE	440A	16		RX 2222	7,8,9,10,13,16		TXS 115A	11,12,16
"Fontanelle"	450	16		RX 2345	7,8,9,11,12,14			
						Pioneer Seed Co.	3388	11,12,16
Green Acres	L17	16	Cargill Seeds	434	12,14	1206 Mulberry St.	3709	7,9,11,12,14,16
Hartington, NE	M414	16	PO Box 9300, Dept. 16	810	7,9,13	Des Moines, IA	3710	7,8,9,10,13,15
"Green Acres"	447	16	Minneapolis, MN 55440	838	7,9,13	"Pioneer"	3965	13,15
	774C	16	"Cargill"	863	7,8,9,10,12,14,16		3975A	6,7,13
	7723	16		890	8,12,16		3978	6
				920	12,16			
P-A-G Seeds	SX 177	7,9,10				Pride Company	R-777	11,16
PO Box 9480	SX 210	7,8,9	Northrup-King & Co.	PX 15	9	Glen Haven, WI	R-793	16
Minneapolis, MN	SX 397	12,16	PO Box 959	PX 20	9	"Pride"	R-803	16
55440	SX 424	12,16	Minneapolis, MN 55440	PX 26	7,9		2206	6,9,10,13,15
	314	16	"N-K"	PX 32	7,9		3315	6,7,9,10,13,15
	534	7,8		PX 46	7,9,11,16		4417	7,9,12,13
	SX 189	7,9		PX 48	7,11,12,16		4488	6,7,9,11,12,13
				PX 65	12,16		5525	12,14
Top Farm Hybrids	SX-95	7		PX 74	11,12,16		7715	11,16
Cokato, MN	SX-97	7,13		PX 585	7,9,11,12,16			
"Top Farm"	SX-100	7,13		PX 606	11,12,16	Sokota Hybrids	TS-44	7,9,13
	SX-106	7,9				Box 250	TS-49	7,8,9,10
	SX-110	9	O's Gold Seed Co.	SX 949	7,8	Brookings, SD	TS-46	7,13
			PO Box 460	SX 1100	7,8,9,10,12,14	"Sokota"	SS-51	6,7,8,9,10
YW Hybrids	YW 35A	16	Parkersburg, IA 50665	SX 1111	7,9		TS-64	6,7,9,13
Box 185	YW 48C	16	"O's Gold"	SX 2199	12		TS-67	6,9,10,12
Grand Junction, IA	YW 49	16					SS-67	9,10,11,13,15
"YW"	YW 490	16					TS-74	11,12,16
							SK-79	11,12,14,16
							TS-82	16

(Concluded inside back cover)