

1969
Missouri Hybrid
Corn Yield Trials

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1969

MISSOURI

HYBRID CORN PERFORMANCE TRIALS

R. D. Horrocks and F. D. Cloninger

Introduction

Synopsis

The 1969 estimated average corn yield for Missouri is 70 bushels per acre. The average for all hybrids tested at the nine locations was 86.3 bushels per acre. Yields for all hybrids tested ranged from 29.5 to 166.5 bushels per acre.

The season was marked by considerable variation in rainfall. Early rainfall delayed planting over most of the state followed by drought over the southern portion of the state. Rainfall at the test sites ranged from 10.39 inches at Summersville to 34.78 inches at Higginsville for the period May 1 to September 15. Dry periods, defined as at least 15 consecutive days with less than 0.25 inches of precipitation on any one day, were recorded in each district. The number of days with temperatures equalling or exceeding 90 F varied from 12 to 57. There was one day at the Mt. Vernon location and 3 days at the Summersville location with a recorded temperature of 100 F or higher.

Stalk lodging was rather severe over the entire state, especially in District 4. Ear droppage was also rather high. Most of the lodging and dropped ears could be attributed to corn borer infestation and secondary invasion of stalk rot organisms such as Diplodia maydis, Gibberella zeae, and Fusarium sp. Root lodging was of little importance at all locations.

Small yield differences should not be overemphasized since there was considerable variation in the soil at each test site. Special planting arrangements and use of the statistical procedure called analysis of variance, from which the L. S. D. (least significant difference) value is computed, help make valid yield comparisons. The L. S. D., found at the bottom of the tables, simply states how much one hybrid must differ from another in yield to be reasonably confident that one hybrid is superior in yield to another.

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 harvested 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				
	20	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	31,360	20,910	17,420	16,510	15,680
12	26,140	17,420	14,520	13,750	13,070
14	22,400	14,930	12,450	11,790	11,200
16	19,600	13,010	10,890	10,317	9,800
18	17,420	11,620	9,680	9,170	8,710
20	15,680	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.

- ¹Zuber, M. S. 1966. Date of planting studies with corn. North Missouri Research Center. Mo. Agr. Exp. Sta. Bulletin 832.
- ²Grogan, 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.
- ³Zuber, 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.

Field Design

The number of hybrids tested in each district ranged from 25 in District 8 to 64 in Districts 1 and 3. 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 41.0 feet long for all locations.

Stand

All plots were planted using conventional equipment modified for small plot use. Planting rates were adjusted depending upon anticipated environmental conditions at a particular location. Plots were not thinned but planting rates were adjusted for an expected 10-15 percent stand loss. In addition to the regular tests, high population tests were conducted at Wayland, Labadie, and Portageville. Table B gives the row width and population data for each test location. 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 hybrid 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 1969. 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 1969 are listed in Table 13.

Numerous closed-pedigree hybrids have been tested during the period 1958 through 1969. 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 1969. Table 15 presents the same information for the closed-pedigree hybrids. Table 16 shows the seed sources of commercial hybrids.

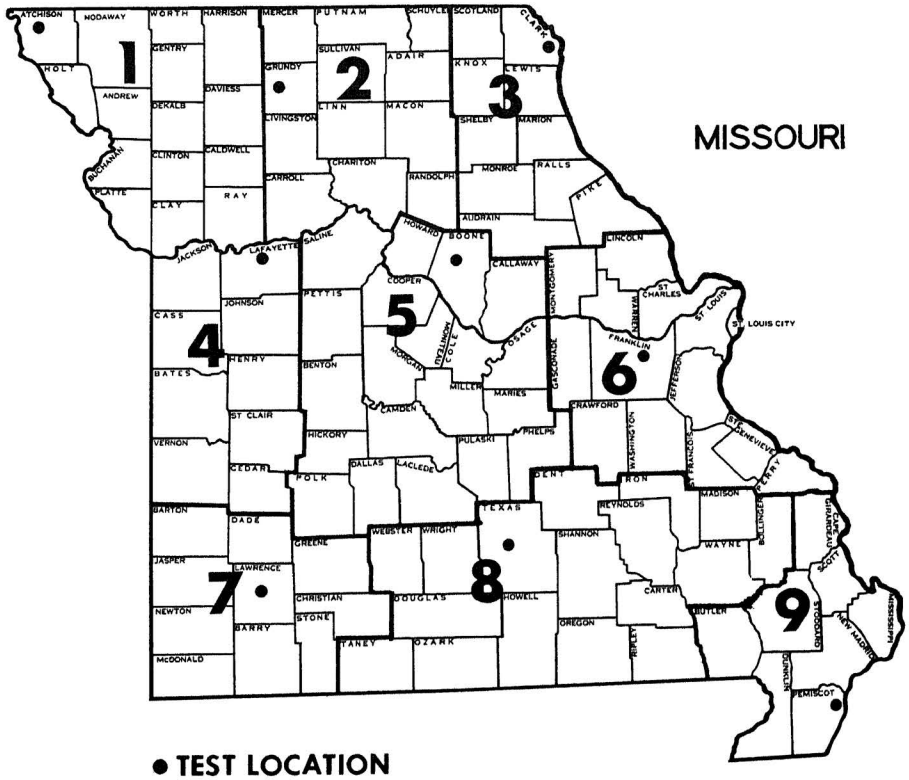


Figure 1. Map of the 9 districts and the test location in each one.

Table B. Summary of test site data.

District	Location	Row Width (in)	Planted Population	Harvested Population	Soil Test				Fertilizer Applied		
					pH	O. M. (%)	P (lb)	K (lb)	N (lb)	P ₂ O ₅ (lb)	K ₂ O (lb)
1	John Jones Farm Tarkio	40	20100	17700	---	---	---	---	120	40	40
2	Univ. of Missouri N. Mo. Center Spickard	40	20100	16700	5.3	3.0	176	230	150	100	100
3	D. L. Shrauner Farm * Wayland	30	21700 25100		5.5	4.1	144	260	200	100	100
4	W. P. Moore Farm Higginsville	40	20100	16500	6.5	2.4	434	310	300	50	50
5	N. G. Weir Farm Columbia	30	20100	17900	6.4	2.4	240	350	150	100	100
6	James Koelling Farm Labadie	40	20100 25100	16100 19800	7.6	1.8	384	520	120	40	40
7	Univ. of Missouri S. W. Center Mt. Vernon	40	18800	13000	5.8	1.9	220	210	150	100	100
8	Howard Wuertley Farm Summersville	40	18800	16900	6.0	1.7	144	240	95	84	102
9	Univ. of Missouri Delta Center Portageville	40	20100 25100	13700 16600	5.9	2.2	307	350	150	100	100

*Trial at this location was not harvested.

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

Dis- trict	Testing Loca- tion	Total Rain- fall	No. of days with rain					Sept. 1-15	Total	Dry Periods*
			May	June	July	Aug.				
1	Tarkio	20.91	10	8	10	7	5	40	(7/19-8/15)	
2	Spickard	21.42	12	13	8	4	4	41	(7/19-8/14)	
3	Wayland	24.52	10	15	10	3	7	45	(7/28-9/5)	
4	Higginsville	34.78	8	13	13	6	3	43	(8/17-9/4)	
5	Columbia	21.84	10	16	10	3	9	48	(7/11-7/26, 8/1-8/15, 8/22-9/6)	
6	Washington	18.73	8	11	8	3	6	36	(8/1-8/15)	
7	Mt. Vernon	12.18	5	11	7	6	6	35	(6/28-7/20, 7/26-8/15)	
8	Summersville	10.39	5	7	6	4	5	27	(5/1-6/12)	
9	Portageville	14.59	5	9	8	8	4	34	(7/8-7/26)	

*A dry period is 15 or more consecutive days with less than 0.25 inch precipitation in any one day. All days 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. Summary of weather data from May 1 to September 15 at each location.

District	Location	Month	Average Temperature	Degrees From Normal	Number of Days Temperature Above	
					90°	100°
1	Tarkio	May	64.4	+1.4	0	0
		June	69.3	-3.3	6	0
		July	78.4	+0.7	15	0
		August	75.2	-0.5	11	0
		Sept. 1-15	69.9	+3.0	0	0
2	Spickard	May	63.7	-0.8	0	0
		June	77.7	+3.7	1	0
		July	78.4	-0.4	8	0
		August	75.5	-1.5	3	0
		Sept. 1-15	69.1	+0.2	0	0
3	Wayland	May	63.0	-0.2	0	0
		June	68.2	-4.4	0	0
		July	77.7	+0.3	9	0
		August	74.0	-1.5	5	0
		Sept. 1-15	70.1	+2.6	0	0
4	Higginsville	May	64.9	-0.6	1	0
		June	69.8	-5.7	6	0
		July	80.1	-0.6	16	0
		August	76.4	-2.6	10	0
		Sept. 1-15	71.7	+1.1	1	0
5	Columbia	May	63.1	-1.3	0	0
		June	68.7	-5.3	2	0
		July	78.6	-0.1	15	0
		August	75.5	-1.7	9	0
		Sept. 1-15	71.8	+2.5	0	0
6	Labadie	May	63.2	-1.9	0	0
		June	72.5	-1.6	10	0
		July	79.4	+0.7	12	0
		August	75.8	-1.4	13	0
		Sept. 1-15	71.7	+1.9	1	0
7	Mt. Vernon	May	64.5	0.0	0	0
		June	67.6	-6.6	2	0
		July	80.3	+1.9	17	1
		August	75.9	-2.1	11	0
		Sept. 1-15	70.8	+2.3	1	0
8	Summersville	May	65.1	+0.7	0	0
		June	72.7	-0.8	11	0
		July	80.1	+2.5	22	1
		August	75.2	-1.2	17	2
		Sept. 1-15	71.0	+2.4	7	0
9	Portageville	May	69.5	-0.1	3	0
		June	77.0	-1.0	14	0
		July	82.1	+0.2	25	0
		August	76.2	-3.8	10	0
		Sept. 1-15	72.1	-1.1	2	0

Table E. Summary of 1969 estimated acre yield and total corn acreage for the nine Missouri crop reporting districts.*

District	Farmland Planted to Corn %	Total Corn Acreage	Yield, bu/ac	
			District Average	Yield Trial
1	15.0	640,000	81	123
2	8.4	330,000	63	121
3	13.1	410,000	68	---**
4	9.6	335,000	71	95
5	5.5	340,000	63	71
6	7.2	230,000	70	80
7	2.9	88,000	53	53
8	0.6	30,000	51	86
9	8.1	200,000	71	62
Average	7.6	2,603,000	70	86

*Preliminary estimate as of December 19, 1969.

**No yield trial harvested at this location in 1969.

DISTRICT 1

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

The average yield from a harvest stand of 17, 700 plants per acre was 123.3 bushels. The 64 hybrids evaluated in this district ranged from 53.0 to 160.9 bushels per acre.

The growing season was marked by above normal temperatures during May, July, and the September 1 - 15 period, and below normal temperatures during June and August. At no time during the growing season did the recorded temperature exceed 100 F, table D. One dry period was recorded between July 19 and August 15, table C.

Stalk lodging ranged from moderate to heavy, the values falling between 2.5 and 58.9 percent of the stalks broken below the ear. Dropped ears was also high for some hybrids, and ranged between 0.0 and 13.4 percent. Most of the lodging and dropped ears could be attributed to heavy European corn borer infestation and secondary invasion of stalk rot organisms such as Diplodia maydis, Gibberella zea, and Fusarium sp. These data suggest wide variation in hybrid tolerance to European corn borer and stalk rot organisms.

Weeds were not of major importance in determining the final yield.

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	

TABLE 1B. 1969 PERFORMANCE RECORD FOR HYBRIDS TESTED IN DISTRICT 1, NEAR TARKIO, MISSOURI (ATCHISON COUNTY). PLANTED MAY 13, 1969. HARVESTED OCTOBER 27, 1969. AVERAGE HARVEST POPULATION, 17,700 PLANTS PER ACRE.

HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	STAND (%)	LODGED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
				ROOT (%)	STALK (%)		
GROUP I MATURITY							
ASGROW ASC91 (SPX)	104.4	20.3	87	0.0	13.5	7.2	3.5
ASGROW IXL9 (SX)	134.1	25.0	83	0.0	8.7	0.0	4.2
ASGROW ASC 93 (SPX)	120.2	21.1	85	0.0	13.2	2.9	3.3
ASGROW ASX165W* (SX)	135.3	24.7	92	0.0	15.3	1.1	4.2
ASGROW A153W* (DX)	124.6	22.4	91	0.0	10.9	2.8	4.3
ASGROW H68150W* (SX)	122.8	23.4	87	0.0	5.3	0.0	3.7
CO-OP S-201 (SX)	64.4	18.6	92	0.0	48.9	3.9	3.0
CORN KING 1122 (SX)	53.0	18.9	91	0.0	54.5	3.5	3.8
MAYGOLD F35 (SX)	115.5	20.6	89	0.0	7.0	2.3	3.5
MFA B7 (SX)	120.4	21.3	88	0.0	16.0	1.7	3.5
NK PX63 (SX)	104.2	20.2	90	0.0	20.0	4.0	3.2
NK PX610 (3X)	117.9	19.9	83	0.0	16.5	5.0	3.3
NK PX615 (3X)	118.4	20.4	81	0.0	15.3	5.2	3.8
NK PX621 (3X)	126.5	19.6	85	0.0	16.8	1.8	3.7
PIONEER 3505 (SPX)	128.9	18.9	88	0.0	19.6	1.2	3.7
PIONEER 3390 (SPX)	123.1	20.1	82	0.0	2.5	3.2	4.0
PIONEER 3365 (SPX)	111.0	20.1	91	0.0	14.3	2.2	3.3
STULL 7075X (SX)	114.3	20.9	92	0.0	18.0	1.7	3.3
STULL 101Y (DX)	96.7	21.4	84	0.0	11.5	4.8	4.0
STULL 7045X (SX)	110.0	19.7	91	0.0	12.3	1.1	3.2
STULL 6205X (SX)	83.0	18.7	92	0.0	28.5	1.2	3.5
GROUP II MATURITY							
UNICORN X672 (SX)	140.1	22.4	87	0.0	22.1	5.3	4.5
UNICORN X872 (SX)	147.7	22.5	94	0.0	11.0	5.0	4.0
BO-JAC X79 (3X)	110.4	21.4	89	0.0	12.8	3.5	4.2
BO-JAC X9 (SX)	138.8	21.3	88	0.0	7.7	2.3	4.7
BO-JAC X7L (SX)	124.6	22.1	88	0.0	10.2	9.5	3.8
BO-JAC X1A (SX)	149.9	20.8	93	0.0	14.0	2.2	4.2
BO-JAC X5 (SX)	120.4	20.3	91	0.0	17.0	4.1	3.5
CO-OP D-213 (DX)	114.4	20.4	92	0.0	18.5	3.4	3.8
CO-OP T-308 (3X)	125.8	22.6	84	0.0	16.6	1.9	3.7
IA-MU SX17 (SX)	155.3	21.8	89	0.0	4.1	1.7	4.3
LEWIS 701B (3X)	126.0	20.6	84	0.0	12.5	6.2	4.7
MAYGOLD 2036 (3X)	122.0	20.6	89	0.0	14.9	5.7	4.2
MAYGOLD 79X (DX)	119.0	21.3	93	0.0	12.6	5.5	4.2
MAYGOLD X19 (SX)	126.4	20.5	83	0.0	6.8	4.4	4.2
MAYGOLD X4 (SX)	124.5	21.4	84	0.0	11.5	5.6	3.3
MAYGOLD L45 (SX)	117.4	19.9	84	0.0	14.4	3.1	3.3
MAYGOLD 2041 (3X)	113.6	19.7	90	0.0	18.8	5.2	4.2
MAYGOLD 2058 (3X)	138.6	20.9	89	0.0	11.4	0.6	3.8
MFA V12 (SX)	148.4	21.6	91	0.0	6.4	1.2	4.5
MCCURDY 68-80 (SX)	129.2	20.2	86	0.0	26.0	3.9	4.3
MCCURDY 67-112 (SX)	116.3	20.2	84	0.0	19.9	3.7	3.8
NG+ 605C (SPX)	134.0	20.9	90	0.0	11.6	2.3	4.3
NG+ 775X (SX)	143.2	21.8	90	0.0	6.2	4.0	4.5
NG+ 830C (DX)	119.7	21.5	88	0.0	11.8	3.0	4.0
NK PX635 (3X)	125.2	20.7	91	0.0	10.0	1.1	3.5
NK PX678 (SPX)	113.3	20.4	84	0.0	12.4	10.8	4.4
PIONEER 3300 (SPX)	134.0	22.7	84	0.0	9.1	2.3	4.0
PIONEER 3306 (SX)	136.7	19.8	90	0.0	9.9	2.3	4.2
PIONEER 3369A (SPX)	139.0	21.1	92	0.0	7.4	3.3	4.2
PIONEER 3199 (SPX)	129.0	23.1	88	0.0	9.9	0.6	5.0
PIONEER 3333 (SPX)	119.5	20.1	84	0.0	7.1	8.2	4.0
PIONEER X5109 (SPX)	129.4	21.8	90	0.0	11.2	6.3	4.2
PV40S (SX)	136.1	21.6	82	0.0	7.0	1.9	4.5
PV82S (SX)	129.2	22.5	79	0.0	4.6	5.0	4.0
PV690 (DX)	122.6	22.4	90	0.0	13.9	9.8	4.3
PV 82M (SPX)	125.8	22.8	79	0.0	7.4	1.3	4.2
PV EXP. 301 (3X)	110.4	20.7	89	0.0	17.5	4.5	4.3
STULL 7205X (SX)	122.2	21.3	87	0.0	15.0	6.7	4.0
US13 (DX)	89.2	21.2	90	0.0	24.0	13.4	4.5
GROUP III MATURITY							
PIONEER 3188 (SPX)	141.3	22.0	92	0.0	21.3	3.3	4.3
PIONEER 3175 (SPX)	145.4	22.4	91	0.0	10.8	3.4	4.5
PIONEER X5349 (SPX)	160.8	24.9	85	0.0	8.0	0.6	4.7
MISSOURI 476W* (DX)	131.7	22.7	92	0.0	22.0	6.1	4.8
MEAN	123.3	21.2	88	0.0	14.4	3.8	4.0

DIFFERENCES IN YIELD BETWEEN ANY TWO HYBRIDS OF LESS THAN 20.7 BUSHELS ARE NOT CONSIDERED SIGNIFICANT.

*WHITE HYBRID

**PERMANENT NUMBER DESIGNATION

TABLE 1C. SUMMARY PERFORMANCE DATA FOR HYBRIDS GROWN NEAR TARKIO, MISSOURI (ATCHISON COUNTY) DURING THE 2-YEAR PERIOD, 1968-1969 AND THE 3-YEAR PERIOD, 1967-1969.

HYBRID	2-YEAR AVERAGE					3-YEAR AVERAGE				
	ACRE	LODGING		DROPPED	EAR	ACRE	LODGING		DROPPED	EAR
	YIELD (BU)	ROOT (%)	STALK (%)	EARS (%)	HEIGHT (FT)	YIELD (BU)	ROOT (%)	STALK (%)	EARS (%)	HEIGHT (FT)
GROUP 1 MATURITY										
ASGR0W ASC91 (SPX)	97.0	1.3	7.2	4.0	3.1	-	-	-	-	-
ASGR0W IXL9 (SX)	100.3	2.7	6.9	5.5	3.2	117.2	1.2	5.6	4.3	3.4
MAYGOLD F35 (SX)	94.9	4.2	3.9	2.0	2.9	105.1	2.8	2.6	1.3	3.0
MFA B7 (SX)	95.7	13.2	9.0	1.3	2.8	103.6	8.8	5.5	0.9	2.9
NK PX63 (SX)	70.0	1.9	11.9	2.0	2.7	93.3	1.3	8.4	1.8	2.9
NK PX610 (3X)	95.6	0.0	12.9	5.4	2.9	106.1	0.0	9.4	3.6	3.1
NK PX616 (3X)	101.1	0.8	8.1	3.5	3.2	111.3	0.8	5.6	2.3	3.4
NK PX621 (3X)	100.2	2.6	4.3	2.7	3.1	-	-	-	-	-
PIONEER 3505 (SPX)	105.4	0.9	11.1	1.9	3.2	114.4	0.6	7.8	1.3	3.3
PIONEER 3290 (SPX)	112.9	2.2	4.2	1.6	3.3	123.1	1.9	3.0	1.1	3.4
PIONEER 3365 (SPX)	95.3	0.0	7.6	1.1	2.8	-	-	-	-	-
GROUP 2 MATURITY										
30-JAC X70 (3X)	90.3	10.1	6.3	4.4	3.3	105.0	6.7	5.8	3.3	3.4
90-JAC X9 (SX)	115.5	0.0	5.1	1.6	3.6	124.1	0.0	3.4	1.3	3.6
80-JAC X7L (SX)	107.7	0.0	5.9	8.2	3.1	-	-	-	-	-
1A-MO SX17 (SX)	124.3	0.0	5.8	1.3	3.6	-	-	-	-	-
MAYGOLD 2036 (3X)	96.9	0.0	9.2	5.5	3.2	110.2	0.0	6.4	3.7	3.3
MAYGOLD 24X (DX)	98.8	3.5	8.5	5.3	3.6	110.4	2.4	7.0	3.9	3.7
MAYGOLD X19 (SX)	103.6	4.1	4.3	3.0	3.6	-	-	-	-	-
MAYGOLD X4 (SX)	102.6	0.0	0.2	2.2	2.7	-	-	-	-	-
MFA V12 (SX)	118.5	0.0	3.2	1.5	3.4	-	-	-	-	-
NK PX635 (3X)	96.0	2.6	3.5	3.2	2.8	-	-	-	-	-
PIONEER 3300 (SPX)	107.9	1.3	5.0	4.3	3.5	115.9	0.9	5.1	2.9	3.6
PIONEER 3306 (SX)	113.6	0.0	5.8	3.1	3.6	122.3	0.0	4.5	2.1	3.7
PIONEER 3194 (SPX)	109.0	0.0	5.3	1.2	4.2	129.8	0.0	5.3	0.5	4.2
PIONEER 3333 (SPX)	106.1	1.3	4.8	5.6	3.5	-	-	-	-	-
US13 (DX)	73.9	0.0	21.6	13.7	4.0	86.9	0.0	18.3	9.7	4.1
GROUP 3 MATURITY										
PIONEER 3186 (SPX)	104.3	1.3	12.4	7.5	3.7	-	-	-	-	-
PIONEER 3175 (SPX)	113.6	0.0	6.7	2.5	3.8	-	-	-	-	-
MEAN	102.5	1.9	7.8	3.8	3.3	110.9	1.7	6.5	2.9	3.4

*WHITE HYBRID.

DISTRICT 2

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

The average yield from a harvest stand of 16,700 plants per acre was 120.7 bushels. The 49 hybrids evaluated at this location ranged in yield from 81.0 to 166.5 bushels per acre.

The growing season was marked by above normal temperatures in June (3.7 F) and during the period September 1-15 (0.2 F). May, June, and August were below the long-time average for the area, with the latter being 1.5 F lower. At no time during the growing season did the recorded temperature exceed 100 F, and there were only 12 days recorded above 90 F. Rainfall was well distributed throughout the growing season. One dry period occurred (at least 15 days with less than 0.25 inch precipitation) between July 19 and August 14.

At this location the average stalk lodging was 10.3 percent for all hybrids, and ranged from 4.2 to 18.4 percent. The increased lodging was due to a heavier than usual infestation of European corn borer and stalk rot fungi such as Diplodia maydis, Gibberella zeae, and Fusarium sp. These data suggest wide variation in hybrid tolerance to corn borer and stalk rot organisms.

Weeds were not a major factor in determining yield.

Table 2A. Corn production data for 1966, 1967, and 1968, and 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	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	

*No test in 1967.

TABLE 2R. 1969 PERFORMANCE RECORD FOR HYBRIDS TESTED IN DISTRICT 2, AT THE NORTH MISSOURI CENTER NEAR SPICKARD, MISSOURI (GRUNDY COUNTY). PLANTED APRIL 25, 1969. HARVESTED OCTOBER 9, 1969. AVERAGE HARVEST POPULATION, 16,700 PLANTS PER ACRE.

HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	STAND (%)	LODGED PLANTS		DROPPED FARS (%)	EAR HEIGHT (FT)
				ROOT (%)	STALK (%)		
GROUP I MATURITY							
ASGROW ASC91 (SPX)	132.5	21.5	85	0.0	4.9	0.0	3.3
ASGROW IXL9 (SX)	115.7	24.0	84	0.0	9.9	0.0	3.8
CO-OP S-201 (SX)	105.4	17.8	89	0.0	5.8	0.0	3.0
MAYGOLD F35 (SX)	109.7	21.3	91	0.0	6.9	0.0	3.3
MFA 87 (SX)	106.4	21.5	76	0.0	4.9	0.0	3.5
NK PX610 (3X)	104.0	19.6	77	0.0	17.3	0.6	3.3
NK PX616 (3X)	115.3	19.5	81	0.0	11.3	0.6	3.5
PIONEER 3505 (SPX)	124.5	19.7	79	0.0	15.7	0.0	3.7
PIONEER 3390 (SPX)	125.6	18.4	75	0.7	14.8	0.7	3.5
PIONEER 3365 (SPX)	128.0	19.7	86	0.0	4.2	0.0	3.7
STULL 7075X (SX)	122.4	21.6	85	0.0	4.8	0.0	3.2
STULL 101Y (DX)	112.4	20.8	87	0.0	11.3	0.0	3.8
STULL 7045X (SX)	111.7	19.7	87	0.0	13.3	0.0	3.2
STULL 6205X (SX)	107.0	17.8	92	0.0	5.6	0.0	3.0
GROUP II MATURITY							
UNICORN X672 (SX)	137.8	22.4	80	0.0	16.2	0.0	3.8
UNICORN X872 (SX)	141.0	21.7	87	0.0	11.9	0.0	3.7
BO-JAC X70 (3X)	114.2	21.0	73	0.0	9.3	0.0	3.5
BO-JAC X7L (SX)	150.8	22.8	82	0.0	4.8	0.0	3.5
BO-JAC 310 (DX)	124.2	20.7	84	0.0	6.1	0.0	3.5
BO-JAC X14 (SX)	131.7	20.0	91	0.0	9.3	0.0	3.5
CO-OP D-213 (DX)	99.8	20.5	87	0.0	5.9	0.0	3.2
CO-OP T-108 (3X)	124.6	22.1	88	0.0	8.3	1.2	3.0
LEWIS 701B (3X)	102.0	20.6	77	0.0	12.4	0.8	3.5
MAYGOLD 2036 (3X)	113.7	20.3	90	0.0	8.0	0.5	3.7
MAYGOLD 29X (DX)	119.2	21.0	84	0.0	7.9	0.0	4.0
MAYGOLD X19 (SX)	124.3	20.0	79	0.0	13.9	0.0	3.8
MAYGOLD L45 (SX)	116.8	20.9	80	0.0	5.3	0.0	3.8
MAYGOLD 2041 (3X)	108.8	19.9	82	0.0	11.5	0.6	3.7
MAYGOLD 2058 (3X)	118.1	20.2	93	0.0	7.2	0.5	3.2
MFA V12 (SX)	123.1	21.2	79	0.0	5.7	0.0	3.7
MCCURDY 68-80 (SX)	119.3	20.3	78	0.0	17.4	0.0	4.0
MCCURDY 67-112 (SX)	113.3	20.1	73	0.0	9.4	0.8	3.5
NK PX678 (SPX)	120.7	19.6	80	0.7	13.1	0.7	4.2
PIONEER 3300 (SPX)	136.5	22.3	86	0.0	9.0	0.0	3.5
PIONEER 3306 (SX)	128.8	19.4	84	0.0	11.8	1.2	4.2
PIONEER 3369A (SPX)	144.2	21.3	89	0.0	10.6	0.0	3.8
PIONEER 3199 (SPX)	122.8	21.5	80	0.0	11.0	0.6	4.7
PIONEER 3333 (SPX)	124.0	20.7	75	0.0	9.6	0.7	3.7
PIONEER X5108 (SPX)	138.7	21.1	84	0.0	7.8	0.6	3.7
STULL 7205X (SX)	119.0	21.4	89	0.0	15.2	0.0	3.7
MISSOURI 67-2 (DX)	111.7	21.7	79	0.0	13.1	0.6	4.0
MISSOURI 67-6 (DX)	118.6	21.4	93	0.0	13.4	0.6	4.3
US13 (DX)	102.0	20.3	91	0.0	16.1	0.6	4.0
GROUP III MATURITY							
PIONEER 3188 (SPX)	104.5	21.3	77	0.0	12.8	0.7	4.0
PIONEER 3175 (SPX)	129.9	22.5	87	0.0	10.5	0.0	4.2
PIONEER X5349 (SPX)	166.5	25.4	90	0.0	9.3	0.0	4.2
MISSOURI 476W* (DX)	137.9	22.1	84	0.0	18.4	0.0	4.8
MO 67-9W* (DX)	128.0	23.4	84	0.0	8.5	0.6	4.2
MO PIPE 14* (DX)	81.0	22.4	85	0.0	12.7	0.0	3.8
MEAN	120.7	21.0	83	0.0	10.3	0.3	3.7

DIFFERENCES IN YIELD BETWEEN ANY TWO HYBRIDS OF LESS THAN 14.0 BUSHELS ARE NOT CONSIDERED SIGNIFICANT.

*WHITE HYBRID

**PERMANENT NUMBER DESIGNATION

TABLE 2C. SUMMARY PERFORMANCE DATA FOR HYBRIDS GROWN AT THE NORTH MISSOURI RESEARCH CENTER NEAR SPICKARD, MISSOURI DURING THE 2-YEAR PERIOD 1968-1969.

HYBRID	ACRE YIELD (BU)	LODGED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
		ROOT (%)	STALK (%)		
GROUP 1 MATURITY (2-YEAR AVERAGE)					
ASGROW ASC91 (SPX)	119.6	4.2	3.3	0.0	3.0
MAYGOLD F35 (SX)	102.1	3.3	5.3	0.5	3.0
MFA 87 (SX)	104.2	3.7	5.2	0.4	3.2
NK PX610 (3X)	101.8	0.0	11.3	2.2	3.0
NK PX616 (3X)	115.8	0.0	7.4	0.5	3.2
PIONEER 3505 (SPX)	116.8	0.0	9.5	0.0	3.2
PIONEER 3390 (SPX)	122.4	0.3	8.3	0.3	3.2
PIONEER 3365 (SPX)	116.1	0.0	5.8	1.0	3.0
GROUP 2 MATURITY (2-YEAR AVERAGE)					
BO-JAC X70 (3X)	117.8	0.0	5.9	0.8	3.1
BO-JAC X7L (SX)	139.2	0.0	5.0	1.7	3.2
BO-JAC 310 (DX)	122.8	1.8	3.9	0.4	3.2
MAYGOLD 2036 (3X)	114.5	1.5	6.6	1.4	3.2
MAYGOLD 29X (DX)	121.8	9.4	7.4	1.3	3.6
MAYGOLD X19 (SX)	125.0	0.0	10.8	0.4	3.2
MFA V12 (SX)	120.2	0.0	4.5	0.0	3.2
PIONEER 3300 (SPX)	134.6	0.9	6.2	0.9	3.4
PIONEER 3306 (SX)	126.1	0.4	6.7	1.0	3.4
PIONEER 3199 (SPX)	128.0	0.0	9.1	0.3	4.0
PIONEER 3333 (SPX)	117.7	0.0	8.7	1.4	3.2
US13 (DX)	91.5	5.7	20.3	4.7	3.8
MAYGOLD X9	109.3	3.4	3.5	2.2	2.6
GROUP 3 MATURITY (2-YEAR AVERAGE)					
PIONEER 3188 (SPX)	117.0	0.0	7.6	1.2	3.5
PIONEER 3175 (SPX)	134.6	0.0	5.7	0.9	3.7
MISSOURI 476W* (DX)	136.3	1.7	16.0	1.7	4.2
MEAN	119.0	1.5	7.7	1.1	3.3

*WHITE HYBRID.

DISTRICT 3

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

Wet weather delayed planting at this location until June 6. The established stand was so uneven that the test was abandoned and consequently no harvest was made.

Summary data for 1967 and 1968 are presented in table 3B for the normal planting population and in table 3C for the higher population. Average plant count over the two years for the hybrids appearing in table 3B was 17,000 plants per acre; for those appearing table 3C it was 22,300 plants per acre.

During 1967 root lodging was severe (caused by high wind coupled with greater than six inches of rain in a short period of time), ranging between 0.0 and 79.9 percent at the lower population and between 41.2 and 96.5 for the higher plant population. In 1968 stalk lodging was severe, ranging from 8.0 to 58.1 percent of the stalks broken below the ear at the lower population. When the stand was increased to 22,800 plants per acre in 1968 stalk lodging was increased by a factor of 1.5 times over the figure for the lower population. These two situations result in fairly high two-year averages for root and stalk lodging.

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	

TABLE 3B. SUMMARY PERFORMANCE DATA FOR HYBRIDS GROWN NEAR WAYLAND,
MISSOURI (CLARK COUNTY) DURING THE 2-YEAR PERIOD 1967-1968.

HYBRID	ACRE YIELD (BU)	LOGGED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
		ROOT (%)	STALK (%)		
GROUP 1 MATURITY (2-YEAR AVERAGE)					
ASGROW ATC 106	139.2	10.3	8.4	4.4	4.3
MFA B6	127.7	8.6	11.6	0.0	3.7
MFA B7	134.1	9.5	8.3	0.6	3.9
MCCURDY 3X6	132.1	12.5	21.7	1.9	3.6
NORTHRUP-KING PX610	132.7	5.4	22.0	0.0	3.8
PIONEER 3505	146.9	1.3	7.1	0.0	3.9
GROUP 2 MATURITY (2-YEAR AVERAGE)					
BO-JAC X70	148.3	5.0	14.8	2.2	4.1
BO-JAC X9	147.2	6.1	7.0	0.3	3.9
IOWA-MISSOURI SX-17	141.5	7.0	20.4	1.2	4.0
MAYGOLD 2036	159.1	11.3	10.1	0.9	4.0
MCALLISTER SX6509	145.4	4.5	9.8	0.7	3.9
MCALLISTER SX6524	157.8	5.1	12.1	0.6	4.0
MCALLISTER 13A	146.3	20.4	7.2	0.0	3.9
MCCURDY H5-61	137.1	12.0	26.5	5.3	3.9
MCCURDY HP5	132.7	2.3	20.3	0.0	3.8
NORTHRUP-KING PX616	132.0	9.2	20.1	1.0	3.9
NORTHRUP-KING PX674	134.9	11.4	24.5	3.4	3.9
PIONEER 321	141.5	6.5	18.7	2.6	4.2
PIONEER 3300	152.3	11.6	7.2	2.6	4.0
PIONEER 3306	136.7	9.7	7.4	0.7	4.3
PIONEER 3307	143.1	9.3	8.6	0.8	4.2
T.F. BONUSMAKER S	134.6	4.8	11.5	1.4	3.5
KANSAS 1639	142.6	3.9	20.9	3.0	4.1
MISSOURI SX14W	133.5	36.9	15.7	5.3	4.0
MISSOURI 63	134.0	18.6	9.8	1.3	4.2
MISSOURI 64	138.5	33.3	4.9	3.0	3.9
MISSOURI 65-2	144.8	9.5	10.7	0.6	4.0
MISSOURI 830	136.5	31.2	12.1	3.1	4.3
MISSOURI 1023	136.0	26.8	13.1	5.0	4.0
US 13	134.6	9.7	34.5	7.7	4.8
GROUP 3 MATURITY (2-YEAR AVERAGE)					
PAG SX29	152.8	4.3	18.1	1.3	4.5
MISSOURI 476W	157.2	30.6	24.5	1.8	4.7
US 523W	122.5	34.5	14.2	5.9	4.6
US 523WB	119.4	22.2	18.1	4.5	5.0
MEAN	140.0	13.1	14.7	2.2	4.1

*WHITE HYBRID.

TABLE 3C. SUMMARY PERFORMANCE DATA FOR HYBRIDS GROWN NEAR WAYLAND, MISSOURI (CLARK COUNTY) AT A HIGHER POPULATION DURING THE 2-YEAR PERIOD 1967-1968.

HYBRID	ACRE YIELD (BU)	LODGED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
		ROOT (%)	STALK (%)		
GROUP 1 MATURITY (2-YEAR AVERAGE)					
ASGROW ATC 106	154.3	24.8	11.5	2.4	4.3
MFA B6	122.4	41.3	19.4	1.0	3.6
MFA B7	147.7	34.7	11.6	0.5	3.9
MCCURDY 3X6	129.9	40.0	30.8	1.5	4.0
NORTHRUP-KING PX610	121.0	32.8	33.7	1.2	3.9
PIIONEER 3505	143.7	23.1	24.7	0.5	3.8
PIIONEER 3390	150.6	34.9	24.9	0.0	4.2
GROUP 2 MATURITY (2-YEAR AVERAGE)					
BD-JAC X70	148.0	34.4	17.8	1.9	4.0
BD-JAC X9	146.7	25.5	22.9	0.3	3.9
MCCURDY H5-61	131.8	28.4	27.3	0.5	3.8
MCCURDY HP5	118.6	29.1	36.1	1.5	3.9
NORTHRUP-KING PX616	124.1	35.9	28.5	0.9	4.0
NORTHRUP-KING PX674	121.0	40.6	21.4	1.9	4.3
PIIONEER 321	137.7	37.6	24.2	0.8	4.1
PIIONEER 3300	133.9	40.1	16.0	0.3	4.0
PIIONEER 3306	156.3	34.0	15.0	1.5	3.9
PIIONEER 3307	138.6	44.0	15.2	0.3	4.0
T.E. BONUSMAKER S	125.8	42.5	16.6	0.0	3.5
MISSOURI SX14W	110.8	48.2	34.8	1.8	4.3
US 13	118.3	37.6	33.9	0.8	4.9
GROUP 3 MATURITY (2-YEAR AVERAGE)					
PAG SX29	138.9	26.3	22.4	2.4	4.4
MISSOURI 476W	120.4	48.2	28.4	0.3	4.8
MEAN	133.7	35.6	23.5	1.0	4.1

*WHITE HYBRID.

DISTRICT 4

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

An average of 94.9 bushels per acre was harvested from a stand of 16,500 plants. Yields ranged between 74.5 and 121.8 bushels, thus indicating the wide diversity in yielding ability that exists among hybrids grown at a common location and under uniform conditions (within limits of experimental variation).

Total rainfall for the period May 1 through September 15 was 34.78 inches, which is way above normal. Despite this large amount of rainfall one dry period occurred between July 28 and September 5. Temperatures for the period averaged as much as 5.7 F below normal (June). All months, except September, were cooler than normal. There were no days when the temperature exceeded 100 F.

Stalk lodging (stalks broken below the ear) and dropped ears were excessive. Stalk lodging when averaged over all hybrids was 34.8 percent. The range among hybrids was 15.1 to 63.5 percent. Dropped ears averaged 7.6 percent and ranged from 1.8 to 16.5 percent over all hybrids evaluated. Yields, as reported in table 4B, were materially affected by these high lodging and dropped ear percentages. The excessive lodging and droppage of ears was due to severe infestation by the European corn borer and stalk rot organisms such as Diplodia maydis, Gibberella zeae, and Fusarium sp.

Weeds were a problem in a few plots.

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	

TABLE 4B. 1969 PERFORMANCE RECORD FOR HYBRIDS TESTED IN DISTRICT 4, NEAR HIGGINSVILLE, MISSOURI (LAFAYETTE COUNTY). PLANTED MAY 19, 1969. HARVESTED NOV. 20, 1969. AVERAGE HARVEST POPULATION, 16,500 PLANTS PER ACRE.

HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	STAND (%)	LODGED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
				ROOT (%)	STALK (%)		
GROUP I MATURITY							
MFA 87 (SX)	97.4	17.5	89	0.0	17.0	5.1	4.3
NK PX63 (SX)	91.5	17.6	88	0.0	32.9	7.6	3.8
NK PX616 (3X)	44.2	17.7	81	1.4	29.4	11.5	4.0
NK PX621 (3X)	46.8	17.7	85	1.6	34.0	4.0	3.8
PIONEER 3505 (SPX)	84.4	17.9	73	0.0	63.5	7.0	3.8
PIONEER 3390 (SPX)	101.3	17.3	71	0.0	28.5	4.9	4.5
STULL 101Y (DX)	81.0	18.4	85	1.2	44.5	8.4	4.3
GROUP II MATURITY							
BO-JAC X7L (SX)	93.4	18.4	85	6.2	15.1	9.0	4.8
BO-JAC X1A (SX)	107.1	18.2	91	0.0	38.6	5.1	4.5
BO-JAC X5 (SX)	91.9	17.8	80	0.6	26.1	13.5	4.7
HOLDEN EXP093 (SX)	102.2	18.4	82	7.6	39.2	3.1	4.7
HOLDEN EXP025 (3X)	92.7	16.4	81	1.3	38.5	7.7	4.2
MAYGOLD 2036 (3X)	88.0	17.4	86	3.5	32.6	6.1	3.8
MAYGOLD 29X (DX)	97.3	17.7	82	0.0	35.3	5.6	4.2
MAYGOLD X19 (SX)	83.0	17.7	85	0.6	24.6	9.8	4.5
MAYGOLD 205B (3X)	90.5	17.4	82	1.8	30.7	4.4	4.0
MFA V12 (SX)	41.9	17.5	81	0.6	45.0	4.0	4.2
MCCURDY 64-80 (SX)	92.6	17.4	83	4.3	34.1	6.2	4.3
MCCURDY 67-112 (SX)	107.1	17.3	81	2.0	29.9	12.0	4.3
MCCURDY 67-96 (SX)	90.7	18.2	93	9.7	17.0	12.6	4.2
NK PX635 (3X)	83.4	18.0	88	0.6	26.7	5.9	4.0
NK PX678 (SPX)	88.6	17.5	81	0.0	27.4	8.8	4.0
PIONEER 3300 (SPX)	97.1	18.5	91	1.9	28.2	10.2	4.5
PIONEER 3306 (SX)	109.8	18.5	91	1.2	27.4	5.4	4.7
PIONEER 3369A (SPX)	108.3	17.8	81	0.0	29.7	10.5	4.7
PIONEER 3199 (SPX)	102.7	18.5	79	0.0	37.0	8.1	4.7
PIONEER 3333 (SPX)	92.3	17.5	80	0.0	36.3	9.9	4.3
PIONEER X5108 (SPX)	121.1	18.0	81	1.8	47.5	10.6	4.2
POIRNT 68 (DX)	79.8	18.0	77	0.0	32.5	7.2	4.3
PV405 (SX)	102.3	17.9	84	0.6	29.7	6.8	4.3
PV425 (SX)	102.6	18.6	80	0.0	32.1	7.6	4.3
PV680 (DX)	93.8	18.8	78	0.0	46.2	16.5	4.2
PV 82M (SPX)	100.7	19.0	80	0.0	36.8	7.6	4.2
PV EXP 301 (3X)	83.7	18.0	75	0.9	16.0	9.5	4.0
PRINCETON SX-893 (SX)	95.6	18.0	76	0.0	37.3	9.3	4.3
PRINCETON SX-816 (SX)	95.4	18.6	83	0.0	43.2	5.1	4.3
PRINCETON SX-873 (SX)	100.7	17.9	80	0.6	34.6	7.6	4.2
STULL 7205X (SX)	105.1	18.1	89	2.4	38.2	1.8	4.0
MISSOURI 67-2 (DX)	92.5	19.4	75	10.9	31.1	11.1	4.7
US13 (DX)	74.4	18.6	78	3.9	39.0	8.1	4.5
GROUP III MATURITY							
EXCEL E-8244 (SX)	97.5	17.6	70	0.0	31.1	4.2	4.5
LEWIS X78 (SX)	83.0	18.6	83	2.3	37.9	8.3	4.5
MFA V8 (SX)	81.5	18.1	80	1.2	47.4	5.8	4.8
MFA TX77 (3X)	92.7	18.6	99	2.5	45.9	6.8	4.7
MCCURDY 67-14 (SX)	121.5	23.1	79	3.9	25.8	4.4	4.5
PIONEER 3193 (SPX)	94.0	18.9	93	0.6	40.6	7.8	4.7
PIONEER 3175 (SPX)	121.8	19.5	98	2.9	40.3	5.2	4.7
PIONEER X5345 (SPX)	106.1	20.5	82	0.6	41.0	6.2	4.7
MISSOURI 4764** (DX)	88.6	19.0	81	7.1	59.5	5.8	4.5
MEAN	94.6	18.2	82	1.7	34.8	7.6	4.3

DIFFERENCES IN YIELD BETWEEN ANY TWO HYBRIDS OF LESS THAN 18.4 BUSHELS ARE NOT CONSIDERED SIGNIFICANT.

*WHITE HYBRID

**PERMANENT NUMBER DESIGNATION

TABLE 4C. SUMMARY PERFORMANCE DATA FOR HYBRIDS TESTED NEAR HIGGINSVILLE, MISSOURI (LAFAYETTE COUNTY) FOR THE 2-YEAR PERIOD 1968-1969 AND THE 3-YEAR PERIOD 1967-1969.

HYBRID	2-YEAR AVERAGE					3-YEAR AVERAGE				
	ACRE YIELD (BU)	LODGING		DROPPED EARS (%)	EAR HEIGHT (FT)	ACRE YIELD (BU)	LODGING		DROPPED EARS (%)	EAR HEIGHT (FT)
		ROOT (%)	STALK (%)				ROOT (%)	STALK (%)		
GROUP 1 MATURITY										
MFA B7 (SX)	87.7	0.0	10.5	3.0	3.7	96.7	0.0	8.4	2.3	3.6
NK PX63 (SX)	77.3	1.8	18.2	3.8	3.2	92.9	1.2	16.5	2.8	3.4
NK PX616 (3X)	95.9	2.5	18.6	6.2	3.5	95.7	1.7	15.0	4.6	3.7
NK PX621 (3X)	90.0	0.8	20.6	2.0	3.5	-	-	-	-	-
PIONEER 3505 (SPX)	78.4	0.0	37.1	5.4	3.3	-	-	-	-	-
PIONEER 3390 (SPX)	100.8	0.0	21.5	3.3	4.0	110.2	0.0	14.8	2.2	4.1
GROUP 2 MATURITY										
MAYGOLD 2036 (3X)	81.6	3.5	21.4	3.9	3.7	94.6	2.3	14.7	2.8	3.7
MAYGOLD 29X (DX)	97.1	2.1	22.5	5.6	3.9	108.4	1.4	16.3	3.9	3.9
MAYGOLD X19 (SX)	94.6	0.3	15.9	5.4	3.9	-	-	-	-	-
MFA V12 (SX)	88.9	0.3	25.8	2.4	3.6	-	-	-	-	-
MCCURDY 68-80 (SX)	93.1	2.2	23.4	3.1	3.9	-	-	-	-	-
NK PX635 (3X)	81.0	0.3	19.2	5.1	3.4	-	-	-	-	-
PIONEER 3300 (SPX)	100.3	0.9	20.8	6.5	4.1	110.8	0.6	16.9	5.0	4.0
PIONEER 3306 (SX)	106.3	0.6	17.7	3.7	4.0	117.5	0.4	12.0	2.4	4.1
PIONEER 3199 (SPX)	106.3	0.0	21.5	5.8	4.2	-	-	-	-	-
PIONEER 3333 (SPX)	97.5	0.0	22.2	5.4	3.7	-	-	-	-	-
PRINCETON SX-836(SX)	105.0	0.0	25.2	4.4	3.8	-	-	-	-	-
US13 (DX)	70.8	7.7	42.5	9.3	4.0	85.2	5.6	37.7	7.6	4.2
GROUP 3 MATURITY										
PIONEER 3188 (SPX)	91.3	1.7	24.3	5.2	4.2	-	-	-	-	-
PIONEER 3175 (SPX)	107.8	1.5	25.3	4.4	4.2	-	-	-	-	-
PIONEER X5349 (SPX)	120.9	0.3	21.9	3.1	4.2	-	-	-	-	-
MISSOURI 476W* (DX)	92.3	15.8	38.0	4.6	4.2	96.2	10.5	30.5	3.3	4.2
MEAN	93.4	1.9	23.4	4.7	3.9	100.8	2.4	18.3	3.7	3.9

*WHITE HYBRID.

DISTRICT 5

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

The average yield for this test was 71.1 bushels per acre with a range of 38.0 to 99.4 bushels per acre. The harvest stand was 17,900 plants per acre. The below normal yield was mainly due to late planting (after June 1).

Average temperatures for the period May through August inclusive were below normal. No temperatures exceeding 100 F were recorded. Conditions were such that the spring months were very wet causing corn planting to be delayed (see table 5B). This wet period was followed by drought as is exemplified by the three dry periods that occurred between July 11 and September 9 (see table C).

Root lodging was of importance for some hybrids. Hybrids ranged between 0.0 and 40.5 percent of the plants root lodged. However, the average over all hybrids was only 5.7 percent which indicates that large differences in rooting patterns and characteristics exist among hybrids. Stalk lodging was not as severe at this location as it was at other testing sites reported in this bulletin.

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	

TABLE 59. 1969 PERFORMANCE RECORD FOR HYBRIDS TESTED IN DISTRICT 5, NEAR COLUMBIA, MISSOURI (BOONE COUNTY). PLANTED JUNE 10, 1969. HARVESTED NOVEMBER 13, 1969. AVERAGE HARVEST POPULATION, 17,400 PLANTS PER ACRE.

HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	STAND (%)	LODGED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
				ROOT (%)	STALK (%)		
GROUP I MATURITY							
ASGROW IXL9 (SX)	53.0	30.9	86	14.0	0.7	1.5	3.7
MFA 87 (SX)	75.1	29.3	87	13.5	1.6	0.0	3.3
NK PX616 (3X)	58.8	25.6	83	10.9	5.0	0.8	3.5
PIONEER 3505 (SPX)	81.2	25.6	88	0.8	8.0	0.0	3.5
PIONEER 3390 (SPX)	70.1	24.8	72	0.8	4.2	0.0	3.7
STULL 101Y (DX)	57.1	29.1	84	9.8	5.0	0.8	3.7
GROUP II MATURITY							
UNICORN X672 (SX)	79.2	28.0	90	2.3	6.3	0.8	4.0
UNICORN X872 (SX)	74.9	27.7	91	1.5	3.7	0.0	4.0
BO-JAC X7L (SX)	70.5	30.8	93	0.0	3.6	0.0	3.5
BO-JAC X1A (SX)	90.4	26.0	97	11.5	2.8	0.7	3.7
HILDEN EXP033 (SX)	76.4	30.6	95	3.7	4.3	0.0	3.7
HOLDEN EXP025 (3X)	80.1	25.4	86	22.4	9.1	4.8	3.8
MAYGOLD 2036 (3X)	67.6	26.4	90	3.9	8.3	0.8	3.7
MAYGOLD 29X (DX)	66.4	27.2	92	10.0	4.3	0.7	3.3
MAYGOLD X19 (SX)	71.2	26.5	86	4.1	6.3	0.4	4.2
MAYGOLD 2058 (3X)	70.3	26.2	92	8.5	2.2	0.8	3.5
MFA W12 (SX)	37.9	29.8	93	3.8	3.7	0.0	3.5
MCCURDY 68-80 (SX)	33.8	27.1	97	1.4	6.2	4.3	3.8
MCCURDY 67-112 (SX)	67.4	26.0	94	20.3	2.5	0.0	3.5
MCCURDY 67-96 (SX)	77.4	29.8	95	0.0	0.7	2.9	3.5
NK PX678 (SPX)	51.5	26.3	87	8.6	3.0	0.0	3.8
PIONEER 3300 (SPX)	87.9	28.1	93	2.3	6.1	0.0	3.7
PIONEER 3306 (SX)	54.9	25.7	93	13.9	0.8	0.8	3.8
PIONEER 3369A (SPX)	89.7	26.0	93	3.8	0.8	0.8	4.0
PIONEER 3199 (SPX)	88.0	30.0	93	5.2	8.0	0.7	3.8
PIONEER 3333 (SPX)	74.3	26.8	84	0.0	9.2	0.9	3.8
PIONEER X5108 (SPX)	99.4	27.1	93	16.5	3.0	0.7	3.5
PRINCETON SX-803(SX)	63.7	24.6	86	2.0	3.9	3.1	3.3
PRINCETON SX-836(SX)	72.6	26.5	88	3.7	8.2	0.0	3.7
PRINCETON SX-823(SX)	30.3	27.3	94	0.0	8.0	1.5	3.5
STULL 720SX (SX)	71.2	28.1	88	17.4	2.3	0.0	3.5
MISSOURI 67-2 (DX)	64.0	29.7	87	40.5	6.9	1.5	3.7
US13 (DX)	53.4	25.4	86	5.9	8.2	0.8	4.3
GROUP III MATURITY							
EXCEL E-8244 (SX)	59.6	30.2	87	2.3	7.9	0.0	3.7
LEWIS X78 (SX)	75.4	29.8	90	0.0	14.8	0.8	3.7
MFA VA (SX)	61.3	27.9	96	4.1	4.4	0.7	4.0
MFA TX77 (3X)	73.0	29.5	93	5.0	4.3	0.7	4.0
MCCURDY 67-14 (SX)	47.2	33.8	88	30.3	3.2	3.2	3.7
PIONEER 3188 (SPX)	71.3	27.1	93	0.7	10.5	1.5	3.8
PIONEER 3175 (SPX)	73.4	32.9	88	2.4	10.7	0.0	3.5
PIONEER X5349 (SPX)	77.9	31.5	87	0.0	12.8	0.0	3.8
MISSOURI 476W* (DX)	63.8	28.7	88	32.4	8.0	1.5	4.0
MEAN	71.1	28.1	89	3.2	5.7	0.9	3.7

DIFFERENCES IN YIELD BETWEEN ANY TWO HYBRIDS OF LESS THAN 1.4 BUSHELS ARE NOT CONSIDERED SIGNIFICANT.

*WHITE HYBRID

**PERMANENT NUMBER DESIGNATION

TABLE 50. SUMMARY PERFORMANCE DATA FOR HYBRIDS TESTED NEAR COLUMBIA, MISSOURI (BOONE COUNTY) FOR THE 2-YEAR PERIOD 1968-1969 AND THE 3-YEAR PERIOD 1967-1969.

HYBRID	2-YEAR AVERAGE					3-YEAR AVERAGE				
	ACRE YIELD (BU)	LOGGING		DROPPED EARS (%)	EAR HEIGHT (FT)	ACRE YIELD (BU)	LOGGING		DROPPED EARS (%)	EAR HEIGHT (FT)
		ROOT (%)	STALK (%)				ROOT (%)	STALK (%)		
GROUP 1 MATURITY										
MFA B7 (SX)	77.4	6.7	9.6	1.9	3.6	78.5	4.5	22.1	1.3	3.4
INK PX616 (3X)	73.7	5.4	14.1	1.6	3.8	73.4	4.0	12.7	1.1	3.7
PIONEER 3505 (SPX)	93.9	0.4	13.7	1.7	3.8	-	-	-	-	-
PIONEER 3390 (SPX)	91.3	0.4	10.5	1.7	3.9	92.7	0.3	15.6	1.1	3.7
GROUP 2 MATURITY										
MAYGOLD 2036 (3X)	84.0	1.9	10.8	1.0	3.9	87.2	1.3	9.9	0.7	3.8
MAYGOLD 29X (DX)	84.3	5.0	7.9	4.3	3.9	87.7	3.7	8.5	3.5	3.7
MFA V12 (SX)	69.0	1.9	13.6	0.6	3.8	-	-	-	-	-
MCCURDY 68-80 (SX)	82.2	0.7	13.9	4.0	4.3	-	-	-	-	-
PIONEER 3300 (SPX)	93.8	1.1	9.9	0.6	4.1	95.4	0.3	22.2	0.4	3.8
PIONEER 3306 (SX)	80.3	7.0	9.7	1.0	4.2	89.1	4.6	11.7	0.7	4.0
PIONEER 3199 (SPX)	90.3	2.6	11.0	2.2	4.2	94.0	1.7	12.3	1.5	4.0
PIONEER 3333 (SPX)	88.3	0.0	11.5	1.0	4.0	-	-	-	-	-
PRINCETON SX-836 (SX)	90.0	1.8	14.2	0.0	4.0	-	-	-	-	-
US13 (DX)	57.4	2.9	23.0	8.2	4.7	73.1	2.0	33.2	6.1	4.4
GROUP 3 MATURITY										
PIONEER 3188 (SPX)	90.8	0.4	9.7	3.0	4.1	-	-	-	-	-
PIONEER 3175 (SPX)	95.3	1.2	22.6	2.2	4.0	-	-	-	-	-
PIONEER X5349 (SPX)	100.6	0.0	13.2	1.7	4.2	-	-	-	-	-
MISSOURI 476W* (DX)	83.9	16.2	17.6	0.7	4.6	82.7	10.8	25.4	0.8	4.4
MEAN	85.7	3.1	13.4	2.1	4.0	85.3	3.4	17.4	1.7	3.9

*WHITE HYBRID.

DISTRICT 6

The hybrid performance records for District 6 are presented in tables 6B through 6E.

Hybrids were evaluated at two populations at this location. The harvest population for the regular test was 16,100 plants per acre and 19,800 plants for the higher population test.

The average yield for all hybrids in the regular test was 81.8 bushels per acre. Hybrid yields ranged from 35.7 to 117.5 bushels. At the higher population the average yield was 78.4 bushels and ranged from 38.5 to 118.4 bushels.

Rainfall was well distributed throughout the growing season. One dry period occurred between August 1 and August 15. Average monthly temperatures for May, June, and August were below the long-time mean. July and the period, September 1-15, were above normal.

Root lodging was not important at this site. Stalk lodging (plants broken below the ear) averaged 10.6 percent for all hybrids. The range was from 2.2 to 25.0 percent. Ear dropping was not significant.

Weeds were not a problem.

These data show that large differences exist among hybrids when grown at a common location in yielding ability and response to insects and diseases.

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	

TABLE 6B. 1969 PERFORMANCE RECORD FOR HYBRIDS TESTED IN DISTRICT 6, NEAR LABADIE, MISSOURI (FRANKLIN COUNTY). PLANTED MAY 21, 1969. HARVESTED NOVEMBER 6, 1969. AVERAGE HARVEST POPULATION, 16,100 PLANTS PER ACRE.

HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	STAND (%)	LODGED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
				ROOT (%)	STALK (%)		
GROUP I MATURITY							
MFA B7 (SX)	87.9	18.9	81	0.0	3.3	1.4	3.7
NK PX616 (3X)	74.7	18.4	81	0.0	4.3	0.0	4.2
PIONEER 3505 (SPX)	86.9	18.3	90	0.0	14.4	0.6	3.7
PIUNEER 3290 (SPX)	66.9	18.3	71	0.0	7.9	2.8	4.3
STULL 101Y (DX)	69.7	19.2	75	0.0	9.1	2.3	4.2
GROUP II MATURITY							
HOLDEN EXP033 (SX)	108.6	19.9	83	0.0	11.2	3.1	3.8
HOLDEN EXP025 (3X)	90.7	18.1	86	0.0	11.4	2.5	4.0
LEWIS 701B (3X)	97.5	18.4	78	0.0	9.6	0.7	3.7
MFA V12 (SX)	79.7	19.3	72	0.0	9.8	0.0	4.2
MCCURDY 68-80 (SX)	71.0	18.7	74	0.0	12.6	2.1	4.7
MCCURDY 67-112 (SX)	76.3	19.0	76	0.0	14.7	0.6	3.8
MCCURDY 67-46 (SX)	71.9	20.3	82	1.3	9.4	2.8	3.8
OLIVER B8702SX (SX)	81.2	19.7	86	0.7	7.5	2.0	3.8
NK PX678 (SPX)	95.7	18.3	77	0.6	12.3	0.6	4.7
PAULSMEYER 207 (DX)	85.3	19.1	78	0.0	9.6	2.7	4.0
PIONEER 3300 (SPX)	70.9	20.5	83	0.0	6.9	1.2	3.3
PIONEER 3306 (SX)	103.1	19.1	91	0.6	8.5	1.7	4.5
PIONEER 3369A (SPX)	95.3	19.3	91	0.0	3.4	2.3	4.2
PIONEER 3199 (SPX)	66.5	21.2	78	0.0	9.1	0.0	4.8
PIONEER 3333 (SPX)	87.7	18.8	82	0.0	7.5	1.8	4.3
PIONEER X5108 (SPX)	79.4	19.7	87	0.0	10.1	1.2	4.5
PRINCETON SX-690(SX)	104.5	18.7	84	0.0	11.6	1.8	4.0
PRINCETON SX-803(SX)	75.5	19.5	77	0.0	17.4	3.4	4.3
PRINCETON SX-836(SX)	61.7	19.7	83	0.0	10.5	1.3	4.3
PRINCETON SX-823(SX)	96.9	19.0	84	0.0	6.8	0.6	3.7
STULL 720SX (SX)	93.8	19.1	80	0.0	10.3	0.6	4.5
MISSOURI 67-2 (DX)	60.6	20.6	80	1.3	8.4	1.9	3.8
MISSOURI 67-6 (DX)	95.4	20.6	81	2.7	9.9	0.6	4.5
US13 (DX)	35.7	19.0	75	0.0	14.5	3.7	4.8
GROUP III MATURITY							
EXCEL E-8244 (SX)	91.3	19.0	69	0.0	17.1	1.6	4.0
LEWIS X78 (SX)	72.1	20.0	77	0.0	7.8	0.6	4.0
MFA V8 (SX)	69.8	20.5	79	0.0	14.9	0.8	4.2
MFA TX77 (3X)	77.1	20.0	77	2.1	6.1	0.0	4.7
MCCURDY 67-14 (SX)	117.4	25.1	75	0.0	9.6	1.4	4.7
PIONEER 3138 (SPX)	81.5	19.7	84	0.0	16.2	1.2	4.3
PIONEER 3175 (SPX)	91.0	21.2	92	1.2	8.4	1.6	4.2
PIONEER X5349 (SPX)	105.7	22.4	78	0.0	4.0	1.5	4.8
PRINCETON SX-927*(SX)	53.4	21.1	90	0.0	2.2	0.0	3.8
PRINCETON 920-A*(DX)	59.0	20.5	82	0.0	13.2	3.2	3.7
PRINCETON SX-950*(SX)	74.3	20.6	75	0.0	14.3	0.7	4.5
PRINCETON 990-3*(DX)	81.1	20.4	80	0.0	23.5	3.4	4.3
MISSOURI 476W* (DX)	76.1	20.2	79	3.3	25.0	1.2	4.5
MEAN	81.7	19.8	80	0.3	10.6	1.5	4.2

DIFFERENCES IN YIELD BETWEEN ANY TWO HYBRIDS OF LESS THAN 24.6 BUSHELS ARE NOT CONSIDERED

SIGNIFICANT.

*WHITE HYBRID

**PERMANENT NUMBER DESIGNATION

TABLE 6C. SUMMARY PERFORMANCE DATA FOR HYBRIDS GROWN NEAR LABADIE, MISSOURI (FRANKLIN COUNTY) DURING THE 2-YEAR PERIOD 1968-1969.

HYBRID	ACRE YIELD (BU)	LODGED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
		ROOT (%)	STALK (%)		
GROUP 1 MATURITY (2-YEAR AVERAGE)					
MFA B7 (SX)	85.1	1.4	2.1	0.7	3.4
NK PX616 (3X)	85.5	0.0	4.8	0.0	3.8
PIONEER 3505 (SPX)	83.2	0.0	8.2	0.3	3.3
PIONEER 3390 (SPX)	78.7	0.6	4.8	1.4	3.9
GROUP 2 MATURITY (2-YEAR AVERAGE)					
HOLDEN EXP033 (SX)	110.7	2.1	5.6	1.5	3.5
MFA V12 (SX)	85.6	0.5	5.4	0.0	4.1
MCCURDY 68-80 (SX)	77.9	2.0	6.8	1.0	4.0
PIONEER 3300 (SPX)	85.1	0.0	4.9	1.1	3.5
PIONEER 3306 (SX)	109.4	0.3	4.7	0.9	4.1
PIONEER 3199 (SPX)	82.1	0.0	5.1	0.0	4.5
PIONEER 3333 (SPX)	91.2	0.0	5.9	1.5	3.7
PRINCETON SX-836(SX)	82.8	0.0	7.9	0.6	4.2
US13 (DX)	61.5	0.0	11.9	2.8	4.4
GROUP 3 MATURITY (2-YEAR AVERAGE)					
PIONEER 3188 (SPX)	95.8	0.0	10.6	0.6	4.2
PIONEER 3175 (SPX)	100.7	1.0	5.1	1.3	4.0
PRINCETONSX-927*(SX)	72.2	0.0	1.1	0.0	3.8
PRINCETON 920-A*(DX)	72.6	2.2	10.2	1.6	3.5
PRINCETONSX-950*(SX)	95.6	0.9	7.6	0.4	4.3
PRINCETON 990-B*(DX)	86.6	4.8	19.0	1.7	4.0
MISSOURI 476W* (DX)	93.6	3.1	14.8	0.6	4.3
MEAN	86.8	0.9	7.3	0.9	3.9

*WHITE HYBRID.

TABLE 6D. 1969 PERFORMANCE RECORD FOR HYBRIDS TESTED IN DISTRICT 6 AT A HIGHER POPULATION. TEST LOCATED NEAR LABADIE, MISSOURI (FRANKLIN COUNTY). PLANTED MAY 21, 1969. HARVESTED NOVEMBER 6, 1969. AVERAGE HARVEST POPULATION, 19,800 PLANTS PER ACRE.

HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	STAND (%)	LODGED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
				ROOT (%)	STALK (%)		
GROUP I MATURITY							
MFA 87 (SX)	94.7	19.0	85	0.0	7.1	0.0	3.7
NK PX615 (3X)	82.0	18.4	76	0.0	5.9	0.6	4.2
PIIONEER 3505 (SPX)	52.1	19.2	72	0.0	12.2	0.0	3.3
PIIONEER 3390 (SPX)	90.0	18.1	77	0.0	4.1	1.6	4.2
GROUP II MATURITY							
HOLDEN EXP033 (SX)	103.2	19.9	83	0.0	10.1	0.9	4.3
HOLDEN EXP025 (3X)	79.8	17.3	94	0.0	12.3	2.3	4.3
MFA V12 (SX)	53.3	18.2	67	0.3	6.6	0.0	4.2
MCCURDY 68-30 (SX)	89.5	19.7	74	0.0	18.3	0.9	4.7
MCCURDY 67-112 (SX)	84.7	18.3	73	0.0	13.8	2.6	4.7
MCCURDY 67-95 (SX)	101.0	20.2	82	0.0	11.6	2.0	3.8
NK PX678 (SPX)	95.8	18.2	81	0.0	4.1	1.5	4.7
PIIONEER 3300 (SPX)	45.6	19.8	77	0.0	3.7	0.5	4.3
PIIONEER 3306 (SX)	67.0	18.8	85	0.0	12.2	2.4	4.5
PIIONEER 3369A (SPX)	118.3	13.1	87	0.0	7.6	0.5	4.7
PIIONEER 3199 (SPX)	76.1	20.6	70	0.6	12.5	0.6	4.5
PIIONEER 3343 (SPX)	82.7	18.8	87	0.4	8.5	0.9	4.2
PIIONEER X510R (SPX)	92.4	19.3	84	2.1	7.6	2.6	4.3
PRINCETON SX-903 (SX)	60.6	18.7	71	0.0	17.3	3.6	4.7
PRINCETON SX-836 (SX)	60.9	19.3	75	0.0	7.1	0.9	4.3
PRINCETON SX-823 (SX)	78.3	18.7	82	0.0	6.0	0.0	3.8
STULL 720SX (SX)	92.3	18.7	82	0.0	5.6	0.0	4.2
MISSOURI 64 (DX)	75.9	19.2	79	1.0	14.2	1.3	5.0
MISSOURI 1073 (DX)	77.6	18.7	82	0.0	15.5	0.5	4.5
MISSOURI 67-2 (DX)	66.9	19.6	84	0.0	7.4	3.4	4.3
MISSOURI 67-5 (DX)	61.7	19.9	77	2.6	9.2	0.6	5.0
GROUP III MATURITY							
EXCEL F-8244 (SX)	76.5	18.6	77	0.0	9.9	1.2	4.3
LEWIS X7H (SX)	91.9	19.1	76	0.0	4.3	0.5	4.0
MFA V8 (SX)	63.4	19.7	77	0.0	11.9	0.5	5.2
MFA TX77 (3X)	63.6	19.3	83	0.0	10.4	0.9	4.7
MCCURDY 67-14 (SX)	77.7	25.1	79	0.0	3.6	0.0	4.7
PIIONEER 3188 (SPX)	91.7	19.4	84	0.0	16.1	1.4	5.0
PIIONEER 3175 (SPX)	69.4	20.3	78	0.5	3.7	0.9	4.5
PIIONEER X5349 (SPX)	90.8	23.2	75	0.0	5.6	2.1	4.5
MISSOURI 4764* (DX)	73.0	20.2	79	3.1	23.4	2.6	4.5
MO 67-9** (DX)	64.9	21.4	76	0.0	5.6	1.0	4.8
MU PIPE 14* (DX)	38.4	20.3	84	0.0	6.5	0.0	4.8
MEAN	78.3	19.5	79	0.3	9.7	1.1	4.4

DIFFERENCES IN YIELD BETWEEN ANY TWO HYBRIDS OF LESS THAN 17.9 BUSHELS ARE NOT CONSIDERED SIGNIFICANT.

*WHITE HYBRID

**PERMANENT NUMBER DESIGNATION

TABLE 6E. SUMMARY PERFORMANCE DATA FOR HYBRIDS TESTED AT A HIGHER POPULATION NEAR LABADIE, MISSOURI (FRANKLIN COUNTY) FOR THE 2-YEAR PERIOD 1968-1969 AND THE 3-YEAR PERIOD 1967-1969.

HYBRID	2-YEAR AVERAGE					3-YEAR AVERAGE				
	ACRE YIELD (BU)	LODGING		DROPPED EARS (%)	EAR HEIGHT (FT)	ACRE YIELD (BU)	LODGING		DROPPED EARS (%)	EAR HEIGHT (FT)
		ROOT (%)	STALK (%)				ROOT (%)	STALK (%)		
GROUP 1 MATURITY										
MFA B7 (SX)	103.5	1.1	6.7	0.0	3.7	111.2	0.7	5.0	0.3	3.7
NK PX616 (3X)	85.6	0.0	9.5	0.6	4.0	107.1	0.0	10.0	0.6	4.0
PIONEER 3505 (SPX)	73.3	0.0	9.9	0.0	3.5	-	-	-	-	-
PIONEER 3390 (SPX)	94.3	0.4	9.1	1.1	4.0	109.8	0.3	8.6	0.8	4.1
GROUP 2 MATURITY										
MFA V12 (SX)	72.3	1.1	5.5	0.0	3.9	-	-	-	-	-
MCCURDY 68-80 (SX)	94.9	0.8	16.1	0.5	4.3	-	-	-	-	-
PIONEER 3300 (SPX)	92.6	0.0	7.6	0.2	4.1	108.4	0.0	7.5	0.5	4.2
PIONEER 3306 (SX)	88.7	0.0	11.4	1.2	4.3	105.2	0.0	11.8	1.0	4.4
PIONEER 3199 (SPX)	95.2	0.3	13.1	0.3	4.4	-	-	-	-	-
PIONEER 3333 (SPX)	96.4	0.2	9.0	0.5	3.8	-	-	-	-	-
PRINCETON SX-336 (SX)	90.4	0.4	10.5	0.8	4.3	-	-	-	-	-
MISSOURI 64 (DX)	86.9	2.2	15.9	1.3	4.5	-	-	-	-	-
MISSOURI 1023 (DX)	89.1	0.0	15.1	0.3	4.0	-	-	-	-	-
GROUP 3 MATURITY										
PIONEER 3188 (SPX)	105.1	2.6	15.1	0.7	4.6	-	-	-	-	-
PIONEER 3175 (SPX)	102.0	1.5	6.6	0.5	4.3	-	-	-	-	-
MISSOURI 476W* (DX)	86.6	8.0	19.8	1.3	4.2	103.0	5.4	23.5	1.4	4.4
MEAN	91.1	1.2	11.3	0.6	4.1	107.6	1.1	11.0	0.8	4.1

*WHITE HYBRID.

DISTRICT 7

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

An average yield of 52.6 bushels per acre was produced from a harvest stand of 13,000 plants. Yields ranged from a low of 38.5 to a high of 76.8 bushels per acre.

Drought prevailed at this location. Rainfall was 12.18 inches for the period May 1 through September 15. This was 6.5 inches less than the 1968 total. Dry periods were recorded between June 28 and July 20 and July 26 and August 15.

The temperatures averaged 6.6 and 2.1 degrees below normal for June and August respectively. May, July, and September were above normal.

Stalk lodging was important for some hybrids, but not for others in the final yield determination. European corn borer and stalk rot fungi were major causes of excessive lodging.

These data point out the widely differing capabilities of hybrids in yield production at a common location.

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	

TABLE 7B. 1969 PERFORMANCE RECORD FOR HYBRIDS TESTED IN DISTRICT 7 AT THE SOUTHWEST CENTER (LAWRENCE COUNTY). PLANTED APRIL 2, 1969. HARVESTED SEPTEMBER 11, 1969. AVERAGE HARVEST POPULATION, 13,000 PLANTS PER ACRE.

HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	STAND (%)	LODGED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
				ROOT (%)	STALK (%)		
GROUP I MATURITY							
NK PX63 (SX)	49.2	20.0	74	0.0	3.7	2.2	1.7
NK PX616 (3X)	44.8	20.8	63	0.0	7.0	0.0	2.2
NK PX621 (3X)	46.0	19.2	76	0.0	9.8	0.0	2.3
PIONEER 3390 (SPX)	67.9	20.4	58	0.0	0.0	0.0	2.5
STULL 101Y (DX)	42.9	21.2	66	0.0	6.0	1.5	2.3
GROUP II MATURITY							
NK PX635 (3X)	50.9	21.7	67	0.0	4.1	0.8	2.2
NK PX678 (SPX)	49.6	21.1	68	0.0	2.5	0.8	2.8
OLIVER BB701SX (SX)	60.2	22.7	70	0.0	0.0	1.6	2.5
OLIVER RR702SX (SX)	60.1	22.6	61	0.0	0.0	0.0	2.2
OLIVER BB703SX (SPX)	45.4	23.7	51	0.0	0.0	0.0	2.5
OLIVER RR704 (3X)	49.3	22.3	78	0.0	1.4	1.4	2.5
PIRROT 68 (DX)	41.4	21.3	63	0.0	4.5	0.8	2.5
PIONEER 3300 (SPX)	57.4	23.1	67	0.0	4.8	1.5	2.7
PIONEER 3306 (SX)	67.3	22.9	74	0.0	2.0	0.0	2.8
PIONEER 3369A (SPX)	72.8	21.3	87	0.0	2.5	0.6	2.3
PIONEER 3199 (SPX)	64.3	22.9	76	2.3	15.6	0.0	3.3
PIONEER 3333 (SPX)	52.6	21.7	63	0.0	8.3	0.9	2.7
PIONEER X5108 (SPX)	48.5	22.1	56	0.0	0.8	3.2	2.5
PRINCETON SX-836(SX)	57.9	21.7	77	0.0	6.4	1.4	2.7
PRINCETON SX-823(SX)	63.7	21.6	76	0.0	1.3	2.2	1.8
SCHENK SS77 (3X)	41.5	20.8	59	0.0	1.8	0.9	2.2
SCHENK SSX75 (3X)	48.2	21.7	72	0.0	5.3	0.0	2.8
STULL 720SX (SX)	45.3	23.0	81	0.0	0.6	0.0	2.3
US13 (DX)	45.3	20.3	66	0.0	10.7	1.7	2.8
GROUP III MATURITY							
MFA V8 (SX)	49.4	23.2	67	0.0	6.9	0.8	3.2
MFA TX77 (3X)	46.7	22.6	62	0.0	4.3	1.9	3.2
PIONEER 3188 (SPX)	48.4	21.4	76	0.0	3.7	0.0	3.0
PIONEER 3175 (SPX)	45.0	24.1	60	0.0	13.2	2.5	2.7
PIONEER X5349 (SPX)	76.7	27.8	75	0.0	2.4	1.4	3.0
GROUP IV MATURITY							
AKC 66 (DX)	38.5	28.8	74	0.0	5.1	0.6	4.0
MEAN	52.6	22.3	69	0.1	4.5	1.0	2.6

DIFFERENCES IN YIELD BETWEEN ANY TWO HYBRIDS OF LESS THAN 15.5 BUSHELS ARE NOT CONSIDERED SIGNIFICANT.

*WHITE HYBRID

**PERMANENT NUMBER DESIGNATION

TABLE 7C. SUMMARY PERFORMANCE DATA FOR HYBRIDS TESTED AT THE SOUTHWEST RESEARCH CENTER (LAWRENCE COUNTY) DURING THE 2-YEAR PERIOD 1968-1969 AND THE 3-YEAR PERIOD 1967-1969.

HYBRID	2-YEAR AVERAGE					3-YEAR AVERAGE				
	ACRE YIELD (BU)	LDDGING		DROPPED EARS (%)	EAR HEIGHT (FT)	ACRE YIELD (BU)	LDDGING		DROPPED EARS (%)	EAR HEIGHT (FT)
		ROOT (%)	STALK (%)				ROOT (%)	STALK (%)		
GROUP 1 MATURITY										
NK PX63 (SX)	64.2	3.1	1.9	1.1	2.2	69.2	2.1	2.4	0.7	2.5
NK PX616 (3X)	66.9	0.0	3.5	1.3	2.6	73.1	0.0	2.9	0.9	2.7
PIONEER 3390 (SPX)	82.1	1.7	1.1	0.0	2.5	85.3	1.1	1.9	0.0	2.7
GROUP 2 MATURITY										
NK PX635 (3X)	71.6	0.0	4.9	0.4	2.6	-	-	-	-	-
OLIVER BB701SX (SX)	77.1	0.0	0.6	0.8	3.0	-	-	-	-	-
OLIVER BB702SX (SX)	83.7	0.0	0.6	0.0	2.8	-	-	-	-	-
PIONEER 3300 (SPX)	79.5	0.0	4.1	0.8	3.1	83.8	0.0	2.7	0.5	3.1
PIONEER 3306 (SX)	84.7	0.0	1.0	0.0	3.1	88.1	0.0	1.8	0.0	3.2
PIONEER 3369A (SPX)	86.3	1.1	1.8	0.3	3.0	-	-	-	-	-
PIONEER 3199 (SPX)	92.3	1.1	7.8	0.0	3.7	94.9	0.5	5.9	0.0	3.8
PRINCETON SX-836 (SX)	78.2	1.1	4.3	0.7	3.0	-	-	-	-	-
SCHFENK SS77 (3X)	59.0	0.0	1.4	0.4	2.7	63.3	0.0	3.2	0.6	2.7
SCHFENK SSX75 (3X)	68.7	1.2	3.8	0.0	3.1	-	-	-	-	-
US13 (DX)	65.5	0.0	8.9	0.9	3.2	71.8	0.0	10.9	0.9	3.4
GROUP 3 MATURITY										
MFA V9 (SX)	72.2	0.0	4.0	1.0	3.3	-	-	-	-	-
PIONEER 3188 (SPX)	71.6	0.0	3.6	0.0	3.3	-	-	-	-	-
PIONEER 3175 (SPX)	72.5	0.0	9.5	1.2	3.1	-	-	-	-	-
MEAN	74.5	0.6	3.7	0.5	3.0	79.3	0.5	4.1	0.4	3.0

*WHITE HYBRID.

DISTRICT 8

Data for this district are presented in tables 8A through 8C.

An average yield of 86.5 bushels per acre was produced from a harvest stand of 16,900 plants. Yields varied between 43.3 and 112.4 bushels per acre.

Rainfall was 10.39 inches during the period May 1 to September 15. This was nearly seven inches below the 1968 total. There was one dry period recorded: May 1 through June 12. Monthly average temperatures were above normal for May, July, and the period September 1-15, and below normal for June and August.

Stalk lodging was severe. The average, over all hybrids, was 22.5 percent. Hybrid lodging ranged from 7.0 to 49.6 percent. Dropped ears and root lodging were not important. European corn borer and stalk rot fungi were major factors in the high stalk lodging.

Weeds were not a problem at this site.

These data suggest that large differences exist among hybrids in yielding capability and tolerance to insects and diseases.

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	

TABLE 88. 1969 PERFORMANCE RECORD FOR HYBRIDS TESTED IN DISTRICT 8 NEAR SUMMERSVILLE, MISSOURI (TEXAS COUNTY), PLANTED MAY 22, 1969. HARVESTED NOVEMBER 19, 1969. AVERAGE HARVEST POPULATION, 16,900 PLANTS PER ACRE.

HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	STAND (%)	LUGGED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
				ROOT (%)	STALK (%)		
GROUP I MATURITY							
NK PX616 (3X)	53.1	21.1	89	0.0	30.2	0.0	3.8
PIONEER 3390 (SPX)	104.5	19.3	80	0.0	7.0	0.0	4.0
STULL 101Y (DX)	75.1	22.1	92	0.0	29.5	0.0	3.5
GROUP II MATURITY							
NK PX678 (SPX)	70.2	18.9	89	0.0	21.2	0.6	4.3
OLIVER 88702SX (SX)	89.8	21.5	94	0.0	40.0	0.0	3.7
OLIVER 88703SX (SPX)	106.9	21.8	93	0.0	19.0	0.0	3.7
OLIVER 88704 (3X)	77.1	21.2	92	0.0	19.8	0.6	4.2
PIONEER 3306 (SX)	112.4	20.0	87	0.0	33.8	0.0	4.2
PIONEER 3369A (SPX)	107.7	20.9	91	0.0	14.5	0.0	4.2
PIONEER 3199 (SPX)	99.5	21.0	89	0.0	8.0	0.0	4.5
PIONEER 3333 (SPX)	79.4	19.5	91	0.0	9.7	0.0	3.7
PRINCETON SX-836 (SX)	94.3	21.3	92	0.0	22.2	0.0	3.7
PRINCETON SX-923 (SX)	39.6	21.3	89	0.0	10.7	0.0	3.8
SCHENK 5577 (3X)	82.2	21.0	96	0.0	29.5	0.0	3.7
SCHENK 5575 (3X)	88.9	20.9	87	0.0	25.2	0.0	4.0
SCHENK 5589 (3X)	72.6	21.5	91	0.0	15.5	0.0	4.3
STULL 720SX (SX)	73.4	21.3	96	0.0	21.5	0.0	4.0
MISSOURI 67-2 (DX)	43.3	22.0	91	0.0	10.3	0.0	4.2
MISSOURI 67-6 (DX)	112.3	21.4	93	0.0	11.5	0.0	4.7
US13 (DX)	78.8	20.0	88	0.0	38.9	0.0	4.7
GROUP III MATURITY							
PIONEER 3188 (SPX)	95.2	20.9	89	0.0	22.5	0.0	4.0
PIONEER 3175 (SPX)	69.0	21.3	91	0.0	15.1	0.0	3.8
PIONEER 55349 (SPX)	91.0	23.5	94	0.0	24.5	0.0	3.8
MISSOURI 476W* (DX)	99.3	22.0	93	0.0	43.6	0.6	4.8
GROUP IV MATURITY							
ARC 66 (DX)	70.4	24.3	89	0.0	32.7	0.0	5.3
MEAN	86.5	21.3	90	0.0	22.5	0.1	4.1

DIFFERENCES IN YIELD BETWEEN ANY TWO HYBRIDS OF LESS THAN 19.7 BUSHELS ARE NOT CONSIDERED SIGNIFICANT.

*WHITE HYBRID

**PERMANENT NUMBER DESIGNATION

TABLE 8C. SUMMARY PERFORMANCE DATA FOR HYBRIDS TESTED NEAR SUMMERSVILLE, MISSOURI (TEXAS COUNTY) FOR THE 2-YEAR PERIOD 1968-1969 AND THE 3-YEAR PERIOD 1967-1969.

HYBRID	2-YEAR AVERAGE					3-YEAR AVERAGE				
	ACRE YIELD (BU)	LOGGING		DROPPED EARS (%)	EAR HEIGHT (FT)	ACRE YIELD (BU)	LOGGING		DROPPED EARS (%)	EAR HEIGHT (FT)
		ROOT (%)	STALK (%)				ROOT (%)	STALK (%)		
GROUP 1 MATURITY										
NK PX616 (3X)	80.5	0.0	15.1	0.0	4.0	86.0	0.0	12.1	0.0	3.8
GROUP 2 MATURITY										
OLIVER B8702SX (SX)	102.1	0.0	20.0	0.0	3.7	-	-	-	-	-
PIONEER 3306 (SX)	112.0	0.0	16.9	0.0	4.1	110.2	0.0	12.1	0.0	4.1
PIONEER 3369A (SPX)	107.0	0.0	10.1	0.0	4.2	-	-	-	-	-
PIONEER 3199 (SPX)	107.7	0.0	4.0	0.0	4.6	-	-	-	-	-
PRINCETON SX-836(SX)	104.9	0.6	14.1	0.0	3.9	-	-	-	-	-
SCHENK SS77 (3X)	85.2	1.8	16.6	0.0	3.4	88.4	1.2	13.7	0.0	3.5
SCHENK SSX75 (3X)	98.2	0.0	15.1	0.0	4.1	-	-	-	-	-
US13 (DX)	98.5	0.0	28.9	0.0	4.7	88.5	0.0	30.4	0.0	4.6
GROUP 3 MATURITY										
PIONEER 3188 (SPX)	107.4	0.0	12.9	0.0	4.2	-	-	-	-	-
PIONEER 3175 (SPX)	97.6	0.0	3.7	0.0	3.9	-	-	-	-	-
MEAN	98.3	0.2	14.8	0.0	4.1	93.3	0.3	17.1	0.0	4.0

*WHITE HYBRID.

DISTRICT 9

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

Regular and high population tests were conducted at this location. Intended and harvest populations are presented in table B.

Average yield for the regular test was 53.1 bushels per acre from a harvest stand of 13,700 plants. Yields ranged from 29.5 to 83.4 bushels per acre.

The high population test average yield was 71.8 bushels from a harvest stand of 16,600 plants. Yields ranged from 47.1 to 104.8 bushels per acre.

Rainfall at this location totaled 14.59 inches for the period May 1 to September 15. One dry period was recorded from July 8 to July 26. Yields were reduced considerably by three different hail storms. The first occurred during the time the kernels were filling, thus causing the most damage. The average temperature was lower than the long-time average for the area.

Stalk lodging was heavy for both planting populations. Those hybrids grown at the lower population averaged 17.4 percent lodging, while the higher population showed 13.8 percent. The range for hybrids was from 3.6 to 33.3 and 4.3 to 31.2 percent for the low and high populations respectively.

Weeds were not a problem at this location.

The hail was probably the major factor in causing the low yields. Drought was eliminated by supplemental irrigation.

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	

TABLE 9B. 1969 PERFORMANCE RECORD FOR HYBRIDS TESTED IN DISTRICT 9 AT THE DELTA CENTER (PEMISCOT COUNTY). PLANTED APRIL 23, 1969. HARVESTED SEPTEMBER 9, 1969. AVERAGE HARVEST POPULATION, 13,700 PLANTS PER ACRE.

HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	STAND (%)	LODGED PLANTS		DROPPED EARS (%)	FAR HEIGHT (FT)
				ROOT (%)	STALK (%)		
GROUP I MATURITY							
NK PX616 (3X)	51.8	20.9	58	0.0	21.4	5.0	2.8
OLIVER BB644 (SPX)	40.3	21.3	68	0.0	12.8	0.8	2.5
OLIVER BR705 (DX)	46.8	22.2	58	0.0	18.0	1.5	2.5
PIONEER 3390 (SPX)	61.4	19.9	68	0.0	3.6	3.2	3.0
STULL 101Y (DX)	37.8	22.2	64	0.0	25.7	2.8	3.0
GROUP II MATURITY							
UNICORN X672 (SX)	73.2	23.7	69	0.0	23.0	0.7	3.0
UNICORN X872 (SX)	55.2	23.3	73	0.6	11.5	0.0	2.8
BO-JAC X70 (3X)	46.6	21.7	76	3.6	11.9	0.7	3.2
BO-JAC X7L (SX)	61.5	22.8	68	0.0	8.6	2.0	2.8
BO-JAC X20 (3X)	52.1	19.5	64	0.0	24.0	1.6	2.7
BO-JAC X1A (SX)	72.0	22.2	76	0.0	13.8	2.3	3.3
NK PX678 (SPX)	29.6	21.3	54	0.0	10.5	1.5	3.2
OLIVER BR702 SX (SX)	61.1	22.0	65	0.0	15.2	4.1	2.7
OLIVER BB703SX (SPX)	55.0	23.2	57	0.0	11.5	0.0	2.7
OLIVER BB708 (3X)	39.5	23.4	69	0.0	12.5	2.1	2.7
OLIVER BR704 (3X)	49.0	21.5	75	2.6	11.6	0.0	3.2
PIONEER 3306 (SX)	55.5	22.2	78	0.0	21.6	1.2	3.0
PIONEER 3369A (SPX)	56.7	21.5	70	0.0	26.6	1.5	2.8
PIONEER 3199 (SPX)	57.2	22.8	75	1.3	27.9	2.0	3.5
PIONEER 3333 (SPX)	53.0	20.9	59	0.0	17.8	3.6	2.7
PRINCETON SX-803(SX)	51.9	21.1	67	0.0	8.5	2.5	2.8
PRINCETON SX-809(SX)	49.0	20.8	58	0.0	19.0	4.0	2.7
PRINCETON SX-836(SX)	50.2	21.8	71	0.0	26.3	10.1	2.8
PRINCETON SX-823(SX)	65.3	21.0	75	0.0	5.7	1.9	2.7
SCHENK S577 (3X)	45.5	20.6	60	0.0	23.2	3.4	3.0
SCHENK S5X75 (3X)	38.6	21.7	62	0.0	16.2	0.7	3.2
SCHENK S588 (3X)	44.7	21.7	49	0.0	22.7	0.0	3.3
STULL 500** (DX)	40.1	22.7	75	0.0	30.2	3.7	2.8
STULL 720SX (SX)	60.1	22.2	71	0.0	16.7	0.7	3.3
US13 (DX)	29.5	20.2	54	0.0	33.3	0.0	3.3
GROUP III MATURITY							
MFA V8 (SX)	57.0	22.6	87	0.0	22.0	0.6	3.2
MFA TX77 (3X)	49.0	21.9	79	0.0	21.3	1.3	3.5
PIONEER 3188 (SPX)	52.8	20.6	73	0.0	15.6	3.5	3.2
PIONEER 3175 (SPX)	56.0	23.5	63	0.9	8.4	2.6	3.0
PIONEER X5349 (SPX)	83.4	26.4	75	0.0	14.0	1.5	3.0
PRINCETONSX-927*(SX)	44.6	24.7	68	4.3	10.7	2.5	2.8
PRINCETON 920-A*(DX)	35.4	25.3	63	1.5	15.5	3.0	3.0
PRINCETONSX-950*(SX)	49.5	26.4	67	5.1	20.2	6.6	3.2
PRINCETON 990-B*(DX)	48.4	24.8	79	0.0	14.0	1.9	3.2
STULL 800* (SX)	63.8	25.3	73	19.3	13.5	0.3	2.8
GROUP IV MATURITY							
AKC 66 (DX)	32.0	27.9	63	2.3	19.1	0.9	3.7
PIONEER 3191 (3X)	53.1	23.7	64	0.0	29.1	0.9	3.3
MEAN	51.3	22.5	69	1.0	17.4	2.1	3.0

DIFFERENCES IN YIELD BETWEEN ANY TWO HYBRIDS OF LESS THAN 19.2 BUSHELS ARE NOT CONSIDERED SIGNIFICANT.

*WHITE HYBRID

**PERMANENT NUMBER DESIGNATION

TABLE 9C. SUMMARY PERFORMANCE DATA FOR HYBRIDS TESTED AT THE DELTA RESEARCH CENTER NEAR PORTAGEVILLE (PEMISCOT COUNTY) FOR THE 2-YEAR PERIOD 1968-1969 AND THE 3-YEAR PERIOD 1967-1969.

HYBRID	2-YEAR AVERAGE					3-YEAR AVERAGE				
	ACRE YIELD (BU)	LODGING		DROPPED EARS (%)	EAR HEIGHT (FT)	ACRE YIELD (BU)	LODGING		DROPPED EARS (%)	EAR HEIGHT (FT)
		ROOT (%)	STALK (%)				ROOT (%)	STALK (%)		
GROUP 1 MATURITY										
NK PX616 (3X)	66.3	0.0	16.1	2.5	3.0	72.3	0.0	11.6	1.7	3.0
OLIVER BB644 (SPX)	55.5	0.0	10.8	0.4	2.8	66.0	0.0	7.8	0.3	2.8
OLIVER BB705 (DX)	49.1	0.0	14.1	0.3	2.8	-	-	-	-	-
GROUP 2 MATURITY										
RO-JAC X70 (3X)	64.9	1.8	8.7	0.9	3.2	-	-	-	-	-
BO-JAC X7L (SX)	71.5	0.0	7.2	1.0	3.0	-	-	-	-	-
BO-JAC X20 (3X)	69.9	0.0	13.2	0.8	2.9	-	-	-	-	-
OLIVER BB702SX (SX)	79.7	0.0	10.3	2.7	3.0	81.8	0.0	6.9	1.8	3.0
OLIVER BB703SX (SPX)	69.6	0.0	9.0	0.0	2.9	-	-	-	-	-
OLIVER BB708 (3X)	60.7	0.0	12.0	1.1	3.0	-	-	-	-	-
PIONEER 3369A (SPX)	73.3	0.0	16.8	0.8	3.1	-	-	-	-	-
PIONEER 3199 (SPX)	68.1	0.6	17.7	1.0	3.7	-	-	-	-	-
PRINCETON SX-809(SX)	59.1	0.0	12.4	3.2	2.7	72.5	0.0	9.1	2.1	2.8
PRINCETON SX-836(SX)	71.7	0.0	15.1	5.1	3.2	-	-	-	-	-
SCHENK SS77 (3X)	58.8	0.0	13.6	2.7	3.2	64.9	0.0	9.4	1.8	2.9
SCHENK SSX75 (3X)	53.9	0.0	11.9	0.3	3.3	-	-	-	-	-
US13 (DX)	47.1	0.0	23.4	0.0	3.2	55.3	0.0	16.7	0.0	3.2
GROUP 3 MATURITY										
MFA VR (SX)	67.1	0.0	15.7	1.5	3.5	-	-	-	-	-
PRINCETONSX-927*(SX)	50.6	2.1	6.1	2.6	3.1	64.6	1.4	4.4	1.7	3.1
PRINCETON 920-A*(DX)	50.3	0.7	7.8	1.5	3.3	63.0	0.5	5.7	1.3	3.2
PRINCETONSX-950*(SX)	53.9	3.8	14.1	3.3	3.4	-	-	-	-	-
PRINCETON 990-B*(DX)	60.6	0.6	14.2	1.4	3.3	-	-	-	-	-
GROUP 4 MATURITY										
MEAN	62.0	0.5	12.9	1.6	3.1	67.6	0.2	9.0	1.3	3.0

*WHITE HYBRID.

TABLE 9D. 1969 PERFORMANCE RECORD FOR HYBRIDS TESTED IN DISTRICT 9 AT A HIGHER POPULATION. TEST LOCATED AT THE DELTA CENTER (PEMISCOT COUNTY). PLANTED APRIL 23, 1969. HARVESTED SEPT. 9, 1969. AVERAGE HARVEST POPULATION, 16,600 PLANTS PER ACRE.

HYBRID	ACRF YIELD (BU)	MOISTURE IN GRAIN (%)	STAND (%)	LOGGED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
				ROOT (%)	STALK (%)		
GROUP I MATURITY							
NK PX616 (3X)	63.5	22.5	55	0.0	18.6	0.8	2.5
PIONEER 3390 (SPX)	59.0	21.6	48	0.0	6.7	1.9	2.8
GROUP II MATURITY							
NK PX678 (SPX)	64.1	23.0	72	1.6	14.8	2.3	3.3
OLIVER 88702SX (SX)	75.3	23.8	62	0.0	12.8	0.6	2.3
OLIVER 88703SX (SPX)	75.1	24.3	63	0.0	9.2	0.0	3.2
OLIVER 88704 (3X)	63.9	23.4	67	1.2	4.8	1.1	3.0
PIONEER 3306 (SX)	76.5	24.7	75	0.0	10.8	0.6	3.0
PIONEER 3369A (SPX)	76.1	24.1	68	0.0	11.4	0.0	2.5
PIONEER 3199 (SPX)	90.7	25.0	67	2.3	24.1	0.5	3.3
PIONEER 3333 (SPX)	74.7	22.4	67	0.0	11.4	5.4	2.8
PRINCETON SX-836(SX)	79.2	23.2	67	2.9	31.2	1.8	2.9
PRINCETON SX-823(SX)	72.8	22.2	72	0.0	12.1	0.5	2.8
SCHENK SS77 (3X)	47.1	22.2	57	2.9	21.6	0.6	3.0
SCHENK SSX75 (3X)	58.8	23.3	76	0.0	15.3	0.5	3.5
SCHENK SS88 (3X)	70.4	23.5	75	0.0	10.4	0.0	3.0
STULL 720SX (SX)	61.5	23.9	72	1.7	8.4	0.0	2.8
GROUP III MATURITY							
PIONEER 3198 (SPX)	74.6	23.1	69	0.0	12.9	1.7	3.0
PIONEER 3175 (SPX)	78.3	25.7	69	0.0	4.3	1.3	3.2
PIONEER X5349 (SPX)	104.3	28.7	69	2.4	12.6	0.0	2.8
MISSOURI 476W* (DX)	69.6	24.5	63	8.7	22.2	1.6	3.0
MEAN	71.8	23.8	66	1.2	13.8	1.1	2.9

DIFFERENCES IN YIELD BETWEEN ANY TWO HYBRIDS OF LESS THAN 16.3 BUSHELS ARE NOT CONSIDERED SIGNIFICANT.

*WHITE HYBRID

**PERMANENT NUMBER DESIGNATION

TABLE 9E. SUMMARY PERFORMANCE DATA FOR HYBRIDS TESTED AT A HIGHER POPULATION AT THE DELTA RESEARCH CENTER (PEMISCOT COUNTY) FOR THE 2-YEAR PERIOD 1968-1969 AND THE 3-YEAR PERIOD 1967-1969.

HYBRID	2-YEAR AVERAGE					3-YEAR AVERAGE				
	ACRE YIELD (BU)	LODGING ROOT (%)	STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)	ACRE YIELD (BU)	LODGING ROOT (%)	STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
GROUP 1 MATURITY										
NK PX616 (3X)	75.8	0.0	15.1	0.4	2.6	81.4	0.0	10.8	0.4	2.8
GROUP 2 MATURITY										
OLIVER BB702SX (SX)	78.3	0.4	10.3	0.3	2.7	-	-	-	-	-
PIONEER 3369A (SPX)	83.2	0.0	7.8	0.0	2.7	-	-	-	-	-
PRINCETON SX-336(SX)	71.2	1.5	23.1	0.9	3.0	-	-	-	-	-
SCHENK SS77 (3X)	57.1	1.4	13.6	0.3	2.9	70.5	1.0	9.8	0.2	2.9
SCHENK SSX75 (3X)	62.4	0.0	20.6	0.3	3.4	-	-	-	-	-
GROUP 3 MATURITY										
MISSOURI 476W* (DX)	68.7	5.0	16.7	0.8	3.1	76.4	3.8	12.8	0.5	3.2
MEAN	71.0	1.2	15.3	0.4	2.9	76.1	1.6	11.1	0.4	3.0

*WHITE HYBRID.

TABLE 10. SUMMARY PERFORMANCE DATA FOR HYBRIDS EVALUATED IN DISTRICTS 1 AND 2 DURING 1969 (REGION I).

HYBRID	ACRE YIELD (BU)	LOGGED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
		ROOT (%)	STALK (%)		
GROUP 1 MATURITY (2-LOCATION AVERAGE)					
ASGROW ASC91 (SPX)	113.4	0.0	9.2	3.6	3.4
ASGROW IXL9 (SX)	124.9	0.0	9.3	0.0	4.0
CU-OP S-201 (SX)	84.9	0.0	27.4	2.0	3.0
MAYGOLD F35 (SX)	110.6	0.0	6.9	1.2	3.4
MFA 37 (SX)	117.4	0.0	10.5	0.9	3.5
NK PX610 (3X)	110.9	0.0	16.9	2.8	3.3
NK PX616 (3X)	116.8	0.0	13.3	2.6	3.7
PIONEER 3505 (SPX)	126.7	0.0	17.6	0.6	3.7
PIONEER 3390 (SPX)	124.3	0.3	8.6	1.9	3.8
PIONEER 3365 (SPX)	119.5	0.0	9.2	1.1	3.5
STULL 7075X (SX)	118.3	0.0	11.4	0.8	3.2
STULL 101Y (DX)	104.5	0.0	11.4	2.4	3.9
STULL 7045X (SX)	110.8	0.0	12.3	0.6	3.2
STULL 6205X (SX)	95.0	0.0	17.1	0.6	3.3
GROUP 2 MATURITY (2-LOCATION AVERAGE)					
UNICORN X572 (SX)	138.9	0.0	19.2	2.7	4.2
UNICORN X372 (SX)	144.3	0.0	11.5	2.5	3.8
BO-JAC X70 (3X)	112.3	0.0	11.0	1.8	3.8
BO-JAC X7L (SX)	137.7	0.0	7.5	4.8	3.7
BO-JAC X1A (SX)	140.8	0.0	11.6	1.1	3.8
CO-OP D-213 (DX)	107.1	0.0	12.3	1.7	3.5
CO-OP T-308 (3X)	125.2	0.0	12.5	1.5	3.3
LEWIS 701B (3X)	114.0	0.0	12.4	3.5	3.8
MAYGOLD 2036 (3X)	117.8	0.0	11.5	3.1	3.9
MAYGOLD 29X (DX)	119.1	0.0	10.3	2.8	4.1
MAYGOLD X19 (SX)	125.3	0.0	10.4	2.2	4.0
MAYGOLD L45 (SX)	117.1	0.0	9.9	1.5	3.6
MAYGOLD 2041 (3X)	111.2	0.0	15.1	2.9	3.9
MAYGOLD 2058 (3X)	128.3	0.0	9.3	0.6	3.5
MFA V12 (SX)	135.7	0.0	6.0	0.6	4.1
MCCURDY 68-80 (SX)	124.2	0.0	21.7	2.0	4.2
MCCURDY 67-112 (SX)	114.8	0.0	14.7	2.2	3.7
NK PX678 (SPX)	119.5	0.3	12.8	5.8	4.5
PIONEER 3300 (SPX)	135.3	0.0	9.1	1.2	3.8
PIONEER 3306 (SX)	132.7	0.0	10.8	2.0	4.2
PIONEER 3369A (SPX)	141.6	0.0	9.0	1.6	4.0
PIONEER 3199 (SPX)	125.9	0.0	10.5	0.6	4.8
PIONEER 3333 (SPX)	121.8	0.0	8.4	4.4	3.8
PIONEER X5108 (SPX) ¹	134.0	0.0	9.5	3.4	3.9
STULL 7205X (SX)	120.9	0.0	15.1	3.3	3.8
US13 (DX)	95.6	0.0	20.0	7.0	4.3
GROUP 3 MATURITY (2-LOCATION AVERAGE)					
PIONEER 3188 (SPX)	122.9	0.0	17.0	2.0	4.2
PIONEER 3175 (SPX)	137.6	0.0	10.7	1.7	4.3
PIONEER X5349 (SPX)	163.6	0.0	8.6	0.3	4.4
MISSOURI 476W* (DX)	134.8	0.0	20.2	3.1	4.8
*FAN	122.4	0.0	12.5	2.2	3.8

*WHITE HYBRID.

TABLE 11. SUMMARY PERFORMANCE DATA FOR HYBRIDS EVALUATED IN DISTRICTS 4, 5, AND 6 DURING 1969 (REGION II).

HYBRID	ACRE YIELD (BU)	LODGED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
		ROOT (%)	STALK (%)		
GROUP 1 MATURITY (3-LOCATION AVERAGE)					
MFA 87 (SX)	86.8	4.5	7.3	2.2	3.8
NK PX616 (3X)	72.6	4.1	12.9	4.1	3.9
PIONEER 3505 (SPX)	83.8	0.3	28.6	2.5	3.7
PIONEER 3390 (SPX)	79.4	0.3	13.5	2.5	4.2
STULL 101Y (DX)	69.3	3.7	19.5	3.8	4.1
GROUP 2 MATURITY (3-LOCATION AVERAGE)					
HOLDEN EXP033 (SX)	95.7	1.4	18.2	2.1	4.1
HOLDEN EXP025 (3X)	84.5	7.9	19.7	5.0	4.0
MFA V12 (SX)	69.8	1.5	19.8	1.3	3.9
MCCURDY 68-80 (SX)	79.1	1.9	17.6	4.2	4.3
MCCURDY 67-112 (SX)	83.6	7.4	15.7	4.2	3.9
MCCURDY 67-96 (SX)	86.7	3.7	9.1	6.1	3.8
NK PX678 (SPX)	78.0	3.1	14.2	3.2	4.2
PIONEER 3300 (SPX)	85.3	1.4	13.7	3.8	3.8
PIONEER 3306 (SX)	89.3	5.2	12.2	2.6	4.3
PIONEER 3369A (SPX)	97.8	1.3	11.3	4.5	4.3
PIONEER 3199 (SPX)	85.7	1.7	18.0	2.9	4.4
PIONEER 3333 (SPX)	94.8	0.0	17.7	4.2	4.2
PIONEER X5108 (SPX)	106.6	6.1	20.2	4.2	4.1
PRINCETON SX-803(SX)	79.3	0.0	19.6	5.3	4.0
PRINCETON SX-836(SX)	76.6	1.2	20.6	2.1	4.1
PRINCETON SX-823(SX)	92.6	0.2	16.5	3.2	3.8
STULL 720SX (SX)	90.0	6.6	16.9	0.8	4.0
MISSOURI 67-2 (DX)	72.6	17.5	15.5	4.8	4.1
US13 (DX)	54.5	3.3	20.6	4.2	4.6
GROUP 3 MATURITY (3-LOCATION AVERAGE)					
EXCEL E-8244 (SX)	79.5	0.8	18.7	1.9	4.1
LEWIS X78 (SX)	77.0	0.8	20.1	3.2	4.1
MFA V8 (SX)	70.9	1.8	22.2	2.5	4.3
MFA TX77 (3X)	80.9	3.2	18.8	2.5	4.4
MCCURDY 67-14 (SX)	95.4	13.4	12.8	3.0	4.3
PIONEER 3188 (SPX)	82.3	0.4	22.4	3.6	4.3
PIONEER 3175 (SPX)	95.6	2.2	19.8	2.3	4.1
PIONEER X5349 (SPX)	96.6	0.2	19.3	2.6	4.4
MISSOURI 476W* (DX)	76.2	14.3	30.8	2.8	4.3
MEAN	83.0	3.7	17.7	3.3	4.1

*WHITE HYBRID.

TABLE 12. SUMMARY PERFORMANCE DATA FOR HYBRIDS EVALUATED IN DISTRICTS 7, 8, AND 9 DURING 1969 (REGION III).

HYBRID	ACRE YIELD (BU)	LODGED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
		ROOT (%)	STALK (%)		
GROUP 1 MATURITY (3-LOCATION AVERAGE)					
NK PX616 (3X)	51.6	0.0	19.5	1.7	2.9
PIONEER 3390 (SPX)	77.9	0.0	3.5	1.1	3.2
STULL 101Y (DX)	51.9	0.0	20.4	1.4	2.9
GROUP 2 MATURITY (3-LOCATION AVERAGE)					
NK PX678 (SPX)	56.5	0.0	11.4	0.9	3.4
OLIVER 88702SX (SX)	70.3	0.0	18.4	1.4	2.8
OLIVER 88703SX (SPX)	69.1	0.0	10.2	0.0	2.9
OLIVER 88704 (3X)	58.5	0.9	10.9	0.7	3.3
PIONEER 3306 (SX)	78.4	0.0	19.2	0.4	3.3
PIONEER 3369A (SPX)	79.1	0.0	14.5	0.7	3.1
PIONEER 3199 (SPX)	73.7	1.2	17.2	0.7	3.8
PIONEER 3333 (SPX)	61.7	0.0	10.3	1.5	3.0
PRINCETON SX-836(SX)	67.5	0.0	18.3	3.8	3.1
PRINCETON SX-823(SX)	72.9	0.0	5.9	1.4	2.8
SCHENK 5577 (3X)	56.4	0.0	18.2	1.4	2.9
SCHENK 55X75 (3X)	58.5	0.0	15.6	0.2	3.3
STULL 720SX (SX)	59.6	0.0	13.0	0.2	3.2
US13 (DX)	51.2	0.0	27.6	0.6	3.6
GROUP 3 MATURITY (3-LOCATION AVERAGE)					
PIONEER 3188 (SPX)	65.5	0.0	13.9	1.2	3.4
PIONEER 3175 (SPX)	56.7	0.3	12.2	1.7	3.2
PIONEER X5349 (SPX)	84.0	0.0	13.6	1.0	3.3
GROUP 4 MATURITY (3-LOCATION AVERAGE)					
AKC 66 (DX)	47.0	0.8	19.0	0.5	4.3
MEAN	64.2	0.1	14.9	1.1	3.2

*WHITE HYBRID.

Table 13. Pedigree of open-pedigree hybrids tested in 1969.

Hybrid	Pedigree	Endosperm Color
<u>Medium Maturity (110-120 days)</u>		
Mo 64	(WF9 x B41)(C103 x Mo17)	yellow
Mo 1023	(WF9 x B41)(Mo5 x C103)	yellow
Mo 67-1W*	(33-16 x Ky 225) (T315 x Mo 14W)	white
Mo 67-2	(R214 x H49) (Mo 5 x B37)	yellow
Mo 67-6	(R214 x H49) (Mo 5 x Oh 7B)	yellow
Mo 67-17W*	(Ky 228 x CI 64) (Ky 201 x Mo 14W)	white
US 13	(WF9 x 38-11) (L317 x Hy)	yellow
<u>Late Maturity (125-135 days)</u>		
Mo 476W*	(33-16 x H28) (K55 x K6)	white
Mo Pipe 14*	(Mo 15W x Mo 16W) (K10 x Ky 49)	white
Mo 67-9W*	(Ky 228 x Ky225) (T315 x Mo 14W)	white

*White hybrids

Table 14. Location by district of open-pedigree hybrids in 1969 yield trials.

Hybrid	Districts									Thick planting experiments			
	1	2	3	4	5	6	7	8	9	10	11	12	
GROUP II MATURITY													
Mo 64			X								X	X	
Mo 1023			X								X	X	
Mo 67-1W*											X		
Mo 67-2		X	X	X	X	X		X			X	X	
Mo 67-6		X	X			X		X			X	X	
Mo 67-17W*											X		
US 13	X	X	X	X	X	X	X	X	X				
GROUP III MATURITY													
Mo 476W*	X	X	X	X	X	X		X			X	X	X
Mo Pipe 14*		X	X								X	X	
Mo 67-9W*		X	X								X	X	

*White hybrids

Table 15. continued

Hybrid	Districts									Thick planting experiment		
	1	2	3	4	5	6	7	8	9	10	11	12
Princeton SX-690						X						
Princeton SX-803				X	X	X				X	X	
Princeton SX-809										X		
Princeton SX-823				X	X	X	X	X	X		X	X
Princeton SX-836				X	X	X	X	X	X		X	X
Schenk SSX75							X	X	X			X
Schenk SS77							X	X	X			X
Schenk SS88								X	X			X
Stull 500W*									X			X
Stull 720SX	X	X	X	X	X	X	X	X	X	X	X	X
GROUP III MATURITY												
Excel E-8244				X	X	X						X
Lewis X78			X	X	X	X						X
McAllister 13AA			X									
McAllister 6509			X									
McAllister 6584			X									
McAllister 6827			X									
McCurdy 67-14				X	X	X						X
MFA V8				X	X	X	X		X			X
MFA TX77				X	X	X	X		X			X
Pioneer 3175	X	X	X	X	X	X	X	X	X	X	X	X
Pioneer 3188	X	X	X	X	X	X	X	X	X	X	X	X
Pioneer X5349	X	X	X	X	X	X	X	X	X	X	X	X
Princeton 920A*						X				X		
Princeton 990B*						X				X		
Princeton SX927*						X				X		
Princeton SX950*						X				X		
Stull 800W*										X		
GROUP IV MATURITY												
AKC 66							X	X		X		
Pioneer 3191										X		

*White hybrids

Table 16. Sources of seed for hybrids entered in the 1969 Missouri yield trials.

Hybrid	Firm	Address
AKC	Arkansas Agric. Experiment Station	Fayetteville, Arkansas 72701
Asgrow	Asgrow Seed Company	4244 Clinton Avenue, P. O. Box 2010 Des Moines, Iowa 50310
Unicorn	Bear Hybrid Corn Company, Inc.	P. O. Box 628, Decatur, Ill. 62525
Bo-Jac	Bo-Jac Hybrid Corn Company	Mt. Pulaski, Ill. 62548
Co-Op	Farmland Industries, Inc.	P. O. Box 7305, Kansas City, Mo. 64116
Corn King	Malcolm H. Grieve	Pierson, Iowa 51048
Excel	Excel Seed Company	Box 1629, Plainview, Texas 79072
Happel	M. L. Happel	Route # 1, Palmyra, Mo. 63461
Holden	Holden Foundation Seeds, Inc.	Box 299, Williamsburg, Iowa 52361
Ia-Mo	Iowa-Missouri Hybrid Corn Co.	Keosauqua, Iowa 52565
Lewis	Lewis Hybrids	Box 36, Ursa, Illinois 62376
Maygold	Earl May Seed & Nursery Co.	Shenandoah, Iowa 51601
McAllister	McAllister Seed Company	Mt. Pleasant, Iowa 52641
McCurdy	W. O. McCurdy & Sons	Fremont, Iowa 52561
M. F. A.	M. F. A. Seed Division	Marshall, Mo. 65304
N. C+	NC+ Hybrids	Route 1, Box 262, Hastings, Nebr. 68901
N. K.	Northrup-King & Company	1500 Jackson N. E., Minneapolis, Minn. 55413
Oliver	Dearmont Oliver & Sons Elevator & Seed Company	Route 1, Box 750, East Prairie, Mo. 63834
Paulsmeyer	Joe Paulsmeyer	Route # 1, Silex, Missouri 63377
Pioneer	Garst & Thomas Hybrid Corn Co.	Coon Rapids, Iowa 50058
Pioneer	Pioneer Corn Company, Inc.	221 N. Main Street, Tipton, Indiana 46072
Poirot	Severin E. Poirot	Golden City, Mo. 64748
PV	Prairie Valley, Inc.	Box 125, Phillips, Nebraska 68865
Princeton	Princeton Farms	P. O. Box 319, Princeton, Ind. 47570
Schenk	Chas. H. Schenk & Sons, Inc.	Route # 4, Vincennes, Ind. 47591
Stull	Stull Brothers, Inc.	P. O. Box 7, Sebree, Kentucky 42455

Table 17. Comparison of average yield of all hybrids in state yield tests with average yield of all corn produced in Missouri by years (1960-1969).

Year	Average, bushel/acre	
	Farm	Yield Tests
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
1969*	70	86

*Preliminary estimates as of December 19, 1969.