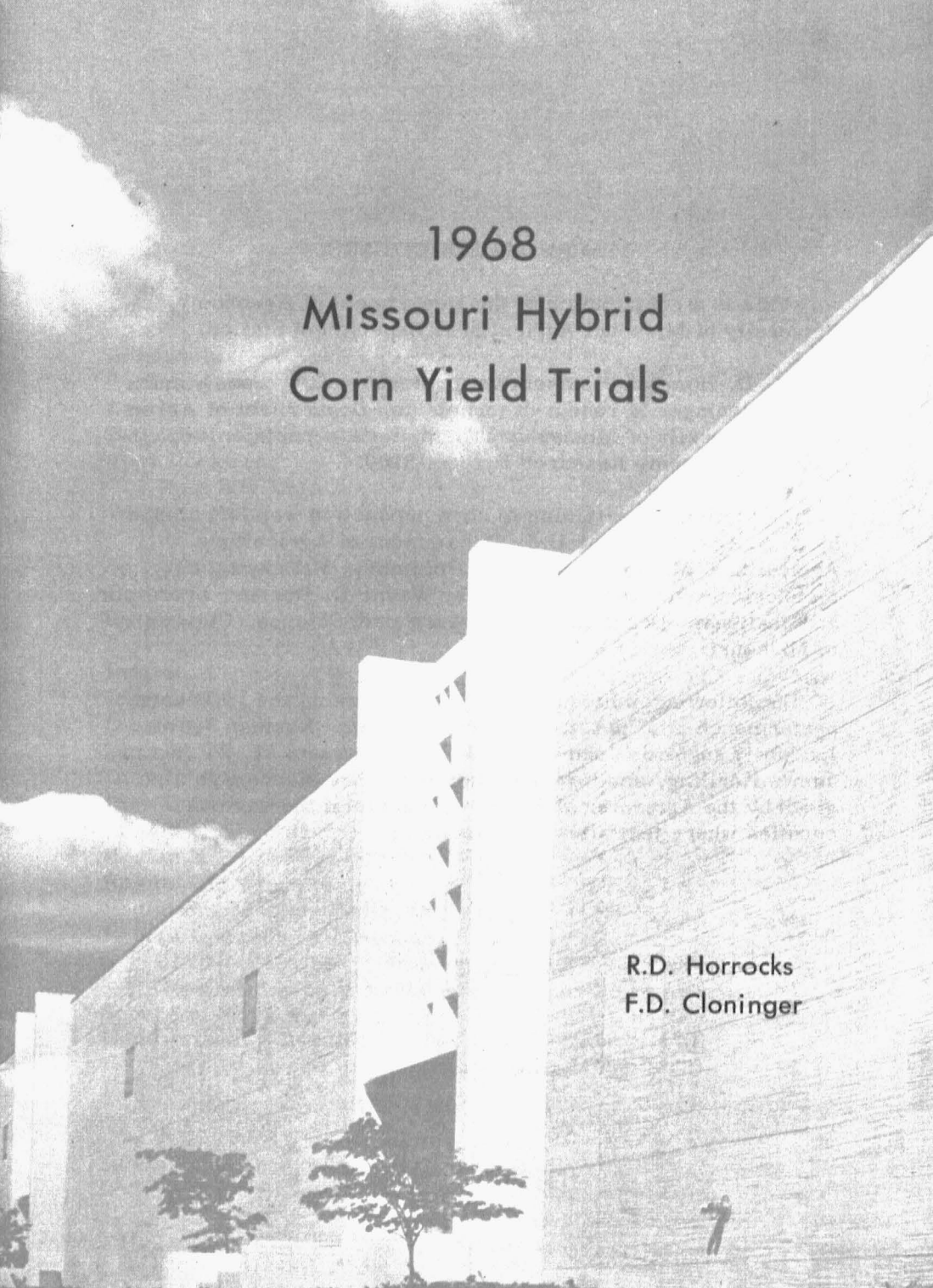
1968 Missouri Hybrid Corn Yield Trials



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1968

MISSOURI

HYBRID CORN PERFORMANCE TRIALS

R. D. Horrocks and F. D. Cloninger

Introduction

Synopsis

The 1968 estimated average corn yield for Missouri is 83 bushels per acre. The average yield of all hybrids tested at the nine locations was 99.6 bushels per acre. Yields for all hybrids tested ranged from 52.3 to 168.4 bushels per acre.

The season was marked by favorable rainfall distribution at all test locations except in Atchison and Pemiscot counties. Rainfall at the test sites ranged from 13.56 to 19.46 inches for the May 1 to September 15 period. Dry periods, defined as at least 15 consecutive days with less than 0.25 inch of precipitation on any one day, were recorded in each district. The number of days with temperatures equalling or exceeding 90 F varied from 23 to 57. There was only one day on which the recorded temperature reached or exceeded 100 F and that was in District 6.

Stalk lodging at the normal population was moderate at all locations except for Districts 3, 4, and 5 (Wayland, Higginsville, and Columbia). Stalk lodging was especially severe in District 3. At those sites where both low and high population tests were located, lodging was increased by a factor of 1.96, on the average, by planting at the higher rate. Root lodging was of little import at all locations. Most root lodging could be attributed to a condition known as 'goosenecked plants'.

Planting Rates

The rate of planting has a direct bearing on corn yields. In Missouri experimental work indicates that optimum populations are between 16, 000 and 20, 000 plants per acre depending on the area. Where moisture stress can be minimized with irrigation higher populations may be acceptable. Perfect stands are rarely realized. There is generally a 10 to 25 percent loss in stand between planting and harvest even under ideal conditions.

The following table is presented as an aid in estimating per-acre plant populations.

Table A. Distance between plants within a row required for a given per-acre plant population.

Inches Between Each Plant in Row	Row Width in Inches			
	30	36	38	40
6	34, 850	29, 040	27, 540	26, 130
7	29, 870	24, 890	23, 630	22, 410
8	26, 140	21, 780	20, 640	19, 600
9	23, 230	19, 360	18, 340	17, 424
10	20, 910	17, 420	16, 510	15, 680
12	17, 420	14, 520	13, 750	13, 070
14	14, 930	12, 450	11, 790	11, 200
16	13, 010	10, 890	10, 317	9, 800
18	11, 620	9, 680	9, 170	8, 710
20	10, 450	8, 710	8, 250	7, 840

Date of Planting

Hybrids should be planted as soon as soil and climate permit. Research conducted at the North Missouri Research Center[1] indicates highest yield can be expected from plantings made between April 20 and May 10. A reduction of 0.4 of a bushel resulted for each day of delay in planting after May 10 until June 1. For each day of delay after June 1 a reduction of 1.4 bushels occurred. At Columbia[2] a decrease of about 12

bushels per acre occurred when planting was delayed from April 20 to May 20. Only a small difference in yield was noted among the April 1, April 20, and May 10 plantings at the Delta Center[3]. After May 10 a reduction of one bushel occurred for each day of delay in planting. In addition to higher yield, early planted corn generally had less lodging, lower ear height, less European corn borer and earworm damage.

[1]Zuber, M. S. 1966. Date of planting studies with corn. North Missouri Research Center. Mo. Agr. Exp. Sta. Bulletin 832.

[2]Grogan, C. O., M. S. Zuber, N. Brown, D. C. Peters, and H. E. Brown. Date of planting studies with corn. Mo. Agr. Exp. Sta. Res. Bulletin 706.

[3]Zuber, M. S. 1967. Date of planting studies with corn in the Missouri Delta area. Mo. Agr. Exp. Sta. Bulletin 862.

TESTING PROCEDURE

Testing Areas

The state was divided into nine districts with one test site located in each. Figure 1 shows the districts and locations of testing fields. The nine districts match the geographical area currently used for reporting the Missouri Farm Census.

Seed Source

All producers and distributors of hybrid seed corn were eligible to enter hybrids in these tests. No limit was placed on the number of hybrids any one seed producer could enter and any hybrid could be entered in as many districts as desired. A minimum of fifteen pounds of processed seed was supplied for each entry. Seed for the open-pedigree hybrids was furnished by the state agricultural experiment stations or by certified seed producers. In addition, extension entries were included in some tests since some seed companies do not participate with voluntary fee-assessed entries and others do not include hybrids that are grown in Missouri. These hybrids were suggested by Extension personnel on the basis of extent of use and interest in the various areas of the state.

Field Design

The number of hybrids tested in each district ranged from 36 in District 8 to 64 in Districts 1, 2, 3, and 9. Three plots of each hybrid were planted at each testing location using the triple lattice field plot randomization design to minimize cultural and soil differences. Plots consisted of one row ten hills long for all locations except District 3, where plot rows were 25 feet long.

Stand

All normal population test plots except District 3 were planted at the rate of five kernels per hill. Hills were thinned to three or four plants depending upon anticipated environmental conditions at a particular location. In District 3 plots were space planted at approximately 19,500 plants per acre. These plots were not thinned. In addition to the regular tests, high population tests were conducted at Wayland (approximately

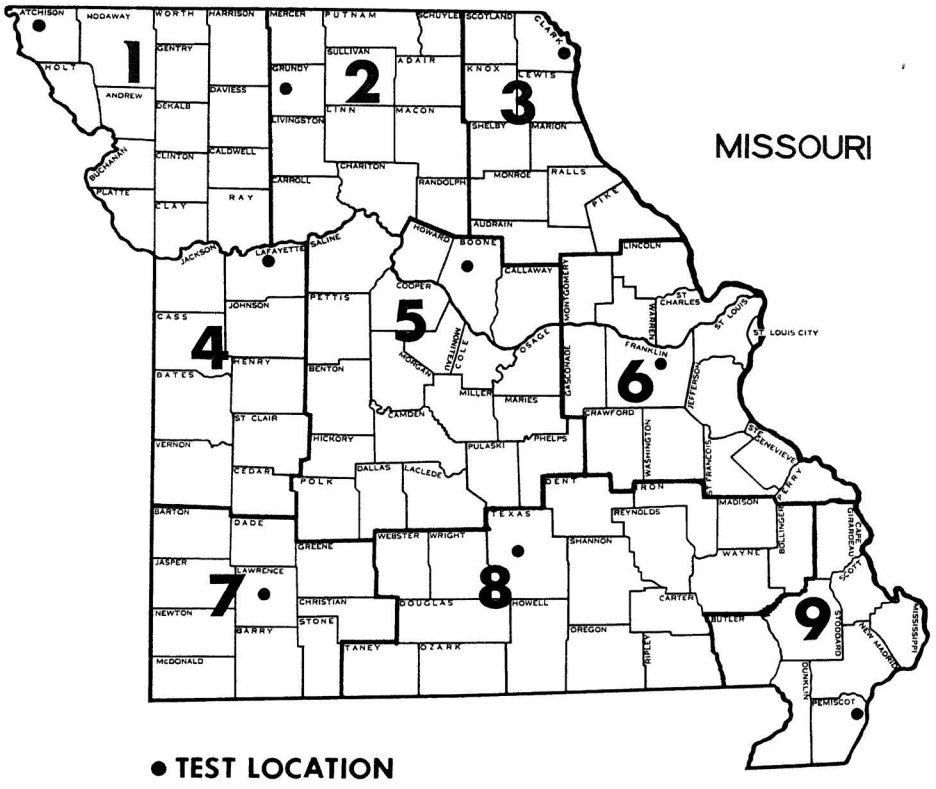

Figure 1. Map of the 9 districts and the test location in each one.

26,475 plants per acre), Labadie, and Portageville (approximately 20,425 plants per acre). The stand percentages for each test were computed on the basis of the total plants present divided by the number required for a perfect stand.

Lodging

A plant was classified as root-lodged if it leaned more than 30 degrees from the vertical through the first several internodes and stalk-lodged if it was broken below the ear. A plant that was both root and stalk-lodged was recorded in both categories. The percent was calculated on the total number of plants present.

Dropped Ears

The total number of ears dropped by each hybrid was recorded at harvest. Dividing this number by the total number of plants present and multiplying by 100 gave the percent of ears dropped. It was assumed that each plant produced one ear.

Ear Height

The ear-height grade was determined from averages of the three plots of a hybrid at a location. The grade consisted of the approximate number of feet from the ground level to the point of attachment of the primary ear.

Yield

The corn from each plot was harvested with a one-row picker-sheller. The shelled corn was then weighed in the field. Yield was determined on the basis of shelled corn with a moisture content of 15.5 percent. Adjustments were not made for missing hills or stand deviations in an attempt to approximate the yield a grower would harvest. The reported yield for each location is the average yield of three plots.

Moisture

The grain moisture of each entry was determined at harvest by obtaining a random sample from each plot during shelling. Grain from each plot was thoroughly mixed and the moisture content determined with a Burrows moisture tester. The

moisture percentage reported for each hybrid is a three-plot average at each location.

RESULTS

Results are reported on a relative maturity group basis. This is the approximate number of days from planting until physiological maturity or the number of days from planting until maximum dry matter content is reached. The relative maturity groups are as follows: Group I, approximately 90-110 days; Group II, 110-120 days; Group III, 120-130 days; Group IV, 130-140 days. Results reported for each district are for tests conducted in 1968. Period-of-years summary tables are also present.

PERIOD OF YEARS PERFORMANCE RECORDS

A number of hybrids have been tested for periods of two or more years either in a single district or in groups of districts (regions). These performance records are presented in tables for the respective districts.

It should be emphasized that the results of tests for a period of more than one year are of greater value in selecting hybrids than the results from any single year. However, if one must rely on results from any one year, it is best to use the average performance from as many testing locations as possible in the area where the hybrid is to be grown.

Three-year summaries of test results for hybrids grown in all of the nine districts are presented within the write-up for each district. Regional summaries are shown in Tables 10, 11, and 12.

Pedigrees of open-pedigree hybrids tested in 1968 are listed in Table 13.

Numerous closed-pedigree hybrids have been tested during the period 1957 through 1968. The Missouri Agricultural Experiment Station does not make specific recommendations for these hybrids, but it is suggested that farmers growing a

new hybrid for the first time grow a small acreage to determine whether the hybrid is adapted before they plant a large acreage of it. This recommendation should be practiced for all new hybrids, whether of closed-or open-pedigree origin.

Table 14 gives the districts in which different open-pedigree hybrids were entered in 1968. Table 15 presents the same information for the closed-pedigree hybrids. Table 16 shows the seed sources of commercial hybrids.

Table B. Cooperators and applicable information about the soils and fertilizer applied.

District	Location	Cooperator	Soil Test			Fertilizer Applied, lb/ac		
			pH	P	K	N	P_2O_5	K_2O
1	Tarkio	John Jones	5.9	253+	450	160	60	60
2	Spickard	Univ. of Mo. N. Mo. Center	---	---	---	150	75	100
3	Wayland	D. L. Shrauner	5.7	86	170	170	80	80
4	Higginsville	W. P. Moore	5.7	224	420	150	50	60
5	Columbia	Univ. of Mo. Bradford Farm	---	---	---	150	80	80
6	Labadie	James Koelling	7.3	394	350	120	40	40
7	Mt. Vernon	Univ. of Mo. S. W. Center	---	---	---	74	96	48
8	Summersville	Howard Wuertley	5.2	138	270	102	87	78
9	Portageville	Univ. of Mo. Delta Center	---	---	---	100	100	100

Table C. Total rainfall, number of days with rain, and dry periods from May 1 to September 15 at each testing location.

District	Testing Location	Total Rainfall	No. of days with rain						
			May	June	July	Aug.	Sept. 1-15	Total	Dry Periods*
1	Tarkio	13.71	11	5	7	12	1	36	(6/12-7/15)
2	Spickard	16.09	12	5	9	8	1	35	(6/23-7/15)(8/31-9/15)
3	Wayland	14.37	10	6	6	4	2	28	(5/1-5/22)(5/24-6/10)
4	Higginsville	17.97	10	7	11	13	2	43	(6/28-7/21)(8/5-9/7) (6/16-7/15)
5	Columbia	19.46	11	8	12	7	2	40	(7/12-7/17)(8/9-8/29)
6	Washington	13.56	13	7	10	7	2	39	(6/2-6/22)(6/27-7/14)
7	Mt. Vernon	18.68	16	6	5	10	1	38	(6/3-6/24)(7/14-7/31)
8	Summersville	17.01	12	5	5	8	4	34	(9/1-9/16) (7/2-7/24)(8/15-8/30)
9	Portageville	13.96	9	6	8	6	3	32	(8/12-9/3)

*A dry period is 15 or more consecutive days with less than 0.25 inch precipitation in any one day. All dates listed are inclusive. The beginning date is the day after rainfall of 0.25 inch or more. The ending date is the day before a 0.25 inch or more rainfall.

Table D. Average temperatures, departure from normal, the number of days with temperatures 90°F or more, 100°F or more from May 1 to September 15 at each testing.

District	Location	Average Temperature	Degrees F. From Normal	Number of Days Temperature Above 90°	Number of Days Temperature Above 100°
1	Tarkio	71.1	-0.6	46	0
2	Spickard	70.2	-0.7	25	0
3	Wayland	70.4	-2.0	32	0
4	Higginsville	72.1	-2.3	42	0
5	Columbia	71.2	-0.1	23	0
6	Washington	71.7	-2.0	38	1
7	Mt. Vernon	69.8	-2.6	31	0
8	Summersville	70.8	-1.0	29	0
9	Portageville	74.8	-0.1	57	0

DISTRICT 1

Data for District 1 are presented in tables 1A through 1C.

The average yield from a harvest stand of 14, 750 plants per acre was 75. 9 bushels. The 64 hybrids tested in this District ranged from 52. 3 to 102. 8 bushels per acre.

The growing season was marked by temperatures that averaged 0. 6 degrees below normal. No temperatures of 100 F or more were recorded. Precipitation was 13. 71 inches from May 1 to September 15. One dry period was recorded (June 12 to July 15) which was severe enough to cause major yield depression.

Insects, diseases, and weeds were of minor importance in this test.

Table 1A. Corn production data for 1966, 1967, and 1968, and the average for the 10-year period, 1958-1967, in District 1.

Period	Farmland Planted to Corn (%)	Total Corn Acreage	Yield, bu/ac	
			District Average	Yield Trial
1968	15.4 *	657, 000 *	84 *	75.9
1967	16.1	700, 000	66	124.1
1966	14.7	636, 000	70	100.6
1958-1967 Average	16.4	702, 000	63	

*Preliminary estimate as of December 19 , 1968.

TABLE 18. 1968 PERFORMANCE RECORD FOR HYBRIDS TESTED IN DISTRICT 1, NEAR TARKIO, MISSOURI IN ATCHISON COUNTY. PLANTED MAY 17, 1968. HARVESTED NOVEMBER 4, 1968. (EXP. 1)

HYBRID	ACRE YIELD BU.	MOISTURE IN GRAIN PCT	STAND PCT	LODGED PLANTS ROOT PCT	LODGED PLANTS STALK PCT	DROPPED EARS PCT	EAR HEIGHT GRADE
	GROUP I MATURITY						
ASGROW ASC 106	59.9	21.0	89	12.0	3.8	6.6	2.8
ASGROW ASC 112	55.9	21.1	85	14.5	3.0	7.6	2.8
ASGROW ASX 92	76.4	19.5	92	0.0	0.0	0.9	2.3
ASGROW ASC 91	89.7	20.2	96	2.7	0.9	0.9	2.7
NORTHRUP-KING PX 63	53.9	19.4	89	3.8	3.8	0.0	2.3
NORTHRUP-KING PX 610	73.4	17.2	98	0.0	9.3	5.9	2.5
NORTHRUP-KING PX 621	75.1	18.5	93	5.3	1.8	3.6	2.5
MAYGOLD F35	74.4	20.2	97	8.3	0.8	1.7	2.3
MAYGOLD X4	82.8	21.4	95	0.0	0.8	0.0	2.2
MAYGOLD X3	66.5	18.8	94	0.0	3.5	2.7	2.0
MAYGOLD EX584-X-547	65.7	22.7	94	0.0	2.6	0.9	2.3
MCCURDY 4X6	71.6	17.8	94	2.6	3.5	2.7	2.5
MCCURDY MP5	71.3	17.6	93	6.6	3.9	4.7	2.3
MFA P6	67.3	18.2	94	8.1	3.5	2.6	2.3
MFA M7	63.2	19.0	95	26.4	0.0	0.9	2.0
PIONEER 3390	102.8	17.8	97	4.4	5.9	0.0	2.7
PIONEER 3505	84.1	18.3	95	1.8	2.6	2.6	2.8
PIONEER 3365	81.7	19.7	94	0.0	0.9	0.0	2.3
PIONEER 3545	97.9	17.3	98	0.0	2.6	1.7	2.5
T-E HONUSMAKER S	84.2	19.8	97	9.3	9.4	0.0	2.2
PAG SX31	83.9	17.0	94	3.4	2.6	7.1	2.3
	GROUP II MATURITY						
BO-JAC X70	70.2	18.9	94	20.2	0.9	5.2	2.5
BO-JAC X9	92.4	19.3	96	0.0	2.6	0.9	2.5
BO-JAC X7	91.0	22.2	96	0.0	1.7	6.9	2.3
BO-JAC X20	80.0	18.8	94	15.9	1.7	0.9	2.3
IOWA-MISSOURI SX-17	93.4	19.9	96	0.0	7.5	0.9	2.8
NORTHRUP-KING PX 635	66.9	18.8	95	5.1	7.0	5.2	2.2
NORTHRUP-KING PX 616	83.9	18.5	95	1.7	0.9	1.7	2.7
NORTHRUP-KING PX 72	82.3	19.6	96	2.5	2.6	1.8	2.2
NORTHRUP-KING PX 674	75.8	20.1	97	15.2	2.5	1.7	2.3
CORN KING 121	77.4	18.6	95	9.3	3.5	7.0	2.7
MAYGOLD 2036	71.9	19.5	94	0.0	3.5	5.3	2.3
MAYGOLD 29X	78.9	20.3	97	7.2	4.3	6.0	3.0
MAYGOLD X9	91.2	18.6	94	1.8	1.8	4.4	3.0
MAYGOLD X20	69.8	20.4	94	0.0	3.6	4.5	2.8
MAYGOLD X19	81.0	19.5	94	8.1	1.8	1.7	3.0
MCCURDY M5-61	73.3	20.2	94	0.0	7.0	7.0	2.5
MFA V12	84.7	19.9	94	0.0	0.0	1.8	2.3
MFA X6	72.7	20.2	94	0.0	4.4	7.0	2.8
PIONEER 3306	90.6	19.4	95	0.0	1.7	3.4	3.0
PIONEER 3307	70.1	19.8	91	8.3	5.4	0.9	3.0
PIONEER 3199	89.0	19.4	89	0.0	2.8	1.8	3.3
PIONEER 321	65.0	19.6	94	0.0	2.6	8.6	3.2
PIONEER 3300	81.8	20.2	93	2.6	0.9	6.3	3.0
PIONEER 3308	85.0	19.0	96	3.4	3.5	6.0	2.8
PIONEER 3333	92.9	19.5	96	2.5	2.5	3.4	3.0
T-E CASHMAKER	70.3	19.0	92	7.2	3.6	0.0	2.5
UNITED-HAGIE 55570	99.0	22.6	94	0.0	0.0	1.7	2.7
UNITED-HAGIE 65540	70.0	21.9	94	3.5	10.6	2.7	2.3
UNITED-HAGIE 55495	87.1	19.3	92	1.8	2.8	1.8	2.2
UNITED-HAGIE 75555	76.9	21.3	94	0.0	2.7	0.9	2.0
UNITED-HAGIE 75570	67.7	23.1	96	5.3	5.0	13.0	2.2
UNITED-HAGIE 75540	88.1	21.2	97	6.7	0.9	2.6	2.3
EMBRO X5	52.3	20.9	94	9.6	5.3	14.9	3.2
FUNKS G4411	77.6	18.0	96	2.6	0.9	4.4	2.5
KANSAS 1639	57.4	18.0	94	0.0	12.3	8.0	3.0
MISSOURI 63	53.5	19.4	94	14.8	7.0	12.4	3.0
MISSOURI 1023	63.5	19.3	97	17.1	10.3	7.7	2.7
MISSOURI 64	57.6	19.2	92	27.5	4.6	11.9	3.2
MISSOURI 880	62.6	18.6	96	19.8	3.4	2.6	2.8
US 13	58.7	18.4	94	0.0	19.3	14.1	3.5
	GROUP III MATURITY						
PIONEER 3188	67.4	21.2	93	2.7	3.6	11.6	3.0
PIONEER X2683 (3175)**	91.8	21.2	94	0.0	2.6	1.7	3.0
PAG SX29	61.9	19.1	90	1.8	5.5	8.4	2.8
MEAN	75.9	19.6	94	5.2	3.8	4.3	2.6

DIFFERENCES IN YIELD BETWEEN ANY TWO HYBRIDS OF LESS THAN 19.6 BUSHELS ARE NOT CONSIDERED SIGNIFICANT.
*WHITE HYBRID
**PERMANENT NUMBER DESIGNATION

Table 1C. Average performance of hybrids tested in District 1 for the three-year period 1966-1968.

Hybrid	2-YEAR AVERAGE[1] Acre Yield Bu.	Lodged Plants Root %	Lodged Plants Stalk %	Dropped Ears %	3-YEAR AVERAGE Acre Yield Bu.	Lodged Plants Root %	Lodged Plants Stalk %	Dropped Ears %
			GROUP I MATURITY					
Asgrow ATC106	98.4	6.0	4.9	4.3	---	---	---	---
Maygold F35	101.4	4.2	0.4	0.8	---	---	---	---
McCurdy 3X6	96.0	6.0	3.0	3.7	---	---	---	---
MFA B6	90.2	4.0	3.2	1.3	---	---	---	---
MFA B7	91.2	13.2	0.3	0.4	---	---	---	---
Northrup-King PX63	87.9	1.9	2.6	0.6	94.1	1.3	7.0	1.1
Northrup-King PX610	100.2	0.0	5.8	3.0	104.1	0.0	11.7	2.6
Pioneer 3505	107.2	0.9	2.0	1.3	106.4	0.6	13.6	1.4
Pioneer 3390	123.1	2.8	3.2	0.0	---	---	---	---
			GROUP II MATURITY					
Bo-Jac X70	112.7	0.0	2.8	4.1	108.3	0.0	11.3	7.4
Bo-Jac X9	116.8	0.0	1.3	0.8	---	---	---	---
Maygold 2036	104.4	0.0	2.0	2.6	106.2	0.0	7.5	2.6
Maygold 29X	106.2	3.6	4.2	3.0	---	---	---	---
McCurdy H5-61	97.9	0.0	4.5	4.2	---	---	---	---
McCurdy HP5	96.6	3.3	3.8	2.4	---	---	---	---
Northrup-King PX616	107.8	1.2	0.8	0.8	113.2	0.8	4.8	3.5
Northrup-King PX674	98.2	7.6	3.0	3.2	101.1	6.0	8.0	5.3
Pioneer 321	99.3	0.0	2.2	4.6	105.9	0.0	8.9	4.9
Pioneer 3300	106.9	1.3	3.0	3.2	107.9	0.9	7.2	2.9
Pioneer 3306	115.1	0.0	1.8	1.7	118.2	0.0	8.2	2.1
Pioneer 3307	99.8	4.2	3.4	0.4	99.8	2.8	6.6	2.0
Pioneer 3199	130.2	0.0	3.0	0.9	---	---	---	---
T. E. Bonusmaker S	98.8	4.6	4.7	0.0	---	---	---	---
United-Hagie 5S570	117.0	0.0	1.6	0.8	---	---	---	---
United-Hagie 6S540	105.2	1.8	8.3	1.7	---	---	---	---
Kansas 1639	86.8	1.8	10.4	5.4	84.4	1.2	17.2	7.9
Mo 63	90.4	7.4	4.8	6.2	90.6	4.9	9.2	9.4
Mo 64	94.6	14.4	4.0	6.6	94.6	9.6	11.8	9.4
Mo 880	92.1	15.0	5.0	1.3	93.0	7.0	7.7	4.0
Mo 1023	91.2	8.6	5.8	4.5	93.0	5.7	9.3	5.3
US 13	85.8	0.0	15.5	7.8	89.8	0.0	26.2	12.0
			GROUP III MATURITY					
PAG SX29	99.0	1.2	3.4	5.8	---	---	---	---
Mean	101.5	3.6	3.9	2.7	100.6	2.4	10.4	4.9

[1] The 2-year average is for the years 1967 and 1968.

DISTRICT 2

Data for District 2 are presented in tables 2A through 2C.

The average yield from a harvest stand of 14, 750 plants per acre was 110.1 bushels. The 64 hybrids tested in this district ranged in yield from 78.8 to 139.5 bushels per acre.

The growing season was marked by temperatures that averaged 1.2 degrees below normal. No temperatures above 100 F were recorded. Precipitation was 16.09 inches from May 2 to September 15. Two dry periods occurred in 1968: June 23 to July 15 and August 31 to September 15.

Insects, diseases, and weeds were controlled adequately and were thus not detrimental to yields.

Table 2A. Corn production data for 1966, 1967, and 1968, and for the 10-year period 1958-1967 in District 2.

Period	Farmland Planted to Corn (%)	Total Corn Acreage	Yield, bu/ac	
			District Average	Yield Trials
1968	11.2*	442,000*	84 *	110.1
1967	9.2	358,000	57	-- **
1966	10.2	398,000	66	132.5
1958-1967 Average	11.2	444,000	61	

*Preliminary estimate as of December 19, 1968.
**No test in 1967.

TABLE 28. 1968 PERFORMANCE RECORD FOR HYBRIDS TESTED IN DISTRICT 2, NEAR SPICKARD, MISSOURI IN GRUNDY COUNTY. PLANTED MAY 1, 1968. HARVESTED NOV. 1, 1968. (EXP. 2)

HYBRID	ACRE YIELD BU.	MOISTURE IN GRAIN PCT	STAND PCT	LODGED PLANTS ROOT PCT	LODGED PLANTS STALK PCT	DROPPED EARS PCT	EAR HEIGHT GRADE
GROUP I MATURITY							
ASGROW ATC 106	114.6	20.2	89	2.9	1.0	3.6	3.3
ASGROW ASC 112	111.7	20.7	79	0.0	2.1	2.1	3.0
ASGROW ASX 92	101.5	20.1	79	0.0	0.0	1.0	3.2
ASGROW ASC 91	106.9	20.5	86	8.3	1.7	0.0	2.7
NORTHRUP-KING PX 63	78.8	19.3	90	2.9	1.7	0.0	2.7
NORTHRUP-KING PX 610	99.8	18.2	89	0.0	5.4	3.7	2.7
NORTHRUP-KING PX 621	115.2	18.1	89	1.1	0.8	2.2	2.8
MAYGOLD F35	98.6	20.1	90	6.7	3.7	1.0	2.7
MAYGOLD X4	100.1	20.9	89	0.0	2.5	0.8	2.3
MAYGOLD X3	90.5	18.6	89	1.0	4.0	0.9	2.3
MAYGOLD EX5P4-X-587	102.7	20.7	91	2.5	1.9	3.6	2.5
MCCURDY 3X6	95.5	17.4	86	4.8	11.2	4.6	2.5
MCCURDY HP5	96.8	18.1	85	0.0	6.6	3.6	2.7
MFA B6	94.2	18.0	86	0.0	0.0	1.8	2.5
MFA B7	102.1	19.6	91	7.4	3.5	0.9	2.8
PIONEER 3390	119.4	18.0	94	0.0	1.8	0.0	2.8
PIONEER 3505	109.3	17.9	88	0.0	3.3	0.0	2.7
PIONEER 3365	104.4	19.0	88	0.0	7.4	1.9	2.3
PIONEER 3545	107.9	17.5	89	0.0	3.7	0.0	2.5
T-E BONUSMAKER S	96.7	19.0	95	28.9	1.8	0.0	2.3
PAG SX31	93.8	17.2	84	2.1	7.1	1.9	2.5
GROUP II MATURITY							
BO-JAC X70	121.6	18.4	100	0.0	2.5	1.7	2.7
BO-JAC X9	112.7	20.0	90	0.0	0.0	0.0	2.7
BO-JAC X7	127.7	22.1	98	0.0	5.2	3.3	2.8
BO-JAC X20	115.0	18.8	94	12.6	2.6	0.9	3.0
BO-JAC 310	121.6	19.1	97	3.6	1.7	0.9	2.8
IOWA-MISSOURI SX-17	94.9	20.2	82	0.0	2.9	1.0	2.8
NORTHRUP-KING PX 635	97.2	19.9	84	0.0	7.5	0.9	2.3
NORTHRUP-KING PX 616	116.4	18.3	90	0.0	3.6	1.0	2.8
NORTHRUP-KING PX 72	99.7	18.2	84	0.0	4.8	2.2	2.3
NORTHRUP-KING PX 674	123.0	20.0	98	5.8	4.2	0.8	2.7
MAYGOLD 2036	115.5	17.6	84	2.9	5.1	2.4	2.7
MAYGOLD 29X	124.6	21.0	97	18.8	6.9	2.5	3.2
MAYGOLD X9	116.1	18.8	97	4.3	5.1	0.9	2.7
MAYGOLD X20	111.5	19.4	90	0.0	0.0	3.6	3.0
MAYGOLD X17	125.9	20.3	96	0.0	7.7	0.8	2.7
MCCURDY H5-61	107.3	19.3	82	14.4	3.1	2.2	2.5
MFA V12	117.5	19.7	96	0.0	3.4	0.0	2.7
MFA K6	95.1	18.4	80	30.9	5.6	4.1	2.7
PIONEER 3306	123.6	17.4	95	0.8	1.7	0.8	2.7
PIONEER 3307	120.4	20.5	90	0.0	3.8	0.0	3.2
PIONEER 3199	133.3	19.3	84	0.0	7.2	0.0	3.3
PIONEER 321	103.9	19.1	80	0.0	4.6	3.7	3.0
PIONEER 3300	132.9	20.5	94	1.7	3.5	1.8	3.3
PIONEER 3308	88.5	19.7	83	1.3	2.3	12.0	3.0
PIONEER 3333	111.5	19.1	85	0.0	7.7	2.0	2.7
T-E CASHMAKER	111.0	19.1	97	28.0	6.2	0.0	2.5
EMBRO X5	89.1	20.6	79	1.1	3.2	5.4	3.2
FUNKS G4411	82.3	17.1	84	0.0	4.9	0.0	2.5
KANSAS 1639	93.5	18.0	90	0.0	6.5	2.8	2.7
MISSOURI 63	120.0	18.8	96	6.8	1.7	3.4	2.5
MISSOURI 1023	109.9	18.9	89	15.0	11.1	4.6	2.8
MISSOURI 64	123.1	19.2	91	0.0	3.7	2.7	2.8
MISSOURI 65-2	136.2	20.7	95	0.0	1.8	0.8	2.7
MISSOURI 880	107.2	19.3	94	0.0	13.2	3.5	2.7
MISSOURI SX14W*	121.1	18.2	87	0.0	10.5	0.0	3.0
MISSOURI 447W*	107.7	20.8	84	0.0	5.3	1.0	3.3
MISSOURI PIPE 12*	108.0	21.3	93	17.4	3.6	0.0	3.3
US 13	81.2	17.5	84	11.4	24.5	8.9	3.5
GROUP III MATURITY							
PIONEER 3188	129.7	20.2	80	0.0	2.5	1.8	3.0
PIONEER X2683 (3175)**	139.5	21.1	90	0.0	0.9	1.9	3.2
PAG SX29	121.5	18.8	83	3.3	3.1	3.7	2.7
MISSOURI 476W*	134.9	20.2	97	3.3	13.7	3.4	3.5
MISSOURI 916	128.3	20.4	95	0.0	2.5	2.6	3.3
MEAN	110.1	19.3	89	3.9	4.6	2.0	2.8

DIFFERENCES IN YIELD BETWEEN ANY TWO HYBRIDS OF LESS THAN 21.7 BUSHELS ARE NOT CONSIDERED SIGNIFICANT.
*WHITE HYBRID
**PERMANENT NUMBER DESIGNATION

Table 2C. Average performance of hybrids tested in District 2 for the two years 1966 and 1968.

Hybrid	Acre Yield Bu.	Lodged Plants Root %	Lodged Plants Stalk %	Dropped Ears %
	GROUP I MATURITY			
Northrup-King PX610	116.7	0.0	18.6	4.2
Pioneer 3505	119.4	0.5	21.9	2.0
	GROUP II MATURITY			
Bo-Jac X70	134.2	0.0	16.5	5.8
Maygold 2036	128.8	1.4	12.0	2.4
MFA K6	108.8	15.4	19.0	5.8
Northrup-King PX616	125.8	0.0	23.8	2.6
Northrup-King PX674	128.8	3.2	19.6	3.8
Pioneer 321	125.8	4.2	24.5	6.4
Pioneer 3300	131.8	3.0	12.4	3.1
Pioneer 3306	140.4	0.4	10.4	3.6
Pioneer 3307	126.2	0.4	14.3	4.7
Kansas 1639	112.2	0.0	17.6	7.8
Mo 63	126.7	5.4	11.6	6.0
Mo 447W*	124.4	0.0	29.6	2.3
Mo 880	121.2	0.0	20.0	3.2
Mo 1023	121.5	7.5	20.0	7.9
US 13	100.8	5.7	52.1	11.8
	GROUP III MATURITY			
Mo 476W*	137.8	3.2	31.8	2.5
Mean	124.0	2.8	20.9	4.8

*White hybrid

DISTRICT 3

Data for District 3 are presented in tables 3A through 3D.

Two population rates were tested. Table 3B is data from the regular test which had a planned stand of 19, 500 plants. Actual count was 17, 350 which produced an average of 145.2 bushels per acre. Table 3D is data from the high population test. An average yield of 137.6 bushels per acre was harvested from a stand of 22, 800 plants per acre. A perfect stand would have been 26, 500 plants.

This district experienced four dry periods: May 1 to May 22, May 24 to June 18, June 28 to July 20, and August 5 to September 7. The soil is a deep river bottom soil and despite the lack of rainfall yields were tops in the state. Total precipitation from May 1 to September 15 was 14.37 inches. There were no days recorded when the temperature reached or exceeded 100 F. The average temperature was 2.0 degrees below normal.

Stalk lodging was severe, ranging from 8.0 to 58.1 percent of the stalks broken below the ear. Stalk lodging was increased by a factor of 1.5 times as the population was increased from 19, 500 to 26, 500 plants per acre. Lodging was caused by stalk rot fungi: Diplodia maydis, Gibberella zeae, Fusarium sp., and Macrophomina phaseoli (Charcoal rot) to some extent. There was no evidence of corn borer damage. Root lodging was not important. All other environmental hazards were controlled.

Table 3A. Corn production data for 1966, 1967, and 1968, and for the 10-year period, 1958-1967, in District 3.

Period	Farmland Planted to Corn (%)	Total Corn Acreage	Yield, bu/ac	
			District Average	Yield Trial
1968	14.3*	447,000*	88*	141.4
1967	14.3	444,000	75	131.1
1966	13.6	423,000	65	114.7
1958-1967 Average	15.1	471,000	62	

*Preliminary estimate as of December 19, 1968.

TABLE 3B. 1968 PERFORMANCE RECORD FOR HYBRIDS TESTED IN DISTRICT 3, NEAR WAYLAND, MISSOURI IN CLARK COUNTY. PLANTED MAY 4, 1968. HARVESTED OCTOBER 31, 1968. (EXP. 3)

HYBRID	ACRE YIELD BU.	MOISTURE IN GRAIN PCT	STAND PCT	LODGED PLANTS ROOT PCT	LODGED PLANTS STALK PCT	DROPPED EARS PCT	EAR HEIGHT GRADE
	GROUP I MATURITY						
ASGROW ATC 106	138.4	19.5	88	0.0	16.1	6.9	4.2
ASGROW ASC 112	151.3	20.3	88	0.0	23.9	1.2	4.7
ASGROW ASX 92	129.3	19.2	90	0.0	27.1	2.6	3.8
ASGROW ASC 91	146.8	19.4	91	0.0	8.0	1.5	3.7
NORTHRUP-KING PX 610	129.4	17.8	89	0.0	43.4	0.0	4.0
MCCURDY 3X6	122.6	17.6	86	0.0	40.2	3.8	3.7
MCCURDY M95	131.6	18.5	86	0.0	38.7	0.0	3.7
MFA P6	133.4	18.4	82	0.0	20.6	0.0	3.8
MFA P7	136.3	18.9	89	0.0	15.8	1.2	4.0
PIONEER 3396	156.3	17.5	94	0.0	30.5	0.0	4.0
PIONEER 3505	142.0	17.6	80	0.0	13.5	0.0	3.8
PIONEER 3365	135.6	18.5	83	0.0	23.2	0.0	4.0
PIONEER 3545	124.4	17.8	88	0.0	56.7	4.1	4.0
T-E PENNSMAKER S	125.7	19.0	82	0.0	22.4	1.6	3.8
PAC SX31	140.0	17.1	91	0.0	26.9	7.7	3.5
	GROUP II MATURITY						
BC-JAC X7C	149.5	17.7	88	0.0	27.7	5.7	4.3
BC-JAC X9	156.2	18.6	89	1.4	13.4	0.0	4.0
BC-JAC X7	153.8	21.1	84	0.0	8.1	1.7	3.8
BC-JAC X20	143.6	18.1	88	0.0	21.7	1.4	4.0
BC-JAC X55	135.7	19.2	85	0.0	28.2	5.1	3.8
ICWA-MISSOURI SX-17	129.0	19.4	95	0.0	40.3	2.5	4.0
NORTHRUP-KING PX 616	133.2	18.3	80	0.0	38.9	1.2	4.0
NORTHRUP-KING PX 72	129.4	18.2	85	0.0	35.2	0.0	4.2
NORTHRUP-KING PX 674	139.6	19.2	79	0.0	47.1	5.0	4.2
MAYCOLE 2036	168.2	19.3	83	0.0	19.6	1.6	4.2
MAYCOLE 29X	165.9	20.1	96	2.8	16.3	7.7	4.8
MAYCOLE X9	152.2	18.4	91	0.0	36.9	6.6	4.3
MAYCOLE X2C	146.0	19.2	88	3.3	25.2	7.8	4.2
MAYCOLE X15	158.8	18.1	86	0.0	31.0	2.7	4.3
MCALLISTER SX6584	157.5	18.8	96	0.0	22.8	0.0	4.0
MCALLISTER SX65C9	153.0	19.7	89	0.0	16.9	1.4	4.0
MCALLISTER 13A	150.5	19.5	88	0.0	13.0	0.0	4.2
MCCURDY H5-61	131.4	19.9	85	0.0	52.5	10.0	4.0
MFA V12	136.5	19.2	80	0.0	24.6	1.7	3.8
MFA K6	141.9	18.6	96	0.0	11.2	0.0	4.2
PIONEER 33C6	154.1	18.3	89	0.0	14.7	1.4	4.3
PIONEER 33C7	140.7	19.5	91	0.0	15.4	1.5	4.3
PIONEER 3159	166.8	19.9	92	0.0	20.8	0.0	4.3
PIONEER 321	142.5	18.7	86	0.0	32.2	4.5	4.8
PIONEER 33C0	152.4	18.9	89	0.0	14.5	5.2	4.0
PIONEER 33C8	143.9	19.5	88	0.0	19.9	4.1	4.2
PIONEER 3333	146.9	18.1	91	0.0	23.8	2.6	4.2
T-E CASHMAKER	139.5	19.1	89	0.0	16.3	0.0	4.0
EMBRO X5	127.9	20.4	84	0.0	31.8	9.1	4.8
FUNKS G4411	130.8	17.8	88	0.0	23.1	0.0	3.7
KANSAS 1639	152.8	17.9	95	0.0	35.1	5.3	4.2
MISSOURI 62	155.5	18.1	95	0.0	15.0	2.5	4.5
MISSOURI 1C23	150.2	19.1	94	0.0	26.2	7.6	4.0
MISSOURI 64	153.1	19.2	90	0.0	8.4	6.0	3.8
MISSOURI 65-2	168.4	19.5	98	0.0	20.6	1.3	4.5
MISSOURI 66C	153.2	19.1	96	0.0	22.2	6.2	4.7
MISSOURI SX14W*	147.8	18.9	97	0.0	31.4	10.7	4.0
MISSOURI 447W*	157.8	21.1	92	0.0	36.1	1.2	4.7
MISSOURI PIPE 12*	163.6	21.8	89	9.1	35.4	0.0	5.0
US 13	130.1	18.5	94	0.0	58.1	14.1	5.0
	GROUP III MATURITY						
MCALLISTER SX6883	131.8	20.4	89	0.0	10.0	2.5	3.7
PIONEER 3188	174.7	20.4	90	0.0	43.2	0.0	4.7
PIONEER X2683 (3175)**	161.9	21.3	90	0.0	39.8	3.8	4.5
PAC SX29	145.0	18.6	90	0.0	35.5	2.6	4.7
MISSOURI 476W*	178.4	20.7	98	2.5	45.1	3.6	5.0
MISSOURI 916	143.8	20.4	84	0.0	27.1	2.6	5.0
MISSOURI 4C81W*	129.4	19.9	96	0.0	26.0	16.0	5.0
US 523W*	141.6	19.9	88	0.0	27.7	11.2	4.8
US 523W8*	132.8	20.9	88	2.8	33.0	8.3	5.2
MEAN	145.2	19.1	89	0.3	27.0	3.5	4.2

DIFFERENCES IN YIELD BETWEEN ANY TWO HYBRIDS OF LESS THAN 23.3 BUSHELS ARE NOT CONSIDERED SIGNIFICANT.
*WHITE HYBRID
**PERMANENT NUMBER DESIGNATION

Table 3C. Average performance of hybrids tested in District 3 for the three-year period 1966-1968.

Hybrid	2-YEAR AVERAGE[1] Acre Yield Bu.	Lodged Plants Root %	Lodged Plants Stalk %	Dropped Ears %	3-YEAR AVERAGE Acre Yield Bu.	Lodged Plants Root %	Lodged Plants Stalk %	Dropped Ears %
GROUP I MATURITY								
Asgrow ATC106	139.2	10.2	8.4	4.4	---	---	---	---
McCurdy 3X6	132.1	12.5	21.7	1.9	---	---	---	---
MFA B6	127.8	8.6	11.6	0.0	---	---	---	---
MFA B7	134.1	9.6	8.2	0.6	---	---	---	---
Northrup-King PX610	132.7	5.4	22.0	0.0	131.0	3.6	18.3	1.3
Pioneer 3505	147.0	1.3	7.0	0.0	137.8	0.9	9.8	0.4
Pioneer 3390	151.5	12.2	15.6	0.0	---	---	---	---
GROUP II MATURITY								
Bo-Jac X70	148.2	5.0	14.8	2.8	141.2	3.4	14.1	4.4
Bo-Jac X9	147.2	6.1	7.0	0.3	---	---	---	---
Ia-Mo SX17	141.5	7.0	20.4	1.2	---	---	---	---
Maygold 2036	159.1	11.3	10.1	0.8	141.4	7.5	9.8	1.2
McAllister SX-6509	148.4	4.6	8.8	0.7	---	---	---	---
McAllister SX-6584	157.8	5.2	12.0	0.6	---	---	---	---
McAllister 13-A	146.2	20.4	7.2	0.0	---	---	---	---
McCurdy H5-61	137.2	12.0	26.6	0.8	---	---	---	---
McCurdy HP5	132.7	2.2	20.3	0.0	---	---	---	---
Northrup-King PX616	132.0	9.2	20.1	1.0	131.4	6.1	15.3	2.3
Northrup-King PX674	135.0	11.4	24.5	3.4	123.5	7.6	21.4	4.1
Pioneer 321	141.5	6.6	18.7	2.6	136.0	4.4	15.9	3.0
Pioneer 3300	152.3	11.6	7.2	2.6	---	---	---	---
Pioneer 3306	138.7	9.7	7.4	0.7	142.6	6.5	6.0	1.1
Pioneer 3307	143.2	9.4	8.6	0.8	132.8	6.2	11.8	3.2
T. E. Bonusmaker S	134.6	4.8	11.5	1.4	---	---	---	---
Kansas 1639	142.6	4.0	20.8	3.0	130.6	2.6	20.2	6.4
Mo SX14W*	133.6	37.0	15.7	5.4	---	---	---	---
Mo 63	134.1	18.6	9.8	1.2	124.4	12.4	10.3	5.9
Mo 64	138.5	33.4	4.8	3.0	134.0	22.2	6.3	6.8
Mo 65-2	144.8	9.6	10.6	0.6	---	---	---	---
Mo 880	136.6	31.2	12.0	3.1	126.9	20.8	12.6	2.9
Mo 1023	136.0	26.8	13.1	5.0	128.8	17.8	10.5	8.5
US 13	134.6	9.7	34.6	7.7	128.6	17.8	30.6	8.3
GROUP III MATURITY								
PAG SX29	152.8	4.2	18.1	1.3	---	---	---	---
US 523W*	122.6	3.4	14.2	5.9	115.3	23.0	15.5	6.5
US 523WB*	119.4	22.2	18.1	4.4	119.4	14.8	21.0	6.8
Mean	139.9	11.6	14.4	2.0	130.9	10.4	14.7	4.3

* White hybrid

[1] The 2-year average is for the years 1967 and 1968.

TABLE 30. 1968 PERFORMANCE RECORD FOR HYBRIDS TESTED IN DISTRICT 3 AT A HIGHER POPULATION. TEST LOCATED NEAR WAYLAND, MISSOURI IN CLARK COUNTY. PLANTED MAY 4, 1968. HARVESTED OCTOBER 31, 1968. (EXP. 10)

HYBRID	ACRE YIELD BU.	MOISTURE IN GRAIN PCT	STAND PCT	LODGED PLANTS ROOT PCT	LODGED PLANTS STALK PCT	DROPPED EARS PCT	EAR HEIGHT GRADE
	GROUP I MATURITY						
ASGROW ATC 106	145.7	19.8	83	0.0	21.9	4.3	4.7
ASGROW ASC 112	125.9	20.1	80	0.0	28.1	0.0	4.8
ASGROW ASX 92	138.2	20.0	85	0.0	27.7	3.0	4.2
ASGROW ASC 91	153.5	19.4	90	0.0	17.0	0.0	4.0
NORTHRUP-KING PX 610	109.5	18.3	90	0.0	66.0	1.0	3.8
MCCURDY 3X6	128.0	17.7	90	0.0	58.6	0.9	4.3
MCCURDY HP5	102.6	19.0	84	0.0	69.8	1.0	4.3
MFA B6	130.7	18.1	84	0.0	35.3	2.0	3.7
MFA B7	160.7	18.6	86	0.0	22.1	1.0	3.8
PIONEER 3390	153.9	17.7	92	0.0	48.9	0.0	4.5
PIONEER 3505	153.2	18.1	83	0.0	48.0	1.0	3.8
PIONEER 3365	146.8	18.5	86	0.0	28.9	0.0	3.7
PIONEER 3545	128.0	18.0	91	1.0	55.3	0.0	4.2
T-E BONUSMAKER S	128.0	18.5	85	0.0	32.2	0.0	3.7
PAG SX31	166.3	16.8	92	0.0	24.3	2.9	4.5
	GROUP II MATURITY						
BC-JAC X70	162.1	18.3	95	0.0	31.1	2.8	4.3
BC-JAC X9	149.3	19.4	90	1.0	43.8	0.0	4.0
BC-JAC X7	159.3	20.9	87	0.0	34.7	0.0	4.0
BC-JAC X20	144.7	19.0	93	0.0	30.8	4.7	4.0
ICWA-MISSOURI SX-17	163.4	19.0	77	0.0	42.0	1.3	4.3
NORTHRUP-KING PX 616	109.4	19.0	86	0.0	55.5	0.0	4.2
NORTHRUP-KING PX 72	128.2	18.6	86	0.0	42.4	0.0	4.2
NORTHRUP-KING PX 674	129.0	19.2	88	2.8	40.9	2.8	4.5
MCCURDY H5-61	133.0	19.4	85	1.0	50.4	0.0	3.7
MFA V12	115.0	20.3	84	0.0	67.0	0.0	4.3
PIONEER 3306	159.3	18.3	85	0.0	28.0	3.1	4.0
PIONEER 3307	151.2	19.9	80	0.0	28.3	0.0	4.0
PIONEER 3199	155.7	19.7	78	0.0	50.2	1.2	4.8
PIONEER 321	135.1	19.5	85	0.0	46.9	1.1	4.7
PIONEER 3300	129.5	19.1	80	0.0	31.0	0.0	4.3
PIONEER 3308	120.6	18.8	85	0.0	47.1	3.1	4.5
PIONEER 3223	150.9	18.9	88	0.0	50.2	0.0	4.5
T-E CASHMAKER	149.7	19.6	80	0.0	31.3	0.0	4.2
EMBRO X5	127.6	19.8	78	0.0	34.1	1.2	4.7
FUNKS G4411	132.6	17.9	87	0.0	45.0	2.0	3.5
MISSOURI 63	106.2	18.8	92	0.0	28.4	5.7	4.7
MISSOURI 1023	117.7	19.0	85	0.0	27.7	4.1	4.3
MISSOURI 64	133.3	18.9	86	0.0	33.3	9.0	5.0
MISSOURI 88C	133.2	18.7	85	2.4	29.4	2.0	4.7
MISSOURI SX14W*	134.1	19.2	80	0.0	69.7	3.1	4.5
MISSOURI 447W*	158.7	20.9	92	0.9	44.0	3.8	4.8
US 13	121.7	18.7	91	0.0	66.4	1.1	5.0
	GROUP III MATURITY						
PIONEER 3188	149.9	21.0	80	0.0	63.2	1.0	4.7
PIONEER X2683(3175)**	168.4	20.8	91	1.8	36.0	1.0	4.7
PAG SX29	127.4	18.9	84	0.0	43.8	4.9	4.7
MISSOURI 476W*	132.6	20.5	88	0.0	56.9	0.0	5.3
MISSOURI 916	153.8	20.1	91	2.8	18.5	0.0	5.0
US 523W*	111.3	20.2	92	0.0	35.7	0.9	5.3
US 523WB*	119.8	20.5	80	3.3	34.8	7.6	5.2
MEAN	137.6	19.2	86	0.3	40.9	1.7	4.4

DIFFERENCES IN YIELD BETWEEN ANY TWO HYBRIDS OF LESS THAN 29.2 BUSHELS ARE NOT CONSIDERED SIGNIFICANT.
*WHITE HYBRID
**PERMANENT NUMBER DESIGNATION

Table 3E. Average performance of hybrids tested in District 3 under high populations for the three-year period 1966-1968.

Hybrid	2-YEAR AVERAGE[1] Acre Yield Bu.	Lodged Plants Root %	Lodged Plants Stalk %	Dropped Ears %	3-YEAR AVERAGE Acre Yield Bu.	Lodged Plants Root %	Lodged Plants Stalk %	Dropped Ears %
			GROUP I MATURITY					
Asgrow ATC106	154.4	24.8	11.4	2.4	---	---	---	---
McCurdy 3X6	130.0	40.0	30.8	1.4	---	---	---	---
MFA B6	122.4	41.2	18.4	1.0	---	---	---	---
MFA B7	147.8	34.7	11.6	0.5	---	---	---	---
Northrup-King PX610	121.0	32.8	33.8	1.2	121.5	21.9	31.1	2.8
Pioneer 3505	143.8	23.2	24.8	0.5	135.6	15.4	23.0	1.5
Pioneer 3390	150.6	35.0	25.0	0.0	---	---	---	---
			GROUP II MATURITY					
Bo-Jac X70	148.0	34.4	17.8	1.9	140.2	22.9	17.7	4.4
Bo-Jac X9	146.8	25.5	22.9	0.2	---	---	---	---
McCurdy H5-61	131.8	28.4	27.2	0.5	---	---	---	---
McCurdy HP5	118.6	29.1	36.2	1.5	---	---	---	---
Northrup-King PX616	124.1	35.9	28.5	1.0	126.0	23.9	26.9	3.9
Northrup-King PX674	121.0	40.6	21.4	1.9	116.2	27.1	19.9	3.4
Pioneer 321	137.8	37.6	24.2	0.8	129.5	25.1	24.8	1.8
Pioneer 3300	133.9	40.1	16.0	0.2	---	---	---	---
Pioneer 3306	156.4	34.0	15.0	1.6	150.6	22.7	13.9	1.8
Pioneer 3307	138.6	44.0	15.2	0.2	132.4	29.3	18.1	2.0
T. E. Bonusmaker S	125.8	42.6	16.6	0.0	---	---	---	---
Mo SX14W*	110.8	48.2	34.8	1.8	---	---	---	---
US 13	118.4	37.6	34.0	0.8	117.4	25.1	30.5	3.4
			GROUP III MATURITY					
PAG SX29	138.9	26.4	22.4	2.4	---	---	---	---
Mo 476W*	120.4	48.2	28.4	0.2	119.4	32.1	28.7	1.3
Mean	133.7	35.6	23.5	1.0	128.9	24.6	23.5	2.6

*White hybrid

[1] The 2-year average is for the years 1967 and 1968.

DISTRICT 4

Results for District 4 are reported in tables 4A to 4C.

An average yield of 88.7 bushels per acre was harvested from a stand of 14,300 plants. Desired stand was 15,700. Yields ranged from 63.0 to 136.0 bushels per acre.

Total rainfall for the period May 1 through September 15 was 17.97 inches. There was one dry period of 40 days from June 6 to July 15. Temperatures averaged 2.3 degrees below normal. There were no days when the temperature reached or exceeded 100 F.

Stalk lodging averaged 11.2 percent over all entries. Root lodging was not important except in a few cases where the western corn rootworm had decapitated the roots. Weeds were not a problem.

Table 4A. Corn production data for 1966, 1967, and 1968, and for the 10-year period, 1958-1967, in District 4.

Period	Farmland Planted to Corn (%)	Total Corn Acreage	Yield, bu/ac	
			District Average	Yield Trial
1968	10.4*	364,000*	80*	88.7
1967	10.8	374,000	64	118.2
1966	10.6	370,000	58	80.5
1958-1967 Average	10.9	381,000	57	

*Preliminary estimate as of December 19, 1968.

TABLE 48. 1968 PERFORMANCE RECORD FOR HYBRIDS TESTED IN DISTRICT 4, NEAR HIGGINSVILLE, MISSOURI IN LAFAYETTE COUNTY. PLANTED MAY 14, 1968. HARVESTED NOVEMBER 26, 1968. (EXP. 4)

HYBRID	ACRE YIELD BU.	MOISTURE IN GRAIN PCT	STAND PCT	LODGED PLANTS ROOT PCT	LODGED PLANTS STALK PCT	DROPPED EARS PCT	EAR HEIGHT GRADE
GROUP I MATURITY							
ASGROW ATC 106	73.7	18.6	82	0.0	8.1	7.9	3.7
ASGROW ASC 112	84.2	19.2	84	0.0	13.1	8.0	3.5
NORTHRUP-KING PX 63	63.0	17.5	81	3.6	3.6	0.0	2.5
NORTHRUP-KING PX 621	93.4	17.7	94	0.0	7.1	0.0	3.2
MFA 87	78.2	17.7	82	0.0	4.0	0.9	3.0
PIONEER 3350	100.5	17.1	98	0.0	14.5	1.7	3.5
PIONEER 3505	73.5	17.5	87	0.0	10.6	3.8	2.8
PIONEER 3365	89.9	17.6	95	0.0	7.7	0.9	3.0
T-E BONUSMAKER S	78.3	18.0	96	0.0	5.1	3.5	2.8
PAG SX31	79.4	16.8	80	0.0	20.4	3.2	3.2
GROUP II MATURITY							
NORTHRUP-KING PX 635	78.7	17.6	99	0.0	11.8	4.2	2.8
NORTHRUP-KING PX 616	87.7	17.2	87	3.5	7.8	0.9	3.0
NORTHRUP-KING PX 72	88.8	16.8	93	0.0	12.1	0.9	3.0
NORTHRUP-KING PX 674	76.0	18.3	95	2.7	15.8	7.9	3.2
MAYCELE 2026	75.4	18.2	97	3.4	10.2	1.7	3.5
MAYCELE 29X	97.1	18.6	94	4.3	9.7	5.5	3.7
MAYCELE X4	108.0	17.7	95	0.0	9.6	2.7	3.3
MAYCELE X2C	72.9	18.2	85	0.0	3.6	0.9	3.5
MAYCELE X19	106.3	18.3	92	0.0	7.2	0.9	3.3
MCCURDY 9CC	103.0	18.1	97	6.0	7.7	4.3	3.3
MCCURDY 7X11C	93.2	17.8	96	0.0	16.3	1.7	3.3
MCCURDY HPE	95.2	17.6	94	0.0	8.7	1.7	3.8
MCCURDY H3-66	93.7	17.2	92	0.0	12.6	0.0	3.5
MFA V12	86.0	17.3	92	0.0	5.6	0.9	3.0
MFA K6	67.3	17.9	94	14.1	8.8	4.4	3.3
PRINCETON SX8C4	87.3	18.1	94	0.0	5.1	15.0	3.7
PRINCETON SX836	114.8	17.7	91	0.0	7.3	3.6	3.3
PIONEER 3306	102.9	17.9	91	0.0	8.0	1.9	3.3
PIONEER 3307	101.3	18.1	93	0.0	4.5	5.3	3.3
PIONEER 3199	110.1	18.3	95	0.0	6.1	3.4	3.8
PIONEER 321	97.3	17.4	92	0.0	22.2	1.9	3.5
PIONEER 330C	103.6	18.1	94	0.0	13.3	2.7	3.7
PIONEER 330F	95.4	17.3	91	0.0	3.7	7.6	3.8
PIONEER 3335	102.9	17.7	93	0.0	8.0	0.9	3.2
T-E CASHMAKER	102.3	17.8	91	0.0	6.3	1.8	2.8
T-E C2CYA	84.6	18.5	96	0.0	7.8	12.9	3.2
T-E MINTMAKER	64.9	17.7	79	0.0	14.8	5.6	3.0
FUNKS G4411	72.3	17.0	94	8.7	6.1	0.8	3.0
KANSAS 1639	72.7	17.6	96	6.7	35.5	4.5	3.3
MISSOURI 63	68.1	17.2	93	23.3	11.5	9.9	3.8
MISSOURI 1023	84.8	17.6	94	13.5	11.4	8.9	3.3
MISSOURI 64	82.8	17.6	91	0.0	7.3	3.7	3.5
MISSOURI 66C	87.0	17.7	93	0.0	27.0	5.1	3.3
LS 13	67.3	17.2	89	11.5	46.0	10.5	3.5
GROUP III MATURITY							
PIONEER 3168	88.6	18.3	89	2.6	8.0	4.6	3.7
PIONEER X2683(3175)**	93.9	18.5	92	0.0	10.3	3.6	3.7
PIONEER X5349	136.0	19.3	92	0.0	2.8	0.0	3.7
PAG SX29	87.2	17.7	92	0.0	17.1	4.5	3.3
MISSOURI 476W*	96.1	18.5	96	24.5	16.5	3.4	3.8
MEAN	88.7	17.8	91	2.6	11.2	3.9	3.3

DIFFERENCES IN YIELD BETWEEN ANY TWO HYBRIDS OF LESS THAN 16.7 BUSHELS ARE NOT CONSIDERED SIGNIFICANT.
*WHITE HYBRID
**PERMANENT NUMBER DESIGNATION

Table 4C. Average performance of hybrids tested in District 4 for the three-year period 1966-1968.

Hybrid	2-YEAR AVERAGE[1] Acre Yield Bu.	Lodged Plants Roots %	Lodged Plants Stalk %	Dropped Ears %	3-YEAR AVERAGE Acre Yield Bu.	Lodged Plants Root %	Lodged Plants Stalk %	Dropped Ears %
GROUP I MATURITY								
Asgrow ASC112	104.9	0.0	9.6	4.4	---	---	---	---
MFA B7	96.4	0.0	4.0	0.8	---	---	---	---
Northrup-King PX63	93.6	1.8	8.4	0.4	---	---	---	---
Pioneer 3390	114.7	0.0	7.9	0.8	---	---	---	---
GROUP II MATURITY								
Maygold 2036	97.9	1.7	5.8	1.2	90.4	1.1	7.1	2.6
Maygold 29X	114.0	2.2	6.8	3.0	105.8	3.2	9.9	2.5
McCurdy 900	111.2	3.0	9.2	2.2	---	---	---	---
McCurdy 7X11E	106.4	0.0	15.0	1.2	---	---	---	---
McCurdy HP8	106.8	0.0	9.8	0.8	---	---	---	---
MFA K6	92.8	7.1	8.2	2.6	86.9	6.7	7.9	5.1
Northrup-King PX616	101.6	1.8	7.8	1.2	---	---	---	---
Northrup-King PX674	102.6	1.4	11.2	5.0	97.0	4.4	13.1	4.6
Pioneer 321	105.6	0.0	17.9	1.3	96.0	0.0	18.4	3.2
Pioneer 3300	117.8	0.0	11.2	2.4	105.2	0.0	13.5	2.0
Pioneer 3306	121.4	0.0	4.4	1.0	120.3	0.0	6.7	1.5
Pioneer 3307	110.4	0.0	7.0	3.4	107.5	0.0	14.2	2.2
Princeton SX804	106.0	0.0	12.6	8.2	94.8	2.0	17.7	10.4
T. E. E20YA	95.6	0.0	8.6	4.2	94.2	0.0	9.8	5.2
T. E. Bonusmaker S	100.8	0.0	9.0	1.8	---	---	---	---
Kansas 1639	91.2	3.4	23.8	5.2	83.4	2.2	22.5	4.8
Mo 63	97.2	11.6	7.8	5.3	89.6	9.5	11.0	6.6
Mo 64	111.0	0.0	8.2	3.2	101.4	1.9	8.8	2.6
Mo 880	97.8	0.0	15.8	2.6	85.7	0.0	13.6	1.7
Mo 1023	98.8	6.8	7.8	5.2	94.3	4.5	10.7	6.4
US 13	90.6	6.4	37.0	7.4	85.0	4.3	34.8	7.6
GROUP III MATURITY								
PAG SX29	103.4	0.0	13.2	2.2	---	---	---	---
Mo 476W*	100.0	12.2	16.0	2.0	88.9	8.2	20.2	1.4
Mean	103.4	2.2	11.2	2.9	95.7	2.8	14.1	4.1

*White hybrid

[1] The 2-year average is for the years 1967 and 1968.

DISTRICT 5

Data from District 5 are shown in tables 5A through 5C.

The average yield for this test was 108.4 bushels per acre with a range of 78.3 to 136.2 bushels per acre. Harvest stand was 12,200 plants per acre. A perfect stand would have been 13,000 plants per acre.

Rainfall for the period May 1 to September 15 was 19.46 inches. There were two dry periods: July 2 to July 17 and August 9 to August 29. Average temperatures deviated only slightly from normal (-0.8 degrees) for the same period. There were no days where the recorded temperature exceeded 100 F.

Root lodging was not of major importance, but stalk lodging averaged 21.5 percent over all hybrids. The percent stalk lodging ranged from 3.5 to 49.3. Lodging was mainly due to European corn borer and secondary stalk rot fungi (Diplodia maydis and Gibberella zeae). Weeds were not a problem.

Table 5A. Corn production data for 1966, 1967, and 1968, and the 10-year period, 1958-1967, in District 5.

Period	Farmland Planted to Corn (%)	Total Corn Acreage	Yield, bu/ac	
			District Average	Yield Trial
1968	7.2*	446,000*	85*	108.4
1967	6.8	422,000	68	86.2
1966	6.6	404,000	58	109.9
1958-1967 Average	8.0	494,000	56	

*Preliminary estimate as of December 19, 1968.

TABLE 58. 1968 PERFORMANCE RECORD FOR HYBRIDS TESTED IN DISTRICT 5, NEAR COLUMBIA, MISSOURI IN BOONE COUNTY. PLANTED MAY 16, 1968. HARVESTED OCT. 29, 1968. (EXP. 5)

HYBRID	ACRE YIELD BU.	MOISTURE IN GRAIN PCT	STAND PCT	LODGED PLANTS ROOT PCT	LODGED PLANTS STALK PCT	DROPPED EARS PCT	EAR HEIGHT GRADE
GROUP I MATURITY							
MFA E7	88.1	21.5	87	0.0	17.6	3.8	3.8
PIONEER 3390	124.2	18.5	98	0.0	16.7	3.4	4.2
PIONEER 3505	117.9	20.4	97	0.0	19.4	3.4	4.0
PIONEER 3369	106.0	20.2	95	0.0	3.5	1.1	3.7
T-E MONUMAKER S	101.1	20.8	96	0.0	17.3	3.4	3.7
PAG SX31	95.6	18.0	97	0.0	25.1	5.7	3.7
GROUP II MATURITY							
NORTHRUP-KING PX 635	96.9	20.9	100	0.0	22.2	1.1	3.5
NORTHRUP-KING PX 616	97.9	20.4	92	0.0	23.3	2.5	4.0
NORTHRUP-KING PX 72	106.2	20.1	97	0.0	36.5	2.2	4.0
NORTHRUP-KING PX 674	105.6	21.6	92	0.0	8.4	5.9	4.0
MAYCOLL 2036	111.0	21.5	93	0.0	13.3	1.3	4.2
MAYCOLL 29X	112.9	21.5	96	0.0	11.5	7.9	4.5
MAYCOLL X9	122.7	20.1	93	0.0	17.9	1.2	4.2
MAYCOLL X2C	116.8	20.6	96	0.0	5.8	4.6	4.0
MCCURDY 9CC	97.4	21.0	88	0.0	25.6	1.2	4.2
MCCURDY 7X11C	90.0	20.6	89	0.0	28.8	6.1	3.7
MCCURDY HPE	114.5	19.7	93	0.0	28.6	2.3	5.0
MCCURDY H3-66	100.2	19.9	89	0.0	31.5	3.7	4.8
MFA V12	110.6	19.3	94	0.0	23.5	1.2	4.0
MFA K6	92.1	21.7	84	0.0	11.5	1.2	3.8
PRINCETON SX8C4	103.0	21.9	96	0.0	10.4	11.4	4.3
PRINCETON SX836	118.7	20.5	98	0.0	20.2	0.0	4.3
PIONEER 33C6	116.8	20.2	95	0.0	16.6	1.3	4.5
PIONEER 33C7	118.6	20.9	98	0.0	10.1	1.2	4.8
PIONEER 3199	102.2	21.2	82	0.0	14.0	3.8	4.5
PIONEER 321	106.7	20.0	95	0.0	44.0	4.7	4.5
PIONEER 33CC	121.2	20.4	94	0.0	13.8	1.3	4.5
PIONEER 33C8	103.6	20.2	100	0.0	30.0	13.3	4.3
PIONEER 3333	113.0	19.6	97	0.0	13.8	1.2	4.2
T-E CASHMAKER	94.0	21.5	96	0.0	31.0	2.3	3.7
T-E E2CYA	99.3	20.8	95	0.0	18.6	4.7	4.0
T-E MINTMAKER	78.3	20.8	73	0.0	19.6	8.8	3.7
FUNKS G4411	98.0	18.7	96	0.0	24.1	3.4	4.0
KANSAS 1639	86.1	19.8	96	0.0	49.3	10.5	4.0
MISSOURI 62	119.9	20.3	97	0.0	26.2	3.4	4.5
MISSOURI 1C73	112.7	21.3	97	1.1	7.9	7.9	4.0
MISSOURI 64	131.2	20.8	98	0.0	17.9	4.4	4.7
MISSOURI 8EC	107.9	20.4	97	0.0	26.3	9.3	4.5
MISSOURI SX14W*	107.2	18.7	96	0.0	16.1	3.4	4.5
MISSOURI 447W*	108.6	21.5	98	0.0	21.4	1.2	4.8
US 13	89.9	19.8	100	0.0	37.8	15.6	5.0
GROUP III MATURITY							
PIONEER 3188	122.0	21.4	98	0.0	9.0	4.4	4.3
PIONEER X2683 (3175)**	129.6	23.3	100	0.0	34.4	4.4	4.5
PIONEER X5349	136.2	22.3	98	0.0	13.5	3.3	4.5
PAG SX29	107.8	20.5	96	0.0	17.1	4.6	4.3
MISSOURI 476W*	115.0	21.2	94	0.0	27.2	0.0	5.2
MISSOURI 916	132.3	21.0	96	0.0	22.8	0.0	4.8
US 523W*	112.9	20.4	98	0.0	30.4	3.4	5.0
US 523WB*	111.7	21.5	100	0.0	40.6	4.2	5.0
MEAN	108.4	20.6	94	0.0	21.5	4.1	4.3

DIFFERENCES IN YIELD BETWEEN ANY TWO HYBRIDS OF LESS THAN 13.9 BUSHELS ARE NOT CONSIDERED SIGNIFICANT.
*WHITE HYBRID
**PERMANENT NUMBER DESIGNATION

Table 5C. Average performance of hybrids tested in District 5 for the three-year period 1966-1968.

Hybrid	2-YEAR AVERAGE[1] Acre Yield Bu.	Lodged Plants Root %	Lodged Plants Stalk %	Dropped Ears %	3-YEAR AVERAGE Acre Yield Bu.	Lodged Plants Root %	Lodged Plants Stalk %	Dropped Ears %
GROUP I MATURITY								
MFA B7	84.3	0.0	32.4	1.9	---	---	---	---
Pioneer 3390	109.8	0.0	21.1	1.7	---	---	---	---
GROUP II MATURITY								
Maygold 2036	102.2	0.0	10.7	0.6	106.0	0.3	8.2	0.7
Maygold 29X	103.6	0.5	10.6	4.9	110.8	0.3	8.2	3.5
McCurdy 900	91.9	0.6	21.4	1.7	---	---	---	---
McCurdy 7X11E	91.4	0.0	38.0	3.0	---	---	---	---
McCurdy HP8	106.4	0.0	25.8	1.2	---	---	---	---
MFA K6	91.3	0.0	14.3	5.8	97.4	1.1	10.9	2.4
Northrup-King PX616	85.2	0.6	16.6	1.2	---	---	---	---
Northrup-King PX674	98.4	0.0	19.0	3.0	99.6	3.7	13.9	3.2
Pioneer 321	97.1	0.0	38.4	3.6	101.8	0.0	28.3	2.7
Pioneer 3300	104.9	0.0	30.3	0.6	109.4	0.0	23.9	1.3
Pioneer 3306	110.2	0.0	17.2	0.6	115.6	0.0	15.5	0.7
Pioneer 3307	101.6	0.0	18.9	1.1	110.5	0.0	14.8	1.6
Pioneer 3199	101.8	0.0	14.4	1.9	---	---	---	---
Princeton SX-804	94.2	0.0	39.0	6.7	100.5	0.6	27.7	8.3
Taylor Evans E20YA	95.2	0.0	26.8	9.8	100.7	0.0	18.7	2.8
T. E. Bonusmaker S	93.3	0.0	31.2	1.7	---	---	---	---
Kansas 1639	81.7	0.0	35.4	5.2	86.0	0.0	28.5	3.8
Mo SX14W*	89.9	0.0	13.4	1.8	---	---	---	---
Mo 63	104.9	0.0	27.4	1.7	106.4	0.9	19.5	2.1
Mo 64	102.6	0.0	25.8	3.5	108.4	0.0	18.8	2.9
Mo 880	96.0	0.0	14.9	4.6	96.1	0.0	11.7	4.0
Mo 1023	100.6	0.6	17.4	4.0	103.2	1.2	12.7	3.7
US 13	87.2	0.0	45.8	8.8	91.6	0.8	40.5	6.1
GROUP III MATURITY								
PAG SX29	91.6	0.0	36.8	2.2	---	---	---	---
Mo 476W*	97.6	0.0	34.2	0.4	101.0	0.3	34.0	2.1
US 523W*	99.0	0.0	43.4	1.7	102.2	9.2	38.8	1.1
US 523WB*	95.4	0.0	38.9	2.7	103.2	11.0	32.3	4.5
Mean	96.9	0.1	26.2	3.0	102.6	1.5	21.4	3.0

*White hybrid

[1] The 2-year average is for the years 1967 and 1968.

DISTRICT 6

Results for test conducted in District 6 are found in tables 6A through 6D.

Two plant populations were tested at this location. The regular test was planted at 15, 700 plants per acre, and the high population test was 20, 400 plants. Yields in the regular test averaged 94. 0 bushels and ranged from 76. 5 to 117. 0 bushels per acre from a harvest stand of 13, 650 plants. The high population test yielded an average of 101. 6 bushels per acre from a harvest stand of 17, 200 plants. The yield range was from 79. 9 to 134. 8 bushels per acre.

Rainfall was 13. 56 inches during the period May 1 to September 15. Yields were reduced by moisture stress. There was one day when the recorded temperature reached or exceeded 100 F. There were two dry periods: June 2 to June 22 and June 27 to July 14.

Stalk lodging was relatively low on the regular test, but increased by a large margin on the high population test. Root lodging was not important. Weeds did not present a serious problem.

Table 6A. Corn production data for 1966, 1967, and 1968, and the 10-year period, 1958-1967, in District 6.

Period	Farmland Planted to Corn (%)	Total Corn Acreage	Yield bu/ac	
			District Average	Yield Trial
1968	8. 2*	261, 000*	78*	97. 8
1967	7. 5	239, 000	79	133. 2**
1966	7. 6	240, 000	60	107. 7
1958-1967 Average	9. 3	295, 000	59	

* Preliminary estimate as of December 19, 1968.
** High population test yield.

TABLE 6B. 1968 PERFORMANCE RECORD FOR HYBRIDS TESTED IN DISTRICT 6, NEAR LABADIE, MISSOURI IN FRANKLIN COUNTY. PLANTED APRIL 29, 1968. HARVESTED OCT. 17, 1968. (EXP. 6)

HYBRID	ACRE YIELD BU.	MOISTURE IN GRAIN PCT	STAND PCT	LODGED PLANTS ROOT PCT	LODGED PLANTS STALK PCT	DROPPED EARS PCT	EAR HEIGHT GRADE
	GROUP I MATURITY						
MFA E7	82.5	20.9	91	2.7	0.9	0.0	3.2
PIONEER 3390	90.7	18.6	89	1.1	1.7	0.0	3.5
PIONEER 3505	79.5	19.3	86	0.0	2.0	0.0	3.0
PIONEER 3365	95.1	19.7	85	0.0	1.0	0.0	3.0
T-E PENNSMAKER S	83.6	20.5	92	0.0	2.8	0.0	3.2
PAG SX31	78.0	17.8	70	0.0	3.1	0.0	3.0
	GROUP II MATURITY						
HOLDEN 033	112.9	22.4	84	4.2	0.0	0.0	3.2
HOLDEN 018	91.7	23.3	87	5.9	2.9	0.0	3.2
HOLDEN 022A	95.9	22.1	84	3.1	1.7	0.0	3.2
HOLDEN 008	84.6	21.4	90	0.9	0.0	0.0	3.7
NORTHRUP-KING PX 616	96.4	19.5	86	0.0	5.3	0.0	3.5
NORTHRUP-KING PX 72	84.9	19.7	84	20.8	3.0	0.0	3.2
NORTHRUP-KING PX 674	87.4	20.3	84	0.9	6.0	0.0	3.3
MCCURDY 9CC	99.3	20.7	95	0.0	0.0	0.0	3.8
MCCURDY 7X11E	96.3	20.3	83	1.1	3.2	0.0	3.2
MCCURDY HPE	107.1	18.8	85	0.0	1.1	0.0	3.8
MCCURDY H3-66	84.9	19.1	85	4.0	1.0	0.0	3.3
MFA V12	91.6	21.2	87	1.0	0.9	0.0	4.0
MFA K6	81.4	20.2	84	0.0	17.8	0.9	3.3
PRINCETON SX804	107.5	21.2	94	1.7	2.5	1.7	3.5
PRINCETON SX836	104.1	20.5	84	0.0	5.1	0.0	4.0
PRINCETON SX805	103.9	20.1	82	0.0	2.2	0.0	3.7
PIONEER 3306	115.9	21.4	93	0.0	0.9	0.0	3.7
PIONEER 3307	91.7	21.5	86	1.8	1.8	0.0	3.7
PIONEER 3195	97.9	21.4	78	0.0	1.1	0.0	4.2
PIONEER 321	80.3	20.1	84	1.0	6.7	0.0	3.2
PIONEER 3300	99.4	20.8	86	0.0	2.9	1.0	3.7
PIONEER 3308	101.3	20.9	91	0.0	0.8	0.0	3.8
PIONEER 3333	94.9	19.7	84	0.0	4.3	1.2	3.2
T-E CASHMAKER	76.8	20.1	84	9.1	3.2	0.9	3.0
T-E EZCYA	96.6	21.6	89	2.8	5.6	0.0	3.7
T-E MINTMAKER	89.0	19.2	85	0.0	8.6	0.0	3.5
FUNKS G4411	76.5	18.2	79	0.0	7.1	0.0	3.0
KANSAS 1639	81.5	18.9	88	0.0	8.4	0.0	3.7
MISSOURI 63	101.3	20.1	94	0.0	2.5	0.0	4.2
MISSOURI 1023	91.4	20.6	89	0.0	4.6	0.0	3.5
MISSOURI 64	98.2	19.9	94	2.7	0.9	0.0	3.7
MISSOURI 88C	78.4	19.9	94	0.0	2.7	0.0	3.3
MISSOURI 447W*	106.6	21.5	93	2.7	3.5	0.0	4.3
LS 13	87.4	19.1	93	0.0	9.3	1.8	4.0
	GROUP III MATURITY						
PRINCETON SX927	91.1	23.1	78	0.0	0.0	0.0	3.8
PRINCETON SX95C	117.0	22.9	92	1.8	0.9	0.0	4.2
PRINCETON S20A	86.4	22.3	82	4.4	7.2	0.0	3.3
PRINCETON S90B	92.3	22.1	78	9.5	14.5	0.0	3.7
PIONEER 3188	110.3	21.7	98	0.0	5.1	0.0	4.0
PIONEER X2683(3175)**	109.9	22.0	95	0.9	1.8	0.9	3.8
PAG SX29	85.2	19.7	78	0.0	5.6	0.0	3.5
MISSOURI 476W*	111.3	21.8	92	2.9	4.5	0.0	4.0
MISSOURI 916	99.2	22.1	95	0.9	0.8	0.0	4.0
MEAN	94.0	20.6	87	1.8	3.7	0.2	3.6

DIFFERENCES IN YIELD BETWEEN ANY TWO HYBRIDS OF LESS THAN 20.2 BUSHELS ARE NOT CONSIDERED SIGNIFICANT.

*WHITE HYBRID

**PERMANENT NUMBER DESIGNATION

Table 6C. Average performance of hybrids tested in District 6 for the two years 1966 and 1968.

2-YEAR AVERAGE

Hybrid	Acre Yield Bu.	Lodged Plants Root %	Lodged Plants Stalk %	Dropped Ears %
GROUP II MATURITY				
MFA K6	94.4	0.0	13.1	1.1
Pioneer 321	85.5	0.5	9.5	0.4
Pioneer 3300	108.1	0.0	2.1	0.5
Pioneer 3306	109.3	0.0	3.0	0.0
Pioneer 3307	105.2	0.9	3.2	0.0
Princeton SX804	113.6	1.2	2.2	1.5
Princeton SX809	109.2	0.0	3.0	0.4
Taylor Evans E20YA	104.2	1.4	6.0	0.0
Kansas 1639	85.5	0.0	9.0	1.1
Mo 63	105.5	0.0	3.5	1.0
Mo 64	105.8	1.4	3.8	0.4
Mo 447W*	101.6	1.4	7.7	0.0
Mo 880	93.0	0.0	2.0	0.0
Mo 1023	87.2	0.0	7.0	0.6
US 13	90.0	0.0	11.8	1.2
Mean	99.9	0.4	5.8	0.5

*White hybrid

TABLE 6C. 1968 PERFORMANCE RECORD FOR HYBRIDS TESTED IN DISTRICT 6 AT A HIGHER POPULATION. TEST LOCATED NEAR LABADIE, MISSOURI IN FRANKLIN COUNTY. PLANTED APRIL 29, 1968. HARVESTED OCTOBER 17, 1968. (EXP. 11)

HYBRID	ACRE YIELD BU.	MOISTURE IN GRAIN PCT	STAND PCT	LODGED PLANTS ROOT PCT	LODGED PLANTS STALK PCT	DROPPED EARS PCT	EAR HEIGHT GRADE
GROUP I MATURITY							
MFA P7	112.5	19.6	92	2.1	6.2	0.0	3.7
PIONEER 339C	98.7	18.4	85	0.8	14.1	0.7	3.8
PIONEER 35C5	94.7	18.2	85	0.0	7.6	0.0	3.7
PIONEER 3365	94.3	18.9	82	0.8	8.5	0.0	3.5
T-E BEAUSMAKER S	81.7	19.3	82	1.5	3.2	0.0	3.5
PAG SX31	98.3	17.5	78	0.0	11.3	0.0	3.7
GROUP II MATURITY							
NORTHRUP-KING PX 616	89.3	19.1	92	0.0	13.1	0.7	3.8
NORTHRUP-KING PX 72	90.9	19.3	82	1.5	5.1	0.0	3.8
NORTHRUP-KING PX 674	98.7	20.5	85	0.7	10.3	0.7	3.7
MCCURDY 9CC	97.3	20.4	92	0.7	10.5	0.0	3.8
MCCURDY 7X11E	103.8	19.7	83	1.6	17.0	0.0	3.7
MCCURDY HPE	91.9	18.6	87	0.0	9.5	0.0	4.2
MCCURDY H3-66	100.5	18.7	82	1.6	14.0	0.0	4.0
MFA V12	91.4	20.2	87	2.2	4.4	0.0	3.7
PRINCETON SX8C4	116.8	20.7	83	7.6	8.9	1.6	4.0
PRINCETON SX836	120.0	20.4	86	0.7	14.0	0.7	4.3
PIONEER 33C6	109.7	20.5	85	0.0	10.7	0.0	4.2
PIONEER 33C7	92.4	20.2	80	0.0	4.4	0.9	3.7
PIONEER 3199	114.4	21.1	79	0.0	13.8	0.0	4.3
PIONEER 321	95.0	19.6	84	0.8	13.6	0.8	3.7
PIONEER 33CC	99.7	20.3	82	0.0	11.5	0.0	3.8
PIONEER 33C8	114.7	20.1	88	0.0	6.6	1.5	4.0
PIONEER 3333	110.3	19.1	86	0.0	9.5	0.0	3.5
T-E CASHMAKER	82.0	19.6	76	2.6	6.6	0.0	3.3
T-E E2CYA	107.4	19.8	89	0.0	14.4	0.0	3.7
FUNKS G4411	96.2	17.8	87	0.0	8.1	0.0	4.2
MISSOURI 62	103.4	19.5	87	2.1	3.8	0.0	4.0
MISSOURI 1023	100.8	19.8	96	0.0	14.6	0.0	3.5
MISSOURI 64	98.1	20.3	82	3.4	17.5	1.6	4.0
MISSOURI 88C	79.9	20.1	90	0.6	9.0	0.0	3.8
MISSOURI 447W*	120.4	22.0	88	2.2	14.7	0.0	4.0
US 13	93.3	18.3	80	0.0	29.8	0.0	4.0
GROUP III MATURITY							
PIONEER 3188	118.6	20.3	83	5.3	14.1	0.0	4.2
PIONEER X2683 (3175)**	134.8	20.8	85	2.5	3.6	0.0	4.2
PAG SX29	105.8	19.5	82	0.7	6.4	0.0	4.0
MISSOURI 476W*	100.3	21.9	85	13.0	16.3	0.0	3.8
MEAN	101.6	19.7	84	1.5	10.7	0.3	3.9

DIFFERENCES IN YIELD BETWEEN ANY TWO HYBRIDS OF LESS THAN 13.7 BUSHELS ARE NOT CONSIDERED SIGNIFICANT.
*WHITE HYBRID
**PERMANENT NUMBER DESIGNATION

Table 6E. Average performance of hybrids tested in District 6 under high population for the three year period 1966-1968.

Hybrid	2-YEAR AVERAGE[1] Acre Yield Bu.	Lodged Plants Root %	Lodged Plants Stalk %	Dropped Ears %	3-YEAR AVERAGE Acre Yield Bu.	Lodged Plants Root %	Lodged Plants Stalk %	Dropped Ears %
			GROUP I MATURITY					
MFA B7	119.6	1.0	3.8	0.5	---	---	---	---
Pioneer 3390	119.8	0.4	10.8	0.4	---	---	---	---
			GROUP II MATURITY					
McCurdy 900	111.5	0.4	14.3	1.0	---	---	---	---
McCurdy 7X11E	122.2	0.8	17.5	0.2	---	---	---	---
McCurdy HP8	121.3	0.0	15.3	0.2	---	---	---	---
Northrup-King PX616	119.6	0.0	12.0	0.6	---	---	---	---
Northrup-King PX674	122.4	0.4	8.6	0.6	126.2	0.2	9.5	1.1
Pioneer 321	117.1	0.4	13.8	0.9	120.2	0.6	15.5	0.6
Pioneer 3300	119.8	0.0	9.4	0.6	124.2	2.7	6.7	0.5
Pioneer 3306	125.4	0.0	11.6	0.2	129.0	0.0	10.2	0.3
Pioneer 3307	112.5	0.0	5.4	1.0	121.6	0.9	7.1	0.6
Princeton SX-804	132.8	3.8	10.5	1.6	133.5	3.0	10.2	1.9
Taylor Evans E20YA	119.6	0.0	16.2	1.0	119.6	0.0	17.5	1.0
T. E. Bonusmaker S	102.6	0.8	4.2	0.0	---	---	---	---
US 13	114.1	0.0	28.0	1.8	115.3	0.5	27.6	2.5
			GROUP III MATURITY					
PAG SX29	119.2	0.4	6.6	0.8	---	---	---	---
Mo 476W*	118.0	6.5	23.5	0.8	122.5	8.3	23.4	0.5
Mean	118.7	0.9	12.4	0.7	123.6	1.8	14.2	1.0

*White hybrid

[1] The 2-year average is for the years 1967 and 1968.

DISTRICT 7

Data for District 7 are presented in tables 7A through 7C.

An average yield of 89.5 bushels per acre was produced from a harvest stand of 10,950 plants. A perfect stand would have been 11,800 plants per acre. Yields ranged from 72.2 to 107.5 bushels per acre.

Rainfall was 18.68 inches from May 1 through September 15. Dry periods were recorded from June 3 to June 24, July 14 to July 31, and September 1 to September 15. Average temperature for the above period was 2.6 degrees below normal. There were no days on which the recorded temperature reached or exceeded 100 F.

All other factors were of minor importance in influencing hybrid yields.

Table 7A. Corn production data for 1966, 1967, and 1968, and for the 10-year period, 1958-1967, in District 7.

Period	Farmland Planted to Corn (%)	Total Corn Acreage	Yield, bu/ac	
			District Average	Yield Trial
1968	3.0*	90,000*	69*	89.5
1967	2.6	76,000	63	88.0
1966	3.2	94,000	34	57.4
1958-1967 Average	4.1	123,000	60	

*Preliminary estimate as of December 19, 1968.

TABLE 73. 1969 PERFORMANCE RECORD FOR HYBRIDS TESTED IN DISTRICT 7, AT THE SOUTHWEST RESEARCH CENTER IN LAWRENCE COUNTY. PLANTED APRIL 18, 1968. HARVESTED OCTOBER 1, 1968. (EXP. 7)

HYBRID	ACRE YIELD BU.	MOISTURE IN GRAIN PCT	STAND PCT	LODGED PLANTS ROOT PCT	LODGED PLANTS STALK PCT	DROPPED EARS PCT	EAR HEIGHT GRADE
	GROUP I MATURITY						
ASGROW ATC 106	89.0	21.5	94	2.4	0.0	0.0	3.3
ASGROW ASC 112	95.0	21.9	89	6.1	0.0	1.3	3.3
ASGROW ASX 92	86.6	21.2	91	0.0	0.0	0.0	3.0
ASGROW ASC 91	78.8	20.9	95	10.4	1.1	0.0	2.8
NORTHRUP-KING PX 63	79.3	19.5	89	6.2	0.0	0.0	2.8
NORTHRUP-KING PX 610	72.2	18.5	89	0.0	2.4	1.2	2.7
PIONEER 3390	96.4	18.4	100	3.3	2.2	0.0	2.5
PIONEER 3505	81.6	19.2	94	0.0	2.4	0.0	2.7
PIONEER 3365	89.2	19.0	96	3.3	0.0	0.0	2.7
T-E PENNSMAKER S	75.3	20.3	91	14.8	4.6	0.0	2.8
PAG SX31	76.8	17.4	95	16.3	1.2	0.0	2.8
	GROUP II MATURITY						
NORTHRUP-KING PX 635	92.4	20.2	96	0.0	5.8	0.0	3.0
NORTHRUP-KING PX 616	89.2	20.0	88	0.0	0.0	2.6	3.0
NORTHRUP-KING PX 72	85.5	19.7	85	0.0	0.0	0.0	3.0
NORTHRUP-KING PX 674	92.2	20.6	95	1.2	2.4	1.2	2.8
MFA V12	82.6	21.2	89	0.0	1.2	0.0	3.3
MFA K6	87.9	20.0	86	1.3	1.2	0.0	3.0
PRINCETON SXRC4	83.5	21.2	97	10.0	3.4	2.3	3.2
PRINCETON SXRB6	98.7	21.1	97	2.3	2.3	0.0	3.3
PIONEER 3306	103.3	21.2	94	0.0	0.0	0.0	3.3
PIONEER 3307	94.8	21.0	95	0.0	2.6	0.0	3.2
PIONEER 3199	100.4	21.0	91	0.0	0.0	0.0	4.2
PIONEER 321	92.5	20.4	94	0.0	6.0	2.4	3.3
PIONEER 3300	101.7	20.3	94	0.0	3.4	0.0	3.5
PIONEER 3308	95.5	21.1	94	0.0	1.1	0.0	3.5
SCHENK SS-77A	76.6	21.3	92	0.0	1.2	0.0	3.2
SCHENK SS-75A	89.3	20.3	96	2.4	2.3	0.0	3.3
SCHENK S-73A	85.5	21.5	96	0.0	3.6	0.0	3.5
T-E CASHMAKER	84.8	20.6	86	0.0	2.6	0.0	2.8
T-E E2CYA	83.6	20.6	91	0.0	0.0	0.0	3.2
T-E MINTMAKER	89.8	20.0	87	0.0	1.2	0.0	3.0
CLIVER BB 7C1SX	94.2	21.4	91	0.0	1.2	0.0	3.5
CLIVER BB 7C2SX	107.5	23.1	92	0.0	1.2	0.0	3.5
EMBRO X5	75.6	21.9	92	1.2	3.8	0.0	3.7
KANSAS 1639	85.8	18.4	97	21.8	3.4	0.0	3.0
MISSOURI 88C	74.4	21.0	94	7.5	2.2	1.1	3.2
MISSOURI 447W*	94.6	21.9	93	19.0	0.0	0.0	3.7
MISSOURI SX1	92.6	25.6	94	0.0	0.0	0.0	3.2
MISSOURI SX3	89.9	21.2	92	0.0	6.2	1.1	2.5
LS 13	85.8	19.4	95	0.0	7.1	0.0	3.5
FUNKS G5757	83.8	23.4	95	0.0	0.0	0.0	3.2
	GROUP III MATURITY						
MFA V6	95.2	21.3	96	0.0	1.2	1.2	3.5
PIONEER 3369A	99.9	20.6	97	2.3	1.1	0.0	3.7
PIONEER 3188	95.0	21.1	95	0.0	3.4	0.0	3.7
PIONEER X2683(3175)**	100.1	22.5	96	0.0	5.8	0.0	3.5
PAG SX29	92.2	19.5	92	2.4	1.2	1.2	3.2
MISSOURI 881	106.2	21.7	93	3.4	2.4	0.0	3.7
MISSOURI 916	101.1	22.1	98	4.6	1.1	0.0	3.8
LS 523W*	85.1	21.8	95	10.2	1.2	0.0	3.3
MEAN	89.5	20.8	93	3.1	2.0	0.3	3.2

DIFFERENCES IN YIELD BETWEEN ANY TWO HYBRIDS OF LESS THAN 11.9 BUSHELS ARE NOT CONSIDERED SIGNIFICANT.
*WHITE HYBRID
**PERMANENT NUMBER DESIGNATION

Table 7C. Average performance of hybrids tested in District 7 for the three-year period 1966-1968.

Hybrid	2-YEAR AVERAGE[1] Acre Yield Bu.	Lodged Plants Root %	Lodged Plants Stalk %	Dropped Ears %	3-YEAR AVERAGE Acre Yield Bu.	Lodged Plants Root %	Lodged Plants Stalk %	Dropped Ears %
			GROUP I MATURITY					
Northrup-King PX63	79.2	3.1	1.8	0.0	64.3	2.1	2.9	0.0
Pioneer 3390	94.1	1.6	2.8	0.0	---	---	---	---
			GROUP II MATURITY					
MFA K6	89.0	0.6	1.5	0.0	72.5	0.4	1.9	0.0
Northrup-King PX616	87.2	0.0	0.9	1.3	---	---	---	---
Northrup-King PX674	83.8	0.6	5.6	0.6	70.2	0.4	5.8	0.7
Pioneer 321	87.6	0.0	5.2	1.6	80.6	0.0	5.4	1.4
Pioneer 3300	97.1	0.0	1.7	0.0	84.0	0.3	4.6	0.0
Pioneer 3306	98.6	0.0	1.6	0.0	88.5	0.0	2.9	0.0
Pioneer 3307	92.2	0.0	3.0	0.8	82.2	0.0	2.6	0.8
Pioneer 3199	110.2	0.0	2.5	0.0	---	---	---	---
Princeton SX-804	83.6	5.0	7.6	2.0	73.1	3.3	7.1	1.4
Schenk SS77A	81.7	0.0	4.0	0.4	---	---	---	---
Taylor Evans E20YA	81.0	0.0	4.0	0.0	70.8	0.0	3.0	0.0
T. E. Bonusmaker S	75.9	7.4	3.6	0.0	---	---	---	---
Kansas 1639	83.8	10.9	4.8	0.4	71.1	7.3	7.3	0.9
Mo SX1	94.2	0.0	0.4	0.0	86.1	0.0	2.3	0.0
Mo SX3	88.0	0.0	5.6	0.6	---	---	---	---
Mo 880	81.2	3.8	2.4	0.6	68.4	2.5	3.7	0.4
Mo 881	105.4	1.7	3.0	0.0	94.9	1.1	4.6	0.0
US 13	85.2	0.0	11.0	0.4	70.8	0.0	12.1	0.3
			GROUP III MATURITY					
PAG SX29	91.0	1.2	2.4	0.6	---	---	---	---
US 523W*	91.0	6.0	4.1	0.0	84.8	4.0	5.5	0.3
Mo 916	104.2	2.3	2.8	0.0	97.0	1.5	1.8	0.0
Mean	89.8	1.9	3.6	0.4	78.7	1.4	4.6	0.4

*White hybrid

[1] The 2-year average is for the years 1967 and 1968.

DISTRICT 8

Data for District 8 are presented in tables 8A through 8C.

An average yield of 100.1 bushels per acre was produced from a harvest stand of 11,300 plants per acre. A perfect stand would have been 11,800 plants. Yields ranged from a low of 72.0 to a high of 126.3 bushels per acre.

Rainfall was 17.01 inches during the period May 1 to September 15. There were two dry periods recorded: July 2 to July 24 and August 15 to August 30. Average temperature during the growing season was 1.0 degree below normal. There were no days on which the temperature reached or exceeded 100 F.

Root and stalk lodging was minimal. Weeds were not a problem.

Table 8A. Corn production data for 1966, 1967, and 1968, and the 10-year period, 1958-1967, in District 8.

Period	Farmland Planted to Corn (%)	Total Corn Acreage	Yield, bu/ac	
			District Average	Yield Trial
1968	0.8*	37,000*	56*	100.1
1967	0.8	34,000	57	89.8
1966	1.0	43,000	43	94.7
1958-1967 Average	1.9	84,000	45	

*Preliminary estimate as of December 19, 1968.

TABLE 88. 1968 PERFORMANCE RECORD FOR HYBRIDS TESTED IN DISTRICT 8, NEAR SUMMERSVILLE, MISSOURI IN TEXAS COUNTY. PLANTED MAY 21, 1968. HARVESTED OCTOBER 24, 1968. (EXP. 8)

HYBRID	ACRE YIELD BU.	MOISTURE IN GRAIN PCT	STAND PCT	LODGED PLANTS ROOT PCT	LODGED PLANTS STALK PCT	DROPPED EARS PCT	EAR HEIGHT GRADE
	GROUP I MATURITY						
NORTHRUP-KING PX 63	72.0	23.3	93	0.0	2.2	0.0	3.2
NORTHRUP-KING PX 610	92.0	22.0	98	0.0	3.3	0.0	3.7
T-E BENUSMAKER S	98.6	23.1	98	3.3	1.1	0.0	3.3
PAC SX31	83.2	20.7	100	4.4	7.8	0.0	3.8
	GROUP II MATURITY						
NORTHRUP-KING PX 635	90.6	23.4	98	0.0	4.5	0.0	3.5
NORTHRUP-KING PX 616	103.1	22.5	98	0.0	0.0	0.0	4.2
NORTHRUP-KING PX 72	97.3	22.7	98	1.1	5.6	0.0	3.5
NORTHRUP-KING PX 674	93.2	23.1	97	2.3	4.6	0.0	4.0
MFA V12	96.4	23.8	96	0.0	1.2	0.0	4.0
MFA K6	89.7	23.4	91	1.2	2.5	0.0	4.0
PRINCETON SX8C4	96.1	23.8	97	1.1	3.6	0.0	4.3
PRINCETON SX836	115.7	24.4	95	1.2	5.9	0.0	4.2
PIONEER 33C6	111.7	23.2	97	0.0	0.0	0.0	4.0
PIONEER 33C7	110.9	23.0	95	0.0	1.2	0.0	4.3
PIONEER 3199	116.0	23.5	96	0.0	0.0	0.0	4.7
PIONEER 33CC	109.3	22.6	97	0.0	1.1	0.0	4.5
SCHENK SS-77A	88.4	22.7	92	3.7	3.6	0.0	3.2
SCHENK SS-75A	87.7	23.1	93	0.0	4.9	0.0	4.2
SCHENK S-72A	99.0	24.7	97	0.0	2.2	0.0	4.5
T-E CASHMAKER	96.0	23.8	98	0.0	5.6	0.0	3.7
T-E E2CYA	105.2	23.4	97	1.2	3.4	0.0	3.8
T-E MINTMAKER	99.5	22.8	91	0.0	3.7	0.0	3.8
CLIVER BB 7C1SX	100.9	23.8	94	0.0	2.4	0.0	3.8
CLIVER BB 702SX	114.5	23.6	100	0.0	0.0	0.0	3.8
EMPRC X5	98.4	23.7	92	6.1	2.4	0.0	4.5
KANSAS 1635	83.9	22.3	98	0.0	14.5	2.3	4.2
MISSOURI 1023	93.8	23.5	100	5.6	3.3	0.0	4.2
MISSOURI 88C	99.5	23.0	97	1.1	4.5	0.0	4.5
MISSOURI 447W*	106.0	23.4	97	0.0	3.4	0.0	4.3
LS 13	98.4	22.3	100	0.0	18.9	0.0	4.8
FUNKS G5757	102.2	24.7	96	3.4	0.0	0.0	4.0
	GROUP III MATURITY						
MFA VE	103.7	23.5	100	0.0	4.4	0.0	4.5
PIONEER 3369A	106.4	22.3	96	0.0	5.7	0.0	4.3
PIONEER 3188	119.8	23.1	100	0.0	3.3	0.0	4.3
PIONEER X2683(3175)**	126.3	25.5	100	0.0	2.2	0.0	4.0
PAC SX29	97.0	22.3	95	0.0	3.6	0.0	4.3
MEAN	100.1	23.2	96	1.0	3.8	0.1	4.1

DIFFERENCES IN YIELD BETWEEN ANY TWO HYBRIDS OF LESS THAN 8.8 BUSHELS ARE NOT CONSIDERED SIGNIFICANT.
*WHITE HYBRID
**PERMANENT NUMBER DESIGNATION

Table 8C. Average performance of hybrids tested in District 8 for the three-year period 1966-1968.

Hybrid	2-YEAR AVERAGE[1] Acre Yield Bu.	Lodged Plants Root %	Lodged Plants Stalk %	Dropped Ears %	3-YEAR AVERAGE Acre Yield Bu.	Lodged Plants Root %	Lodged Plants Stalk %	Dropped Ears %
			GROUP I MATURITY					
Northrup-King PX63	81.6	0.0	6.6	0.0	---	---	---	---
			GROUP II MATURITY					
MFA K6	89.4	0.6	3.7	0.5	---	---	---	---
Northrup-King PX616	100.0	0.0	3.0	0.0	---	---	---	---
Northrup-King PX674	97.2	1.2	4.9	0.0	---	---	---	---
Pioneer 3306	109.1	0.0	1.3	0.0	110.5	0.0	0.9	0.0
Pioneer 3307	110.2	0.0	3.5	0.0	---	---	---	---
Princeton SX804	99.2	0.6	2.3	0.0	101.8	0.4	2.1	0.0
Schenk SS77A	91.6	1.8	5.8	0.0	---	---	---	---
Taylor Evans E20YA	94.0	0.6	19.1	0.4	94.0	0.4	13.6	0.6
T. E. Bonusmaker S	94.6	1.6	1.4	0.0	---	---	---	---
Kansas 1639	82.6	0.0	17.1	1.2	80.5	0.0	12.2	1.0
Mo 880	93.9	0.6	4.8	0.0	90.8	0.4	3.5	0.3
Mo 1023	92.4	2.8	4.2	0.0	87.3	1.9	3.6	0.0
US 13	93.4	0.0	26.1	0.0	92.0	0.0	20.5	0.3
			GROUP III MATURITY					
PAG SX29	91.4	0.0	4.0	0.0	---	---	---	---
Mean	94.7	0.6	7.2	0.1	93.8	0.4	8.0	0.3

[1] The 2-year average is for the years 1967 and 1968.

DISTRICT 9

Data for District 9 are presented in tables 9A through 9D.

Regular and high population tests were conducted in this district.

Average yield for the regular test was 73.3 bushels per acre from a harvest stand of 10,700 plants. A perfect stand required 15,700 plants per acre. Yields ranged from 53.6 to 98.5 bushels per acre.

In the high population test average yield was 71.2 bushels per acre from a harvest stand of 19,200 plants. A perfect stand would have been 20,400 plants per acre. Yields ranged from 57.7 to 90.4 bushels.

Rainfall in the Delta region was only 13.96 inches for the May 1 to September 15 period. There was one dry period recorded from August 12 to September 3.

Root and stalk lodging was moderate in both trials, with the latter increasing by about 1.5 times as the population was increased from 10,700 to 19,200 plants per acre. Weeds were not a problem.

Table 9A. Corn production for 1966, 1967, and 1968, and for the 10-year period, 1958-1967, in District 9.

Period	Farmland Planted to Corn (%)	Total Corn Acreage	Yield, bu/ac	
			District Average	Yield Trial
1968	8.7*	214,000*	85*	72.2
1967	9.1	225,000	89	83.8
1966	9.6	236,000	59	108.4
1958-1967 Average	11.4	279,000	46	

*Preliminary estimate as of December 19, 1968.

TABLE 9B. 1968 PERFORMANCE RECORD FOR HYBRIDS TESTED IN DISTRICT 9, AT THE DELTA RESEARCH CENTER IN PEMISCOT COUNTY. PLANTED APRIL 22, 1968. HARVESTED SEPTEMBER 11, 1968. (EXP. 9)

HYBRID	ACRE YIELD BU.	MOISTURE IN GRAIN PCT	STAND PCT	LODGED PLANTS ROOT PCT	LODGED PLANTS STALK PCT	DROPPED EARS PCT	EAR HEIGHT GRADE
	GROUP I MATURITY						
T-E BONUSMAKER S	53.7	17.3	58	0.0	7.3	0.0	2.7
CLIVER BB 644	70.8	18.4	65	0.0	8.8	0.0	3.0
PAC SX31	68.5	16.2	69	0.0	6.8	0.0	3.0
	GROUP II MATURITY						
BC-JAC X7C	83.4	17.6	69	0.0	5.4	1.1	3.2
BC-JAC X9	59.6	18.9	51	0.0	3.2	0.0	3.5
BC-JAC X7	81.5	22.2	71	0.0	5.9	0.0	3.2
BC-JAC X2C	87.8	17.8	70	0.0	2.5	0.0	3.2
NORTHRUP-KING PX 635	74.7	19.0	72	0.0	9.1	0.0	2.8
NORTHRUP-KING PX 616	80.8	17.2	78	0.0	10.9	0.0	3.2
NORTHRUP-KING PX 72	63.9	18.9	64	0.0	3.3	0.0	3.2
NORTHRUP-KING PX 674	66.4	19.0	59	0.0	10.2	0.0	3.2
MEACHAMS M-7W*	67.9	22.0	76	0.0	1.0	0.0	3.2
MEACHAMS MX-75W*	76.7	22.4	81	0.0	0.0	1.2	3.2
MEACHAMS MX-50W*	66.5	22.5	71	1.2	6.4	1.2	3.3
MEACHAMS M-33YH	68.6	20.9	78	0.0	11.8	1.2	3.3
MEACHAMS MX-10Y	68.0	20.7	62	0.0	6.4	0.0	3.0
MEACHAMS MX-20Y	71.2	19.1	73	0.0	4.3	0.0	2.8
MFA V12	65.9	19.5	66	0.0	2.6	1.3	3.3
MFA K6	69.8	19.1	55	0.0	6.7	0.0	3.0
PRINCETON SX8C4	60.3	19.9	64	0.0	9.3	3.9	3.5
PRINCETON SX836	93.4	19.7	72	0.0	3.9	0.0	3.7
PRINCETON SX8C9	69.3	19.2	69	0.0	5.8	2.3	2.8
PIONEER 3307	53.6	19.6	46	0.0	7.5	0.0	3.2
PIONEER 3195	79.1	21.3	65	0.0	7.5	0.0	3.8
SCHENK SS-77A	72.0	18.6	69	0.0	4.0	2.0	3.3
SCHENK SS-75A	69.3	18.6	67	0.0	7.6	0.0	3.5
SCHENK S-73A	58.4	19.4	57	0.0	5.0	0.0	3.5
T-E CASHMAKER	65.7	18.7	64	0.0	13.6	0.0	2.8
T-E E2CYA	69.9	19.0	55	0.0	4.1	0.0	3.3
T-E MINTMAKER	75.9	17.8	66	0.0	5.1	0.0	3.2
CLIVER BB 701SX	77.2	20.0	78	0.0	12.5	0.0	3.3
CLIVER BB 702SX	98.5	20.5	75	0.0	5.4	1.2	3.3
CLIVER BB 703SX	84.4	22.2	80	0.0	6.5	0.0	3.2
CLIVER BB 705SX	51.5	18.4	57	0.0	10.2	0.0	3.2
CLIVER BB X706	74.6	21.2	64	0.0	16.5	0.0	3.2
CLIVER BB X707	80.4	21.1	72	0.0	3.2	0.0	3.2
EMBRO X5	58.1	20.9	59	0.0	4.4	1.3	3.5
KANSAS 1635	71.4	17.3	75	0.0	12.2	1.0	3.5
MISSOURI 1C23	86.4	20.1	80	0.0	2.1	0.0	3.0
MISSOURI 64	81.4	20.7	72	0.0	2.7	2.3	3.5
MISSOURI 65-2	78.2	20.5	83	0.0	3.1	0.0	3.5
MISSOURI 65-6	87.3	21.3	84	0.0	3.1	1.0	3.2
MISSOURI 68C	73.0	19.5	73	0.0	1.0	2.2	3.0
MISSOURI SX14W*	91.7	17.1	80	0.0	5.1	1.2	3.2
MISSOURI 447W*	74.5	21.5	71	0.0	5.9	0.0	3.7
MISSOURI PIPE 12*	57.4	23.6	74	0.0	3.7	0.0	3.5
LS 13	64.8	18.2	64	0.0	13.5	0.0	3.2
FUNKS C5757	86.0	21.7	68	2.2	5.6	0.0	3.5
	GROUP III MATURITY						
MISSOURI 66-69W*	75.2	22.6	75	0.0	4.7	7.2	3.0
MFA V8	77.3	18.9	70	0.0	9.3	2.3	3.8
CLIVER BB 67	69.8	19.0	59	0.0	12.1	1.5	3.3
CLIVER BB X708	82.0	22.4	69	0.0	11.4	0.0	3.3
PRINCETON SX927	56.7	23.0	58	0.0	1.6	2.7	3.3
PRINCETON SX95C	58.5	22.3	61	2.6	7.9	0.0	3.7
PRINCETON 9204	65.3	21.9	63	0.0	0.0	0.0	3.5
PRINCETON 9908	72.8	22.0	76	1.1	13.4	1.0	3.5
PIONEER 3369A	90.0	18.6	74	0.0	7.1	0.0	3.3
PAC SX29	83.9	18.5	67	0.0	3.7	1.2	3.2
MISSOURI 476W*	69.2	21.1	75	0.0	4.9	1.0	3.7
MISSOURI 881	78.7	20.8	69	0.0	7.3	0.0	3.5
MISSOURI 916	89.8	21.4	79	0.0	4.0	0.0	3.7
MISSOURI 4C81W*	73.6	19.4	77	0.0	8.8	0.0	3.7
LS 523W*	74.8	21.2	68	3.9	11.3	0.0	3.7
LS 523WB*	81.4	21.6	59	0.0	16.5	0.0	4.0
MEAN	73.3	20.0	68	0.2	6.7	0.6	3.3

DIFFERENCES IN YIELD BETWEEN ANY TWO HYBRIDS OF LESS THAN 16.8 BUSHELS ARE NOT CONSIDERED SIGNIFICANT.
*WHITE HYBRID
**PERMANENT NUMBER DESIGNATION

Table 9C. Average performance of hybrids tested in District 9 for the three-year period 1966-1968.

Hybrid	2-YEAR AVERAGE[1] Acre Yield Bu.	Lodged Plants Root %	Lodged Plants Stalk %	Dropped Ears %	3-YEAR AVERAGE Acre Yield Bu.	Lodged Plants Root %	Lodged Plants Stalk %	Dropped Ears %
			GROUP II MATURITY					
Meacham M-7W*	76.6	0.0	1.4	0.0	77.4	0.0	4.9	0.9
Meacham M-33YB	76.0	0.0	7.2	0.6	83.3	0.9	6.5	0.4
Meacham MX-50W*	73.1	0.6	4.1	0.6	---	---	---	---
Meacham MX-75W*	83.6	0.0	0.0	0.6	---	---	---	---
MFA K6	79.6	0.0	4.6	0.0	82.6	0.0	5.9	0.3
Northrup-King PX616	82.5	0.0	6.7	0.0	---	---	---	---
Northrup-King PX674	77.0	0.0	5.6	0.0	74.9	0.0	7.1	0.3
Princeton SX804	73.0	0.0	5.6	2.9	81.0	0.0	6.0	3.4
Princeton SX809	84.2	0.0	4.2	1.2	88.1	0.0	4.3	0.8
Schenk S73A	70.1	0.0	3.0	0.0	74.4	0.0	2.9	0.0
Schenk SS77A	74.6	0.0	2.5	1.0	---	---	---	---
Taylor Evans E20YA	73.7	0.0	3.4	0.0	77.0	0.0	4.3	0.6
T. E. Bonusmaker S	55.2	0.0	5.4	0.0	---	---	---	---
Kansas 1639	72.8	0.0	7.8	0.5	75.0	0.0	9.2	1.8
Mo SX14W*	89.4	0.0	4.0	2.0	---	---	---	---
Mo 64	81.6	0.0	2.2	1.2	86.1	0.0	3.8	0.8
Mo 65-2	80.9	0.0	3.8	0.0	---	---	---	---
Mo 880	77.6	0.0	0.5	1.1	75.7	0.0	2.5	0.7
Mo 881	82.0	0.0	3.6	0.0	87.2	0.0	3.3	0.3
Mo 1023	85.2	0.0	2.4	0.0	84.6	0.0	4.8	0.3
US 13	68.2	0.0	8.4	0.0	70.4	0.0	12.9	0.6
			GROUP III MATURITY					
Princeton SX-927	74.7	0.0	1.2	1.4	---	---	---	---
Princeton 920-A	76.8	0.0	0.8	0.4	82.9	0.0	5.5	0.3
Mo 476W*	78.2	0.0	2.9	0.5	86.6	4.3	5.7	0.3
Mo 916	96.2	0.0	2.8	0.0	97.8	0.0	2.5	0.3
US 523W*	80.5	2.0	8.3	0.4	84.4	3.1	9.4	1.2
US 523WB*	84.2	0.0	9.1	0.0	90.2	0.9	11.8	0.9
Mean	78.0	0.1	4.1	0.5	82.1	0.5	6.0	0.7

*White hybrid

[1] The 2-year average is for the years 1967 and 1968.

TABLE 9C. 1968 PERFORMANCE RECORD FOR HYBRIDS TESTED IN DISTRICT 9 AT A HIGHER POPULATION. TEST LOCATED AT THE DELTA RESEARCH CENTER IN PEMISCOT COUNTY. PLANTED APRIL 17, 1968. HARVESTED SEPTEMBER 11, 1968. (EXP. 12)

HYBRID	ACRE YIELD BU.	MOISTURE IN GRAIN PCT	STAND PCT	LODGED PLANTS ROOT PCT	LODGED PLANTS STALK PCT	DROPPED EARS PCT	EAR HEIGHT GRADE
	GROUP I MATURITY						
T-E BONUSMAKER S	65.8	16.3	91	0.0	10.4	0.0	2.5
PAG SX31	77.2	15.2	92	0.0	6.3	0.7	2.8
	GROUP II MATURITY						
NORTHRUP-KING PX 635	77.2	16.4	100	0.0	15.3	0.0	2.5
NORTHRUP-KING PX 616	88.1	15.8	92	0.0	11.6	0.0	2.7
NORTHRUP-KING PX 72	82.8	16.7	96	0.7	6.7	0.0	3.2
NORTHRUP-KING PX 674	82.9	17.0	96	0.0	6.6	0.6	2.8
MFA V12	69.7	16.6	96	0.0	10.7	0.0	3.3
PRINCETON SXBC4	57.7	15.9	94	0.0	18.4	0.7	3.0
PRINCETON SX836	63.4	17.2	92	0.0	15.1	0.0	3.2
SCHENK SS-77A	67.2	16.3	92	0.0	5.5	0.0	2.8
SCHENK SS-75A	66.0	16.9	98	0.0	26.0	0.0	3.3
SCHENK S-73A	74.5	16.6	92	0.0	10.9	0.0	2.7
T-E CASHMAKER	71.0	16.4	94	0.0	5.4	0.7	2.5
T-E E2CYA	84.5	16.9	95	0.0	1.3	0.0	2.8
T-E MINTMAKER	70.1	15.9	89	0.0	10.4	0.7	2.7
CLIVER BB 7C1SX	74.0	16.6	93	0.7	8.6	0.0	3.2
CLIVER BB 7C2SX	81.5	20.6	91	0.8	7.8	0.0	3.0
EMBRO X5	65.5	17.6	91	0.0	10.8	1.4	3.5
MISSOURI 1C23	62.6	17.5	94	1.4	6.8	2.0	2.7
MISSOURI 64	74.1	17.6	95	0.0	6.1	1.3	3.2
MISSOURI 65-7	62.0	16.7	96	0.0	9.3	0.7	3.2
MISSOURI 65-6	73.7	16.8	96	0.0	10.0	0.0	3.2
MISSOURI 660	64.2	17.0	93	1.3	5.2	1.3	3.0
MISSOURI SX14W*	62.1	16.9	95	0.0	6.7	0.0	2.7
MISSOURI 447W*	75.1	19.2	98	0.0	9.2	0.0	3.2
MISSOURI PIPE 12*	62.7	18.7	96	2.7	13.3	0.0	3.5
LS 13	61.5	16.4	95	0.6	27.7	0.0	3.3
FUNKS G5757	72.7	18.6	92	1.4	11.6	0.0	2.8
	GROUP III MATURITY						
MISSOURI 66-69W*	59.8	19.2	99	1.3	6.6	0.0	3.0
MFA V8	70.8	17.2	96	0.0	9.3	0.0	3.5
PIONEER 3369A	90.4	16.5	92	0.0	4.1	0.0	2.8
PAG SX29	86.9	16.5	94	0.0	3.3	0.7	3.0
MISSOURI 476W*	68.0	18.3	92	1.3	11.1	0.0	3.2
MISSOURI 661	67.5	19.5	88	2.9	3.6	1.5	3.3
MISSOURI 916	64.1	18.7	93	0.7	9.6	0.0	3.3
MISSOURI 4C81W*	64.4	16.8	96	1.4	14.6	2.7	3.0
MEAN	71.2	17.2	94	0.5	9.9	0.4	3.0

DIFFERENCES IN YIELD BETWEEN ANY TWO HYBRIDS OF LESS THAN 12.7 BUSHELS ARE NOT CONSIDERED SIGNIFICANT.
*WHITE HYBRID
**PERMANENT NUMBER DESIGNATION

Table 9E. Average performance of hybrids tested in District 9 under high populations for the three-year period 1966-1968.

Hybrid	2-YEAR AVERAGE[1] Acre Yield Bu.	Lodged Plants Root %	Lodged Plants Stalk %	Dropped Ears %	3-YEAR AVERAGE Acre Yield Bu.	Lodged Plants Root %	Lodged Plants Stalk %	Dropped Ears %
			GROUP II MATURITY					
Northrup-King PX616	90.4	0.0	6.8	0.2	---	---	---	---
Northrup-King PX674	89.8	0.0	4.4	0.4	---	---	---	---
Princeton SX-804	76.0	0.0	9.9	1.0	80.3	0.0	9.8	1.6
Schenk SS-77A	82.2	0.0	3.9	0.0	---	---	---	---
Taylor Evans E20YA	88.4	0.0	3.0	0.0	87.3	0.0	4.7	0.2
T. E. Bonusmaker S	69.2	0.2	7.6	0.0	---	---	---	---
Mo SX14W*	82.2	1.4	4.7	0.6	---	---	---	---
Mo 65-2	74.4	0.0	5.9	0.4	---	---	---	---
US 13	72.2	0.3	17.8	1.6	73.6	0.7	15.4	1.1
			GROUP III MATURITY					
Mo 476W*	79.9	1.4	8.2	0.0	88.7	4.2	12.7	0.7
Mean	80.5	0.3	7.2	0.4	82.5	1.2	10.6	0.9

*White hybrid
[1] The 2-year average is for the years 1967 and 1968.

Table 10. Summary of performance records for hybrids tested in Districts 1, 2 and 3 for the period 1966-1968.

Hybrid	2-YEAR AVERAGE (5 TESTS)[1] Acre Yield Bu.	Lodged Plants Root %	Lodged Plants Stalk %	Dropped Ears %	3-YEAR AVERAGE (8 TESTS) Acre Yield Bu.	Lodged Plants Root %	Lodged Plants Stalk %	Dropped Ears %
			GROUP I MATURITY					
Asgrow ATC106	118.5	7.1	5.5	4.2	---	---	---	---
Northrup-King PX610	113.1	2.2	12.2	1.9	117.3	1.4	15.9	2.5
McCurdy 3X6	112.7	6.5	12.0	2.4	---	---	---	---
McCurdy HP5	111.5	2.2	11.0	1.7	---	---	---	---
MFA B6	106.0	5.1	5.9	0.9	---	---	---	---
MFA B7	110.5	10.6	4.5	0.6	---	---	---	---
Pioneer 3390	133.8	6.0	7.8	0.0	---	---	---	---
Pioneer 3505	123.5	0.9	4.3	0.5	---	---	---	---
T. E. Bonusmaker S	112.7	9.6	6.8	0.6	---	---	---	---
			GROUP II MATURITY					
Bo-Jac X70	124.5	6.1	7.3	2.8	124.5	3.8	13.5	5.7
Bo-Jac X9	128.1	2.4	3.3	0.4	---	---	---	---
Northrup-King PX616	119.2	4.2	9.1	0.9	123.2	2.6	13.5	2.8
Northrup-King PX674	117.8	8.8	11.8	2.8	116.4	5.9	15.9	4.4
Maygold 2036	128.5	5.1	5.9	1.9	125.1	3.2	9.5	2.1
McCurdy H5-61	115.5	7.7	13.0	4.2	---	---	---	---
Pioneer 321	117.1	2.6	9.3	3.6	122.2	2.7	15.4	4.5
Pioneer 3300	130.3	5.5	4.8	2.7	---	---	---	---
Pioneer 3306	126.2	4.0	4.0	1.1	132.9	2.5	7.9	2.1
Pioneer 3307	121.2	5.4	5.6	0.5	118.7	3.5	10.5	2.7
Kansas 1639	110.4	2.3	13.8	3.9	108.7	1.4	18.4	7.3
Mo 63	113.8	11.8	6.2	3.7	112.3	7.9	10.2	7.2
Mo 64	117.9	19.1	4.3	4.4	120.8	12.2	11.0	7.2
Mo 880	112.9	16.7	9.5	2.5	112.8	10.4	12.6	3.4
US 13	104.4	6.2	24.9	8.0	107.2	3.9	34.3	10.6
			GROUP III MATURITY					
PAG SX29	125.0	2.8	9.2	3.6	---	---	---	---
Mean	118.2	6.4	8.5	2.4	118.6	4.7	14.5	4.8

[1] The 2-year average is for the years 1967 and 1968.

Table 11. Summary of performance records for hybrids tested in Districts 4, 5 and 6 for the period 1966-1968.

Hybrid	2-YEAR AVERAGE (5 TESTS)[1] Acre Yield Bu.	Lodged Plants Root %	Lodged Plants Stalk %	Dropped Ears %	3-YEAR AVERAGE (8 TESTS) Acre Yield Bu.	Lodged Plants Root %	Lodged Plants Stalk %	Dropped Ears %
GROUP I MATURITY								
MFA B7	88.8	0.5	14.8	1.1	---	---	---	---
Pioneer 3390	108.0	0.2	12.0	1.0	---	---	---	---
T. E. Bonusmaker S	94.4	0.0	16.7	1.9	---	---	---	---
GROUP II MATURITY								
McCurdy 900	101.1	1.5	12.3	1.1	---	---	---	---
McCurdy 7X11E	98.4	0.2	21.8	1.7	---	---	---	---
McCurdy HP8	106.7	0.0	14.4	0.8	---	---	---	---
MFA K6	89.9	2.8	12.6	1.4	92.7	2.9	10.4	3.1
Northrup-King PX616	94.0	0.9	10.8	1.0	---	---	---	---
Northrup-King PX674	97.8	0.7	13.3	3.2	97.1	2.1	11.5	3.0
Princeton SX804	101.6	0.3	21.2	6.3	101.7	1.2	17.6	6.8
Pioneer 321	97.2	0.2	22.7	2.0	95.6	0.1	19.2	2.3
Pioneer 3300	108.9	0.0	17.2	1.4	---	---	---	---
Pioneer 3306	115.8	0.0	8.8	0.6	115.8	0.0	9.1	0.8
Pioneer 3307	103.1	0.4	10.7	1.2	108.0	0.2	11.7	1.1
Taylor Evans E20YA	95.6	0.6	15.2	3.8	99.2	0.4	12.2	3.2
Kansas 1639	85.4	1.3	25.3	4.2	84.9	0.8	21.4	3.5
Mo 63	101.1	4.6	14.6	2.8	99.9	3.9	12.3	3.5
Mo 64	105.1	0.5	13.8	2.7	105.1	1.0	11.3	2.2
Mo 880	93.2	0.0	12.8	2.9	91.4	0.0	10.0	2.1
Mo 1023	98.1	2.9	11.0	3.6	95.9	2.1	10.6	4.0
US 13	88.6	2.6	35.0	6.8	88.7	1.9	31.2	5.4
GROUP III MATURITY								
PAG SX29	95.0	0.0	21.1	2.0	---	---	---	---
Mo 476W*	101.3	5.5	21.0	1.0	99.2	4.5	22.6	1.5
Mean	98.6	1.1	16.5	2.4	98.2	1.5	15.1	3.0

*White hybrid

[1] The 2-year average is for the years 1967 and 1968.

Table 12. Summary of performance records for hybrids tested in Districts 7, 8, and 9 for the period 1966-1968.

Hybrid	2-YEAR AVERAGE (6 TESTS)[1] Acre Yield Bu.	Lodged Plants Root %	Lodged Plants Stalk %	Dropped Ears %	3-YEAR AVERAGE (9 TESTS) Acre Yield Bu.	Lodged Plants Root %	Lodged Plants Stalk %	Dropped Ears %
			GROUP I MATURITY					
T. E. Bonusmaker S	75.2	3.0	3.5	0.0	---	---	---	---
			GROUP II MATURITY					
MFA K6	86.0	0.4	3.3	0.2	---	---	---	---
Northrup-King PX616	89.9	0.0	3.5	0.4	---	---	---	---
Northrup-King PX674	86.0	0.6	5.3	0.2	---	---	---	---
Princeton SX804	85.2	3.5	5.2	1.6	85.3	1.2	5.1	1.6
Schenk SS-77A	82.6	0.6	4.1	0.5	---	---	---	---
Taylor Evans E20YA	82.9	0.2	8.8	0.2	80.6	0.1	7.0	0.4
Kansas 1639	79.8	3.6	9.9	0.7	75.6	2.4	9.6	1.8
Mo 880	84.2	1.4	2.6	0.6	78.3	1.0	3.2	0.4
US 13	82.3	0.0	15.2	0.2	77.8	0.0	15.2	0.4
Mean	83.4	1.3	6.1	0.5	79.5	0.9	8.0	0.9

[1] The 2- year average is for the years 1967 and 1968.

Table 13. Pedigrees of open-pedigree hybrids tested in 1968.

Hybrids	Pedigree	Endosperm Color
Medium Maturity (110-120 days)		
Kansas 1639	(WF9 x 38-11)(K148 x K150)	yellow
Mo SX-1	(Mo5 x CI21E)	yellow
Mo SX-3	(Mo17 x Mo5)	yellow
Mo SX-14W	(33-16 x Ky201)	white
Mo 63	(WF9 x B41)(Mo17 x C103)	yellow
Mo 64	(WF9 x B41)(C103 x Mo17)	yellow
Mo 65-2	(H60 x CI21E)(B37 x Mo5)	yellow
Mo 65-6	(Mo5 x H49)(H60 x CI21E)	yellow
Mo 447W	(K55 x K6)(H28 x K41)	white
Mo 880	(WF9 x 38-11)(K148 x Mo5)	yellow
Mo 881	(CI21E x Mo7)(Oh7B x Oh29)	yellow
Mo 1023	(WF9 x B41)(Mo5 x C103)	yellow
US 13	(WF9 x 38-11)(L317 x Hy)	yellow
Mo Pipe 12	(Mo15W x Mo16W)(Mo8W x Mo9W)	white
Late Maturity (125-135 days)		
Mo 476W	(33-16 x H28)(H55 x K6)	white
Mo 916	(Mo6 x CI21E)(Oh7B x Oh29)	yellow
Mo 4081W	(Mo1W x Ky211)(CI66 x K6)	white
Mo 66-69W	(Mo1W x Mo63:2197W)(K41 x K55)	white
US 523W	(K55 x K64)(Ky27 x Ky49)	white
US 523WB	(CI66 x CI64)(CI127 x Ky 49)	white

Table 14. Location by districts of commercial hybrids entered in the 1968 yield trials.

Hybrid	Districts									Thick planting experiments		
	1	2	3	4	5	6	7	8	9	10	11	12
GROUP I MATURITY												
Asgrow ATC106	X	X	X	X			X			X		
Asgrow ASC112	X	X	X	X			X			X		
Asgrow ASX92	X	X	X				X			X		
Asgrow ASC91	X	X	X				X			X		
Northrup-King PX63	X	X		X			X	X				
Northrup-King PX610	X	X	X				X	X		X		
Northrup-King PX621	X	X		X								
Maygold F35	X	X										
Maygold X4	X	X										
Maygold X3	X	X										
Maygold EX584-X-587	X	X										
McCurdy 3X6	X	X	X							X		
McCurdy HP5	X	X	X							X		
MFA B6	X	X	X							X		
MFA B7	X	X	X	X	X	X				X	X	
Pioneer 3390	X	X	X	X	X	X	X			X	X	
Pioneer 3505	X	X	X	X	X	X	X			X	X	
Pioneer 3365	X	X	X	X	X	X	X			X	X	
Pioneer 3545	X	X	X							X		
T. E. Bonusmaker S	X	X	X	X	X	X	X	X	X	X	X	X
Oliver BB644									X			
PAG SX31	X	X	X	X	X	X	X	X	X	X	X	X
GROUP II MATURITY												
Bo-Jac X70	X	X	X						X	X		
Bo-Jac X9	X	X	X						X	X		
Bo-Jac X7	X	X	X						X	X		
Bo-Jac X20	X	X	X						X	X		
Bo-Jac 310		X										
Bo-Jac X55			X									
Holden 033						X						
Holden 018						X						
Holden 022A						X						
Holden 008						X						
Iowa-Missouri SX17	X	X	X							X		
Northrup-King PX635	X	X		X	X		X	X	X			X
Northrup-King PX616	X	X	X	X	X	X	X	X	X	X	X	X
Northrup-King PX72	X	X	X	X	X	X	X	X	X	X	X	X
Northrup-King PX674	X	X	X	X	X	X	X	X	X	X	X	X
Corn King 421	X											
Maygold 2036	X	X	X	X	X							
Maygold 29X	X	X	X	X	X							
Maygold X9	X	X	X	X	X							
Maygold X20	X	X	X	X	X							
Maygold X19	X	X	X	X								
McAllister SX6584			X									
McAllister SX6509			X									
McAllister 13A			X									
McCurdy H5-61	X	X	X							X		
McCurdy 900				X	X	X					X	
McCurdy 7X11E				X	X	X					X	
McCurdy HP8				X	X	X					X	
McCurdy H3-66				X	X	X					X	
Meachams M-7W*									X			
Meachams MX-75W*									X			
Meachams MX-50W*									X			
Meachams M-33YB									X			
Meachams MX-10Y									X			
Meachams MX-20Y									X			

Table 14. Continued.

Hybrid	Districts									Thick planting experiments		
	1	2	3	4	5	6	7	8	9	10	11	12
MFA V12	X	X	X	X	X	X	X	X	X	X	X	X
MFA K6	X	X	X	X	X	X	X	X	X			
Princeton SX804				X	X	X	X	X	X		X	X
Princeton SX836				X	X	X	X	X	X		X	X
Princeton SX809						X			X			
Pioneer 3306	X	X	X	X	X	X	X	X		X	X	
Pioneer 3307	X	X	X	X	X	X	X	X	X	X	X	
Pioneer 3199	X	X	X	X	X	X	X	X	X	X	X	
Pioneer 321	X	X	X	X	X	X	X			X	X	
Pioneer 3300	X	X	X	X	X	X	X	X		X	X	
Pioneer 3308	X	X	X	X	X	X	X			X	X	
Pioneer 3333	X	X	X	X	X	X				X	X	
Schenk SS-77A							X	X	X			X
Schenk SS-75A							X	X	X			X
Schenk S-73A							X	X	X			X
T-E Cashmaker	X	X	X	X	X	X	X	X	X	X	X	X
T-E E20YA				X	X	X	X	X	X		X	X
T-E Mintmaker				X	X	X	X	X	X			X
United-Hagie 5S570	X											
United-Hagie 6S540	X											
United-Hagie 5S495	X											
United-Hagie 7S555	X											
United-Hagie 7S570	X											
United-Hagie 7S540	X											
Oliver BB 701SX							X	X	X			X
Oliver BB 702SX							X	X	X			X
Oliver BB 703SX									X			
Oliver BB705SX									X			
Oliver BBX706									X			
Oliver BBX707									X			
Embro X5	X	X	X				X	X	X	X		X
Funks G4411	X	X	X	X	X	X				X	X	
Funks G5757							X	X	X			X
GROUP III MATURITY												
McAllister SX6883			X									
MFA V8							X	X	X			X
Oliver BB67									X			
Oliver BBX708									X			
Princeton SX927						X			X			
Princeton SX950						X			X			
Princeton 920A						X			X			
Princeton 990B						X			X			
Pioneer 3369A							X	X	X			X
Pioneer 3188	X	X	X	X	X	X	X	X		X	X	
Pioneer X2683 (3175)**	X	X	X	X	X	X	X	X		X	X	
Pioneer X5349				X	X							
PAG SX29	X	X	X	X	X	X	X	X	X	X	X	X

*White hybrid
** Permanent Number Designation

Table 15. Location by districts of open-pedigree hybrids in 1968 yield trials.

Hybrid	Districts									Thick planting experiments		
	1	2	3	4	5	6	7	8	9	10	11	12
GROUP II MATURITY												
Kansas 1639	X	X	X	X	X	X	X	X	X			
Missouri 63	X	X	X	X	X	X				X	X	
Missouri 1023	X	X	X	X	X	X		X	X	X	X	X
Missouri 64	X	X	X	X	X	X			X	X	X	X
Missouri 65- 2		X	X						X			X
Missouri 65-6									X			X
Missouri 880	X	X	X	X	X	X	X	X	X	X	X	X
Missouri SX14W*		X	X		X				X	X		X
Missouri 447W*		X	X		X	X	X	X	X	X	X	X
Missouri Pipe 12*		X	X						X			X
Missouri SX1							X					
Missouri SX3							X					
US 13	X	X	X	X	X	X	X	X	X	X	X	X
GROUP III MATURITY												
Missouri 66-69W*									X			X
Missouri 476W*		X	X	X	X	X			X	X	X	X
Missouri 881							X		X			X
Missouri 916		X	X		X	X	X		X	X		X
Missouri 4081W*			X						X			X
US 523W*			X		X		X		X	X		
US 523WB*			X		X				X	X		

*White hybrid

Table 16. Sources of seed for commercial hybrids.

Hybrid	Firm	Address
Asgrow	Asgrow Seed Company	P.O. Drawer A. San Antonio, Texas 78211
Bo-Jac	Bo-Jac Hybrid Corn Co.	R.R. #2, Mt. Pulaski, Illinois 62548
Corn King	Malcolm H. Grieve	Pierson, Iowa 51048
Embro	Embro Seed Co., Inc.	P.O. Box 12286, Soulard Station, St. Louis, Mo. 63157
Holden	Holden Foundation Seed, Inc.	Williamston, Iowa
Ia-Mo	Iowa-Missouri Hybrid Corn Co.	Keosauqua, Iowa 52565
Maygold	Earl May Seed & Nursery Co.	Shenandoah, Iowa 51601
McAllister	McAllister Seed Farms	P.O. Box 206, Mt. Pleasant, Iowa 52641
McCurdy	W. O. McCurdy & Sons	Fremont, Iowa 52561
Meacham	Meacham's Hybrids	R.R. #3, Morganfield, Kentucky 42437
MFA	MFA Seed Division	Marshall, Missouri 65340
Northrup-King	Northrup-King & Co.	1500 Jackson, N.E., Minnespolis, Minn. 55413
Oliver	Dearmont Oliver & Sons	Charleston, Missouri 63834
Pioneer	Garst & Thomas Hybrid Corn Co.	Coon Rapids, Iowa
Pioneer	Pioneer Corn Co., Inc.	221 N. Main St., Tipton, Indiana 46072
Princeton	Princeton Farms	P. O. Box 319, Princeton, Indiana 47570
Schenk	C.H. Schenk & Sons, Inc.	R.R. #4, Vincennes, Indiana 47591
Taylor-Evans (T.E.)	Taylor-Evans Seed Co.	Box 480, Tulia, Texas 79088
United-Hagie	United-Hagie Hybrids, Inc.	4244 Clinton Ave., P. O. Box 2007, Des Moines, Iowa 50310

Table 17. Comparison of average yield of all hybrids in state yield tests with average yield of all corn produced in Missouri by years (1958-1968).

	Average, bushel/acre	
Year	Farm	Yield Tests
1958	54	106
1959	53	97
1960	52	102
1961	62	109
1962	58	111
1963	61	117
1964	51	95
1965	72	115
1966	62	100
1967	69	103
1968	83*	100

*Preliminary estimates as of December 19, 1968.