

# Missouri Crop Performance

## 1976

Part I: Corn

Part II: Grain Sorghum

Part III: Soybeans

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## PART I, CORN

### SYNOPSIS

The fall of 1975 and the winter of 1975-76 were open and harvesting proceeded at a record pace. By November 15, 1975, more than 95% of the corn had been harvested.

Spring plowing also proceeded rapidly and by March 21, 1976, it was approximately two-thirds complete. More than 93% of the plowing was completed by May 1.

Corn planting proceeded rapidly in the spring of 1976, i.e., 53% planted by May 20, 70% by May 9, and 85% by May 22.

Total precipitation for the period May 1 through August 31 was well below normal throughout most regions of the state. Central Missouri was hardest hit by the drought. Southwest Missouri had above normal precipitation. Temperature was generally below normal for those areas most deficient in precipitation, thus lessening the effect of the drought.

Yields were well below normal throughout the state's corn producing areas. Stalk lodging was not prevalent in 1976.

### SELECTING A HYBRID FOR YOUR FARM

#### Period-of-Years Performance Records

A number of hybrids have been tested for periods of two or three years either in a single district or in groups of districts. These performance records are presented in tabular form for the respective districts.

Emphasis is placed upon the fact that results for a period of greater than one year are of greater value in assessing the performance of a hybrid than the results from a single year. 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 general area where the hybrid is to be grown.

#### Statistical Interpretations

The performance of each hybrid cannot be measured with absolute precision. Uncontrollable variability is involved in the determination of each yield average. The statistic used here as a measure of variability is called the least significant difference. It can be expressed at any probability level. We have chosen to present it at the 5 and 20 percent levels. It is usually written as "L. S. D.". In each single year table the L. S. D. is given at the bottom in bushels per acre. The reader will note that the L. S. D.'s vary in magnitude from table to table. This means that the trials differ in their uncontrolled variability. One having an L. S. D. of 11 bushels has less

variability than one with an L. S. D. of 15 bushels per acre. A yield difference of 12 bushels between two hybrids would be more meaningful in the first set of data than in the second. Interpreted in terms of probability of an event occurring, the L. S. D. values mean: (1) at the 5% level, if hybrid A exceeds hybrid B in yield by more than the L. S. D. value, then you would expect that 19 out of 20 years it would do so; (2) at the 20% level, if hybrid A exceeds hybrid B in yield by more than the L. S. D. value, then you would expect it to do so in 16 out of 20 years.

### Recommendations

The Missouri Agricultural Experiment Station does not make specific recommendations for hybrids. It is suggested that the farmers growing a new hybrid for the first time consider the information contained in this booklet and then grow a small acreage to determine adaptability. This should be the practice for all new hybrids regardless of origin.

### 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 1. 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<sup>1</sup> 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 2.4 bushels occurred.

At Columbia<sup>2</sup> 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<sup>3</sup>. 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 less earworm damage.

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<sup>1</sup>Zuber, M. S. 1966. Date of planting studies with corn. North Missouri Research Center. Missouri Agricultural Experiment Station Bulletin 832.

<sup>2</sup>Grogan, C. O., M. S. Zuber, N. Brown, D. C. Peters, and H. E. Brown. Date of planting studies with corn. Missouri Agricultural Experiment Station Research Bulletin 706.

<sup>3</sup>Zuber, M. S. 1967. Date of planting studies with corn in the Missouri Delta area. Missouri Agricultural Experiment Station Bulletin 862.

## EXPERIMENTAL PROCEDURES

### Testing Area

For statistical reporting purposes the state is divided into nine districts, each based on the geographical characteristics of the area. Tests were located in seven of the nine districts. Figure 1 shows the districts and the counties in which tests were conducted. Cultural practices applied at each site are given in Table 4.

### Seed Sources

All producers of hybrid seed were eligible to enter hybrids in the 1976 evaluation plots. No limit was placed on the number of hybrids any one seed producer could enter in the trials on a fee basis. In addition to the fee entries, a broader based program was continued in which certain widely-grown hybrids were included on a no-fee basis. Identification of these widely-grown hybrids was through an extensive mail survey of hybrids grown by farmers of Missouri. The number of subsidized entries from this option for each company was limited to three or less no-charge hybrids per location. Each company was also eligible to nominate two hybrids for inclusion in the irrigation trials. A minimum of 15 pounds of processed seed was supplied by the company or purchased from a seed dealer for each entry. Seed for the open-pedigree hybrids was furnished by the respective state agricultural experiment stations or by certified seed producers.

### Field Design

Lattice field plot designs of appropriate size and random assignment of entry numbers were used in all tests to locate plots at random over the testing area. This was done to facilitate statistical analysis for computing the least significant differences (L.S.D.) and to minimize the effect of cultural and soil differences over the testing area. Three two-row plots of each hybrid were planted at all locations.

### Stand

All plots were planted using conventional equipment modified for small plot work. Plots were over-planted for an expected 10 to 15 percent stand loss.

### 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 lodged plants was calculated based on the total number of plants present at time of harvest.

### 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 two-row combine and then weighed. Yield was determined on the basis of shelled corn with a moisture content of 15.5 percent. Adjustments were not made for stand deviations. The reported yield at each location for each hybrid is the average yield of three two-row 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 in the tables for each hybrid is the average of three plots at all locations. The grain yields were adjusted to 15.5 percent moisture.



Table 2. Total rainfall, number of days with rain, and dry periods\* from May 1 through August 31 at each testing location.

Location	Growing Season		May		June		July		August		Dry Periods*
	Total Rainfall	Days With Rain	Amt. of Rain	Days With Rain	Amt. of Rain	Days With Rain	Amt. of Rain	Days With Rain	Amt. of Rain	Days With Rain	
Tarkio	11.79	27	5.65	11	2.33	6	2.99	6	0.82	4	(5-23 to 6-17; 8-13 to 8-31)
Spickard	8.97	36	3.67	13	2.35	9	1.04	6	1.91	8	(5-30 to 6-14; 7-3 to 8-4; 8-15 to 8-31)
Edina	10.32	25	4.50	10	3.74	5	1.08	6	1.00	4	(5-18 to 6-10; 7-4 to 8-10; 8-12 to 8-31)
Palmyra	10.35	27	4.09	11	2.10	5	1.20	4	2.96	7	(7-4 to 8-5; 8-16 to 8-31)
Higginsville	8.78	26	3.27	10	2.04	6	2.50	2	0.97	8	(5-18 to 7-5; 6-25 to 7-15; 7-17 to 8-10; 8-13 to 8-31)
Norborne	6.69	30	3.49	9	1.68	8	0.84	5	0.68	8	(5-31 to 6-14; 7-3 to 8-31)
Columbia	5.93	24	3.68	11	1.79	4	0.24	5	0.21	4	(5-31 to 6-22; 6-29 to 8-31)
Mexico	8.20	24	2.82	9	2.14	5	1.39	6	1.85	4	(5-31 to 6-23; 7-17 to 8-10; 8-12 to 8-31)
McCredie	6.69	21	2.46	5	3.80	4	0.05	1	0.38	3	(6-29 to 7-14; 7-16 to 8-4)
Appleton City	10.59	30	3.96	9	4.61	8	0.84	6	1.18	7	(5-31 to 6-14; 7-4 to 8-5; 8-15 to 8-31)
Mt. Vernon	17.23	33	4.12	13	4.62	10	5.20	5	3.29	4	(6-7 to 6-22; 7-5 to 7-28; 8-16 to 8-31)
Cape Girardeau	18.18	30	4.16	10	6.25	11	6.05	7	1.72	2	(7-9 to 7-28; 7-29 to 8-12; 8-15 to 8-31)
Portageville	18.67	35	5.01	13	7.13	10	4.45	8	2.08	4	None

\*A dry period is 15 or more 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 and the ending date is the day before a 0.25 inch rainfall.

Table 3. Temperature data for the period May 1 through August 31 at each testing location.

Location	Month	Avg. Temp.	Deviation From Normal	Number of Days Above 90°	Location	Month	Avg. Temp.	Deviation From Normal	Number of Days Above 90°	Number of Days Above 90°
Tarkio	May	--	--	0	Mexico	May	59.0	4.8	0	0
	June	71.7	-0.3	5		June	71.4	1.5	1	0
	July	76.7	0.1	18		July	78.0	-0.8	22	3
	August	75.1	0.0	18		August	73.8	2.0	12	0
Spickard	May	60.3	3.4	0	McCredie	May	59.9	4.0	0	0
	June	72.2	0.3	0		June	70.6	2.3	0	0
	July	78.6	-1.9	23		July	77.2	0.0	19	0
	August	75.1	-0.1	13		August	73.5	2.3	9	0
Edina	May	59.8	3.3	0	Appleton City	May	61.2	4.8	0	0
	June	70.4	1.2	1		June	72.1	2.3	2	0
	July	77.8	-1.8	19		July	78.1	0.5	20	1
	August	74.0	0.4	7		August	77.2	0.7	21	1
Palmyra	May	59.6	3.9	0	Mt. Vernon	May	59.0	6.2	0	0
	June	71.8	0.6	3		June	69.4	4.3	0	0
	July	78.8	-2.5	19		July	75.5	2.4	8	0
	August	73.1	1.7	4		August	74.2	3.0	8	0
Higginsville	May	61.1	5.5	0	Cape Girardeau	May	61.8	---	0	0
	June	71.8	3.0	2		June	72.9	---	6	0
	July	79.0	0.3	24		July	78.2	---	18	0
	August	77.0	1.4	21		August	74.2	---	9	0
Norborne	May	61.0	3.0	0	Portageville	May	63.2	5.9	0	0
	June	71.7	1.1	2		June	73.9	2.8	9	0
	July	78.9	-2.7	23		July	79.1	-0.2	17	0
	August	76.2	-1.2	17		August	74.6	3.4	11	0
Columbia	May	59.2	5.2	0		May	59.2	5.2	0	0
	June	70.0	3.0	1		June	70.0	3.0	1	0
	July	77.9	-0.6	21		July	77.9	-0.6	21	0
	August	75.2	0.8	12		August	75.2	0.8	12	0

- ▲ REGULAR POPULATION, CORN
- IRRIGATION TEST, CORN
- GRAIN SORGHUM

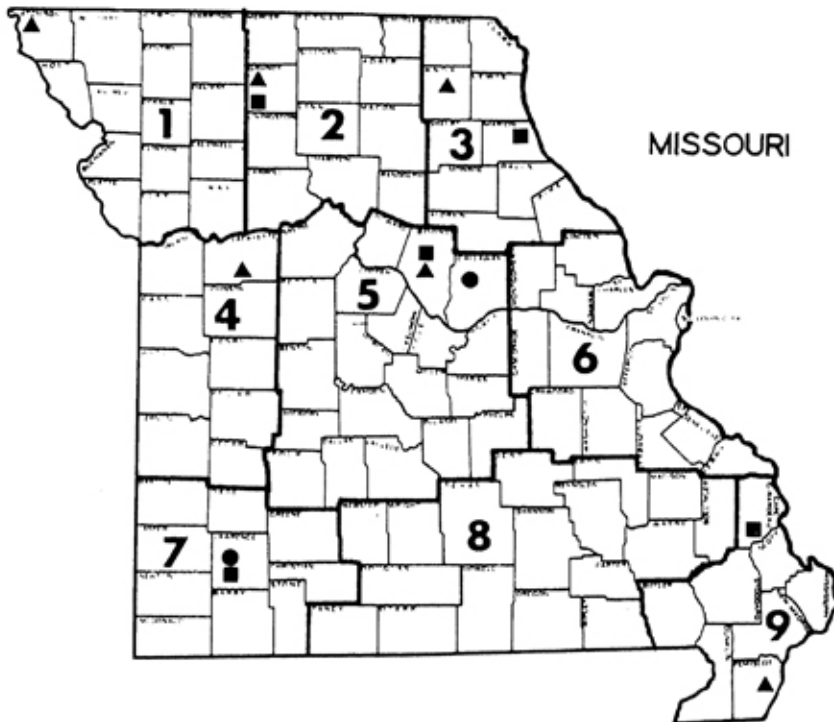


FIG. 1. TEST SITE LOCATIONS.

Table 4. Cultural practices of 1976 hybrid corn evaluation plots.

Location	Soil Test			Fertilizer Added	Insecticide*	Herbicide*	Row Width (in.)	Planting Rate (Per/A)	Date Planted	Date Harvested	Cooperator (Town)
	O. M.	P <sub>2</sub> O <sub>5</sub>	K								
District 1 (Atchinson Co.)	3.0	304	348	120-60-60	None	Bladex + Lasso	30	21,000	4-12	10-21	John Jones (Tarkio)
District 2 (Grundy Co.)	4.1	104	280	160-83-122	None	Lasso + Atrazine	30	21,000	4-16	10-07	North Missouri Center (Spickard)
District 3 (Knox Co.)	2.2	185	165	200-50-160	None	Lasso + Atrazine	30	21,000	4-15	9-30	Lynn Douglas (Edina)
District 4 (Lafayette Co.)	3.7	314	280	150-60-100	Furadan	Lasso + Atrazine	30	21,000	4-14	9-23	Lynn Dyer (Higginsville)
District 5 (Boone Co.)	1.9	200	182	150-70-70	None	Bladex + Lasso	30	21,000	4-13	9-22	Agronomy Research Center (Columbia)
District 9 (Pemiscot Co.)	2.2	396	420	150-40-70	None	Bladex + Lasso	30	21,000	4-05	9-14	Delta Center (Portageville)
Irrigation Test (Callaway Co.)	3.0	370	389	245-75-75	Furadan	Bladex + Lasso	30	28,000	4-09	9-28	Claypan Research Station (McCredie)
Irrigation Test (Lawrence Co.)	2.6	448	400	300-200-200	Furadan	Sutan + Atrazine	30	28,000	4-02	---	Southwest Center (Mt. Vernon)

\* Applied at recommended rates. See MU Guide 4136 for 1976 weed control recommendation.

## RESULTS

Report of results is arranged according to relative maturity groups. 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 for each district are reported for 1976, where available, as well as data for a period-of-years.

For complete listing of material presented in this booklet and a key to its locations see the Table of Contents, page 3.

### DISTRICT 1

Data for District 1 are presented in Tables 5 and 6. A summary of cultural practices applied may be found in Table 4.

This site was characterized by below normal rainfall, but distribution was good; therefore, acre yields were considerably better than those at other evaluation sites.

The average yield from a harvest stand of 18,300 was 131 bushels, up 52 bushels from the 1975 average. This was, however, approximately 15 bushels lower than the 1973 yield. Hybrid yields ranged from 79 to 163 bushels per acre. The average stand loss for the hybrids was within the 15% allowance made at planting time, but the stand loss for individual hybrids was as large as 25.3% and as little as less than 1%, indicating a considerable difference in seed quality and seedling vigor.

Stalk and root lodging were insignificant during 1976, averaging only 1.7 and 0.2%, respectively.

Weeds were not a problem during the season.

For more reliable results, hybrids that have proven their potential over two or three growing seasons should be held with higher regard than those for which only one season's data is available. Such information is found in Tables 6 and 11.

TABLE 5. PERFORMANCE RECORD OF HYBRIDS EVALUATED ON THE JOHN JONES FARM NEAR TARKIO, MISSOURI (ATCHISON COUNTY). PLANTED APRIL 12, 1976. HARVESTED OCTOBER 21, 1976.

BRAND--HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	PLANTS PER ACRE (#)	LODGED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
				ROOT (%)	STALK (%)		
GROUP I MATURITY							
ACCO UC6601(SX)	128.9	18.7	19400	0.0	0.5	0.0	3.0
BO-JAC X35(SPX)	132.4	18.3	18300	0.0	2.9	0.0	3.0
BO-JAC X37(SX)	137.3	17.2	18800	0.5	1.5	0.0	3.3
BO-JAC X56(SX)	157.2	21.5	18800	0.0	2.0	0.0	3.5
BO-JAC X28(SX)	130.0	17.6	21100	0.4	1.7	0.0	3.0
BO-JAC X27(SX)	79.4	18.6	16600	0.0	3.3	0.0	2.5
BO-JAC X337(SPX)	132.4	18.6	18900	0.0	0.5	0.0	3.7
USS AG CHEM 0555(3X)	128.6	18.4	17800	0.0	1.1	0.0	3.7
USS AG CHEM0555A(3X)	132.4	18.7	18500	0.0	2.7	0.0	3.5
FEDERAL FX34(SX)	96.9	18.5	17700	0.5	2.6	0.0	2.8
FUNK G-4507(SX)	142.2	20.8	16500	0.0	1.5	0.0	3.5
FUNK G-4503(SX)	144.8	18.9	18900	0.0	0.5	0.0	3.3
FUNK G-4520(SX)	132.1	20.4	18000	0.0	4.6	0.0	3.2
FUNK EXP27130(3X)	146.7	19.5	19200	0.0	0.5	0.0	3.5
FUNK EXP22352(SX)*	103.6	23.2	19600	0.0	0.5	0.0	4.0
SUPERCROST 4242(SPX)	138.4	17.6	17300	0.0	5.8	0.0	3.3
CORN KING 1138(SX)	129.1	19.4	20000	0.0	0.9	0.0	3.2
M-F-A 5001(SX)	133.8	17.6	19300	0.0	0.9	0.0	4.0
HULTING X770(SX)	109.8	17.6	18800	0.0	8.7	0.0	3.3
GROUP II MATURITY							
ACCO UC9301(SX)	136.5	20.8	18000	0.0	0.5	0.0	3.2
ACCO U390(3X)	140.3	22.4	20000	0.0	0.9	0.0	3.5
ASGROW RX92(SX)**	120.9	19.3	17000	0.5	0.6	0.0	3.5
BO-JAC X-83(SPX)**	140.1	21.2	18300	0.0	1.0	0.0	3.7
BO-JAC X-69(SX)	129.1	20.5	20000	0.0	0.0	0.0	3.8
RO-JAC X-52A(SX)	117.3	20.1	18200	0.0	8.3	0.0	3.3
CARGILL 979(SX)**	137.5	21.6	18200	0.0	1.0	0.0	3.3
CARGILL 949(SX)	154.3	20.8	18300	0.0	3.1	0.0	3.5
CARGILL 920(SX)	143.0	18.2	18800	0.0	0.9	0.0	3.0
COOP 2318(SX)	136.0	21.3	18100	0.0	0.5	0.0	3.5
COOP 2300(SX)	137.9	20.0	17300	2.7	0.0	0.0	3.7
DEKALB XL81(SX)**	128.4	21.6	16500	0.0	1.1	0.0	3.2
DEKALB XL372(SX)**	138.3	20.5	20600	0.0	0.0	0.0	3.3
DEKALB XL728(SX)	143.5	20.3	18800	0.0	1.4	0.0	3.2
USS AG CHEM 1010(SX)	155.0	20.5	17900	0.5	0.0	0.0	3.5
USS AG CHEM 1515(SX)	128.9	21.7	17700	0.0	0.0	0.0	3.3
GLDNHRVSTH2650(SX)**	127.3	22.1	16000	0.0	0.6	0.0	3.5
RING A. RA1501(SX)	142.4	20.9	17700	0.0	2.1	0.0	3.7
RING A. RA1502(SX)	124.4	20.9	19300	1.0	2.5	0.0	4.0
RING A. RA2502(SPX)	122.9	20.5	18500	0.0	0.5	0.0	3.2
RING A. RA3502(3X)	126.2	20.2	18300	0.0	3.1	0.0	3.5
FEDERAL FX59(SX)	131.0	20.6	17100	0.0	1.1	0.0	3.2
FONTANELLE 660(SX)	137.5	21.4	18200	0.0	0.0	0.0	3.5
FONTANELLE 590(SX)	128.9	19.0	18400	0.0	1.1	0.0	3.7
FUNK G-4628(SX)**	143.6	21.5	18700	0.0	0.5	0.0	3.2
FUNK G-4611(3X)	128.7	20.1	19500	0.0	1.4	0.0	3.5
FUNK G-4776(3X)	119.8	21.7	17700	0.0	0.6	0.0	4.2
SUPERCROST 585(SX)**	124.6	21.8	18300	0.0	0.5	0.0	3.5
SUPERCROST 5440(SX)	142.8	20.7	17600	0.0	0.0	0.0	3.5
SUPERCROST 4350(SPX)	144.2	19.5	19500	1.5	3.2	0.0	3.5
HAPPEL MS-72(SX)	129.8	19.6	19100	0.0	0.5	0.0	3.5
HAPPEL H-37(SPX)	113.0	20.4	19300	0.0	1.3	0.0	3.2
HAPPEL 3361-A(3X)	133.3	19.2	17200	0.0	0.0	0.0	3.7
LYNKS LX4510(SX)	126.1	20.3	18000	0.0	1.0	0.0	3.5
LYNKS LX4370(SX)	132.7	18.9	18900	0.0	0.0	0.0	3.7
LYNKS LX4330(SX)	142.4	21.4	18400	0.0	1.0	0.0	3.5
LEWIS X788(SX)	124.0	22.4	18200	0.0	0.6	0.0	3.3
LEWIS X628(SX)	153.4	20.6	18100	0.0	2.5	0.0	4.0
LEWIS X158(SX)	133.6	19.4	18200	0.0	5.5	0.0	3.7
LEWIS X248(SX)	141.5	20.8	18200	0.0	2.3	0.0	3.5
LEWIS X338(SX)	130.1	18.2	21400	0.0	1.8	0.0	3.2
LEWIS X738(SX)	144.0	22.4	18600	0.5	0.0	0.0	3.7
M-F-A V12(SX)**	116.3	21.3	16600	0.6	1.2	0.0	3.3
M-F-A V16(SX)**	135.8	22.3	18800	0.0	0.0	0.0	3.2
M-F-A 6041(SPX)**	115.3	18.9	18700	0.0	2.9	0.0	3.0
M-F-A 6061(3X)	122.5	18.8	17000	0.0	2.6	0.0	3.7
M-F-A 5802(SX)	150.8	20.4	18400	1.5	1.4	0.0	4.0
MCALLSTR SX6837(SX)	118.7	20.1	16400	0.0	2.8	0.0	3.3
MCALLSTR SX7300(SX)	149.0	20.8	18800	0.5	2.4	0.0	3.5
MCCURDY MSX85(SX)	117.1	19.6	17000	0.0	2.2	0.0	3.5
MCCURDY MSX70(SX)	128.9	20.2	19000	0.0	0.9	0.0	3.7

TABLE 5. (CONTINUED).

BRAND--HYBRID	ACHE YIELD (BU)	MOISTURE IN GRAIN (%)	PLANTS PER ACRE (#)	LOADED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
				ROOT (%)	STALK (%)		
GROUP II MATURITY							
MCCURDY MSX84(SX)	163.2	20.2	18400	1.0	0.5	0.0	3.5
NC+85(SX)	119.3	22.0	16800	0.5	1.6	0.0	3.3
NC+59(SX)	161.1	19.4	19900	1.6	0.9	0.0	3.5
NC+76(3X)	149.2	20.9	19300	0.5	3.4	0.0	3.5
NK PX74(SX)	137.0	20.3	17100	0.0	0.5	0.0	3.8
NK PX76(SX)	130.0	20.3	18400	0.0	0.0	0.0	3.0
NK PX675(3X)	142.2	19.0	18800	0.0	0.0	0.0	4.0
O*SGOLD SX5500(SX)**	129.5	21.5	16500	0.0	1.1	0.0	3.3
O*SGOLD SX5500A(SX)**	143.2	19.4	18400	0.0	0.9	0.0	3.5
O*SGOLD SX3400(SX)	119.5	19.4	20000	0.0	1.4	0.5	3.3
P-A-G SX98(SX)**	138.9	21.5	18600	0.0	0.6	0.0	3.5
P-A-G 314(SX)	139.6	18.9	19100	0.0	2.9	0.0	3.5
P-A-G SX494(SX)	122.8	18.8	20700	0.0	2.3	0.0	3.0
P-A-G 340(SX)	127.2	19.2	20900	0.0	1.8	0.4	4.3
P-A-G 7545(3X)	131.7	20.6	19800	0.0	2.7	0.0	3.3
PIONEER 3369A(SX)**	137.8	20.9	19200	0.0	2.3	0.0	3.5
PIONEER 3388(SX)**	122.7	20.2	17100	0.0	1.7	0.0	3.3
PIONEER 3219(DX)**	116.4	20.1	18400	0.0	1.4	0.0	3.2
PIONEER 3517(SX)	88.8	17.9	18600	0.5	2.1	0.0	2.5
PIONEER 3529(SX)	107.3	18.1	18300	0.0	2.1	0.0	2.8
PIONEER 3184(SX)	144.1	20.4	17600	0.0	0.5	0.0	3.8
PIONEER 3325A(SX)	132.5	19.7	18900	0.0	0.5	0.0	3.2
PIONEER 3541(SX)	120.9	17.2	18700	0.0	2.0	0.0	2.8
PIONEER 3183(SX)	139.8	20.6	16100	0.6	1.7	0.0	4.0
SECURITY 55112A(SPX)	131.7	19.5	17700	0.0	2.1	0.0	3.5
SECURITY 55118(SX)	103.6	21.0	15300	0.0	0.6	0.0	3.5
TEKSEED SPX34(SX)	155.5	21.0	18200	0.0	1.0	0.0	3.8
TEKSEED SPX36(SX)	117.3	19.5	18500	0.0	0.5	0.0	3.5
TEKSEED SPX388(3X)	153.5	21.6	19200	0.0	1.9	0.0	3.5
TROJAN TXS119(SX)**	135.0	21.8	18500	0.0	0.0	0.4	3.5
TROJAN TXS113(SX)	114.9	19.9	19000	0.0	1.0	0.0	2.8
TROJAN TX119A(3X)**	127.6	20.5	18100	0.0	0.0	0.0	3.5
TROJAN TXS115A(SX)	159.4	20.2	20200	0.5	0.9	0.0	3.5
TROJAN TXS117A(SX)	145.6	20.1	18700	1.6	2.6	0.0	3.5
WEATHR M. EPX12(DX)	113.7	21.9	16500	0.0	0.0	0.0	3.5
WEATHR M. EPX12A(DX)	131.8	20.1	18500	0.0	0.5	0.0	3.5
WEATHR M. EPX888(DX)	133.4	19.5	16400	0.0	2.3	0.0	4.0
WEATHR M. EPX888H(DX)	143.2	19.2	18800	0.5	3.8	0.0	3.5
WILSTAR 6663(SX)	132.2	20.7	16400	0.6	1.7	0.0	3.5
WILSTAR 7774(SX)	114.3	22.0	15700	0.0	0.7	0.0	3.5
US-13(DX)	62.8	18.5	19200	0.0	3.4	0.0	3.8
WALTHER W271(DX)	132.2	19.6	19100	0.0	1.9	0.0	3.0
WALTHER W80(DX)	106.6	18.9	20100	0.0	0.5	0.0	3.2
WALTHER W239(DX)	120.6	19.6	19800	0.0	8.4	0.0	3.3
WILSON 1800(SX)	141.6	19.0	18400	1.0	1.5	0.0	3.5
WILSON 1040(SX)	136.8	19.0	17800	0.0	0.5	0.0	3.5
WILSON 1790(3X)	124.3	19.6	18800	0.0	6.4	0.0	3.8
GROUP III MATURITY							
RING A. RA2602(SPX)*	128.4	24.3	17900	0.0	5.6	0.0	5.0
FUNK G-4747(SPX)*	142.0	25.5	19900	0.0	4.7	0.0	4.7
MCCURDY MSX88(SX)	131.3	20.0	17400	0.0	2.0	0.5	3.3
TEKSEED SPX90(SX)	105.6	21.5	16900	0.0	1.0	0.0	3.3
AVERAGE	131.1	20.2	19354	0.2	1.7	0.0	3.5

LSD AT 5% LEVEL IS 16.0 BU. HYBRIDS DIFFERING BY MORE THAN THIS VALUE MAY BE EXPECTED TO DIFFER SIGNIFICANTLY IN YIELD 19 OF 20 TIMES GROWN.

LSD AT 20% LEVEL IS 10.2 BU. HYBRIDS DIFFERING BY MORE THAN THIS VALUE MAY BE EXPECTED TO DIFFER SIGNIFICANTLY IN YIELD 16 OF 20 TIMES GROWN.

\*WHITE HYBRID

\*\*WIDELY GROWN HYBRIDS.

TABLE 6. PERFORMANCE RECORD OF HYBRIDS EVALUATED NEAR TARKIO, MISSOURI (ATCHISON COUNTY) DURING THE 2-YEAR PERIOD 1975-76 AND THE 3-YEAR PERIOD 1974-76.

BRAND--HYBRID	2-YEAR AVERAGE					3-YEAR AVERAGE				
	ACRE YIELD	LODGING		DROPPED EARS	EAR HEIGHT	ACRE YIELD	LODGING		DROPPED EARS	EAR HEIGHT
		ROOT (%)	STALK (%)				ROOT (%)	STALK (%)		
GROUP 1 MATURITY										
HULTING X770(SX)	106.9	8.8	31.0	0.0	3.8	-	-	-	-	-
M-F-A 5001(SX)	109.3	2.9	14.7	0.0	4.3	97.9	1.9	10.2	0.0	4.1
SUPERCROST 4242(SPX)	110.9	0.8	38.6	0.0	3.7	-	-	-	-	-
FUNK G-4503(SX)	120.6	4.2	4.9	0.3	3.8	-	-	-	-	-
FUNK G-4507(SX)	113.3	4.7	11.4	0.0	3.8	96.2	3.1	7.9	0.4	3.8
USS AG CHEM0555A(3X)	103.0	1.5	16.4	0.3	3.8	-	-	-	-	-
USS AG CHEM 0555(3X)	106.2	3.2	17.9	0.0	3.9	-	-	-	-	-
BO-JAC X56(SX)	119.9	0.7	9.5	0.0	3.9	105.6	0.5	6.4	0.1	3.9
BO-JAC X37(SX)	107.6	3.0	16.3	0.3	3.7	101.0	2.0	11.2	0.2	3.6
BO-JAC X35(SPX)	111.1	0.7	34.8	0.0	3.6	100.1	0.7	25.2	0.1	3.7
ACCO UC6601(SX)	103.9	2.7	35.6	0.0	3.3	90.9	2.0	24.7	0.0	3.4
GROUP 2 MATURITY										
WILSON 1790(3X)	105.8	1.3	19.1	0.0	3.9	-	-	-	-	-
WILSON 1040(SX)	115.2	1.5	6.1	0.0	3.8	105.5	1.7	4.2	0.3	3.7
WILSON 1800(SX)	109.1	2.8	2.9	0.0	3.9	96.8	2.0	2.5	0.1	3.9
WALTHER W271(CX)	100.9	1.2	20.2	0.3	3.6	-	-	-	-	-
US-13(DX)	70.4	4.1	23.5	0.7	4.0	60.3	3.1	17.5	1.0	3.9
TRCJAN TXS117A(SX)	115.4	1.5	23.1	0.2	3.9	-	-	-	-	-
TRCJAN TXS115A(SX)	123.6	1.2	9.3	0.0	4.0	101.4	0.8	6.4	0.4	4.0
TRCJAN TXS113(SX)	104.8	3.4	24.5	0.0	3.3	97.2	2.2	16.7	0.0	3.3
TRCJAN TXS119(SX)**	102.1	0.5	22.5	0.2	3.5	91.1	0.4	15.1	0.1	3.5
PICNEER 3184(SX)	110.8	4.5	1.2	0.0	4.3	-	-	-	-	-
PICNEER 3529(SX)	96.1	0.9	6.5	0.0	3.1	-	-	-	-	-
PICNEER 3517(SX)	83.3	2.4	16.7	0.0	3.0	81.2	1.6	11.1	0.1	3.1
PICNEER 3219(DX)**	96.4	1.2	8.2	0.0	3.5	87.6	0.8	5.7	0.0	3.5
PICNEER 3388(SX)**	114.8	2.7	14.0	0.0	3.7	105.6	1.8	9.7	0.0	3.7
PICNEER 3369A(SX)**	108.2	1.4	24.9	0.0	3.7	-	-	-	-	-
P-A-G SX494(SX)	104.1	5.8	19.0	0.0	3.4	-	-	-	-	-
P-A-G SX98(SX)**	104.9	0.0	20.6	0.0	3.7	95.0	0.0	13.9	0.0	3.6
C*SGOLDSX5500A(SX)**	116.7	4.3	6.7	0.0	3.8	106.5	2.8	4.5	0.3	3.8
C*SGOLD SX5500(SX)**	103.0	0.5	19.8	0.2	3.4	97.0	0.3	13.4	0.2	3.6
NK FX675(3X)	114.9	11.7	6.3	0.0	4.0	100.3	7.8	4.5	0.1	3.9
NK PX76(SX)	110.6	3.2	26.6	0.0	3.4	97.4	3.1	18.6	0.0	3.4
NK PX74(SX)	111.8	2.4	8.7	0.5	4.1	100.5	1.6	5.8	0.5	4.0
NC+59(SX)	133.3	4.1	14.7	0.0	3.8	-	-	-	-	-
NC+85(SX)	96.7	1.6	28.4	0.0	3.6	-	-	-	-	-
MCCURDY MSX70(SX)	102.9	1.6	8.2	0.0	4.0	92.3	1.2	6.1	0.0	3.9
MCCURDY MSX85(SX)	101.4	3.2	9.5	0.0	3.8	95.9	2.1	7.2	0.0	3.8
MCALLSTR SX7300(SX)	116.2	1.5	10.3	0.0	3.8	104.5	1.0	6.8	0.0	3.9
MCALLSTR SX6837(SX)	99.5	0.9	17.2	0.0	3.5	95.3	0.6	11.7	0.1	3.5
M-F-A 6061(3X)	96.8	0.5	12.8	0.3	3.8	90.5	0.8	8.7	0.2	3.8
M-F-A 6041(SPX)**	99.2	1.6	31.2	0.0	3.3	93.1	2.0	21.3	0.1	3.4
M-F-A V16(SX)**	104.8	4.3	13.1	0.0	3.6	94.9	2.8	8.9	0.1	3.6
M-F-A V12(SX)**	94.8	2.1	15.9	0.0	3.7	88.2	1.4	11.1	0.0	3.7
LEWIS X62B(SX)	128.5	1.7	17.6	0.0	4.0	-	-	-	-	-
LEWIS X78B(SX)	99.3	0.6	27.6	0.0	3.7	94.9	0.6	18.5	0.1	3.6
HAPPEL H-37(SPX)	86.9	0.0	6.2	0.0	3.5	87.0	0.0	4.4	0.1	3.6
HAPPEL MS-72(SX)	101.3	1.5	33.4	0.0	3.7	91.2	1.0	22.9	0.1	3.7
SUPERCROST 5440(SX)	106.9	1.3	6.1	0.0	3.8	-	-	-	-	-
SUPERCROST 585(SX)**	101.1	1.4	17.4	0.0	3.7	-	-	-	-	-
FUNK G-4628(SX)**	121.4	0.2	21.9	0.0	3.4	104.3	0.3	15.1	0.2	3.4
FONTANELLE 590(SX)	110.3	2.4	3.1	0.0	4.0	-	-	-	-	-
FONTANELLE 660(SX)	101.9	0.3	26.0	0.3	3.9	94.0	0.2	17.6	0.4	3.9
FEDERAL FX59(SX)	98.3	0.8	19.7	0.0	3.4	93.2	0.7	13.9	0.0	3.5
GLDNHPVSTH2650(SX)**	99.3	1.0	27.8	0.0	3.7	-	-	-	-	-
USS AG CHEM 1515(SX)	103.8	0.2	11.4	0.0	3.7	-	-	-	-	-
USS AG CHEM 1010(SX)	120.8	3.0	8.9	0.0	3.9	-	-	-	-	-
DEKALB XL81(SX)**	106.9	0.7	31.3	0.0	3.6	97.6	0.9	21.2	0.0	3.7
COOP 2300(SX)	104.0	2.8	7.7	0.0	4.0	-	-	-	-	-
COOP 2318(SX)	107.6	2.4	16.2	0.0	3.6	96.4	1.6	10.9	0.0	3.6
CARGILL 949(SX)	117.4	1.1	7.7	0.0	3.8	-	-	-	-	-
BO-JAC X-52A(SX)	95.1	3.2	28.1	0.0	3.7	-	-	-	-	-
BO-JAC X-69(SX)	104.4	4.9	1.5	0.0	4.2	-	-	-	-	-
BO-JAC X-83(SPX)**	120.2	2.4	9.5	0.0	4.0	-	-	-	-	-
ACCO UC9301(SX)	117.2	1.6	33.7	0.0	3.3	102.5	3.3	22.6	0.0	3.4
GROUP 3 MATURITY										
FUNK G-4747(SPX)*	95.2	4.5	9.9	0.0	4.8	-	-	-	-	-
AVERAGE	106.6	2.3	16.9	0.1	3.7	95.5	1.6	12.2	0.1	3.7

\*WHITE HYBRID.

\*\*WIDELY GROWN HYBRID



## DISTRICT 2

Data on agronomic performance of hybrids evaluated at this site are found in Tables 7 and 8. A summary of the site cultural practices is found in Table 4.

The site was characterized by a prolonged drought during the 1976 growing season. The months of June, July, and August all showed precipitation deficits (Table 2). The effects of the drought, however, were lessened by cooler than normal temperatures (Table 3).

The average yield of 60 bushels per acre was 6 bushels less than the 1975 average, 41 bushels below the 1974 average and 87 bushels below the 1973 average. The range in yield was from a low of 38 to a high of 88 bushels per acre. The average harvest stand was 13,800 plants per acre, which was a stand loss of approximately 34%. Because of the extreme drought the lesser population may have been an advantage in that competition for available moisture was lessened.

Stalk and root lodging were not important, nor were weeds a factor in determining final yields in 1976.

For more reliable results, hybrids that have proven their potential over a two or three-year period should be considered. Such information is available in Tables 8 and 11.

TABLE 7. PERFORMANCE RECORD OF HYBRIDS EVALUATED AT THE NORTH MISSOURI RESEARCH CENTER (NMC) NEAR SPICKARD, MISSOURI (GRUNDY COUNTY). PLANTED APRIL 16, 1976. HARVESTED OCTOBER 7, 1976.

BRAND--HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	PLANTS PER ACRE (#)	LODGED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
				ROOT (%)	STALK (%)		
GROUP I MATURITY							
ACCO UC6601(SX)	54.6	24.5	12900	0.0	6.2	0.7	3.0
BURRUS BX20(SX)	88.5	25.7	14100	0.0	0.0	0.0	3.2
BO-JAC X35(SPX)	66.0	21.8	14700	11.2	2.5	0.0	3.0
BO-JAC X37(SX)	65.8	24.5	14300	0.0	0.6	0.0	3.0
BO-JAC X56(SX)	72.3	26.8	12900	0.0	0.0	0.0	3.8
BO-JAC X29(SX)	52.1	23.0	17100	0.0	18.9	0.0	3.2
BO-JAC X27(SX)	57.4	23.2	13700	0.0	16.1	0.6	2.8
BO-JAC X337(SPX)	56.0	23.7	15100	0.0	1.8	0.0	3.0
USS AG CHEM 0555(3X)	62.1	23.6	14400	0.0	0.6	0.0	3.5
USS AG CHEM 0555A(3X)	66.5	24.9	14100	0.0	1.7	0.0	3.7
FUNK G-4507(SX)	53.8	24.9	13800	0.0	0.0	0.0	3.5
FUNK G-4503(SX)	57.3	26.1	11300	3.3	4.0	0.0	3.5
FUNK G-4520(SX)	53.7	26.4	15200	0.0	1.2	0.0	3.5
FUNK EXP27130(3X)	60.6	25.4	12900	0.0	2.6	0.0	3.0
SUPERCROST 4242(SPX)	67.8	25.0	13700	0.0	5.8	0.0	3.8
M-F-A 5001(SX)	68.6	24.2	12100	0.0	1.3	1.0	3.3
HULTING X770(SX)	67.2	23.3	15000	0.0	15.0	0.0	3.7
GROUP II MATURITY							
ACCO U390(3X)	52.9	26.9	13700	9.0	1.5	0.0	3.8
ASGR0W RX100(SX)	63.9	26.4	15100	4.9	2.4	0.0	3.3
ASGR0W RX92(SX)**	64.9	25.0	8800	0.0	0.0	0.0	3.2
ASGR0W RX87(SPX)	57.6	25.5	14400	0.0	1.2	0.0	3.0
BURRUS BX25(SX)	53.0	27.4	13800	0.0	1.0	1.0	3.2
BURRUS BX35(SX)	48.7	26.8	14300	0.0	0.5	0.0	3.0
BO-JAC X7L(SX)	65.0	26.8	13300	0.0	0.0	0.0	3.3
BO-JAC X-R3(SPX)**	59.2	27.2	13200	0.0	1.5	0.0	3.3
BO-JAC X622A(SPX)	63.6	27.3	13800	0.0	1.8	0.0	3.2
CARGILL 979(SX)**	64.7	28.6	16200	0.0	1.6	0.0	3.2
CARGILL 949(SX)	66.6	27.2	14800	0.0	0.6	0.0	3.5
CARGILL 920(SX)	70.7	24.8	13900	0.0	1.7	0.0	3.5
CUDD 231R(SX)	59.2	26.3	12400	0.0	0.0	0.0	3.2
COOP 2300(SX)	53.2	25.8	8900	5.4	0.0	1.0	3.2
DEKALB XL81(SX)**	64.3	25.9	13300	4.8	5.0	0.0	3.3
DEKALB XL372(SX)**	55.5	26.2	17000	0.0	0.5	0.0	3.3
DEKALB XL72B(SX)	70.2	26.2	15200	0.0	0.5	0.0	3.2
USS AG CHEM 1010(SX)	60.5	25.9	15000	4.3	0.5	0.0	3.5
USS AG CHEM 1515(SX)	55.9	28.0	16700	0.0	0.6	0.0	2.8
GLDNHRVSTH2650(SX)**	57.2	27.3	13000	0.0	1.9	0.0	3.3
RING A. RA1501(SX)	67.3	25.7	14400	0.0	0.0	0.8	3.8
RING A. RA2501(SPX)	57.6	26.8	14800	0.0	3.3	0.0	3.5
RING A. RA2502(SPX)	38.2	27.4	15200	0.5	2.2	0.0	2.8
FUNK G-4628(SX)**	57.7	26.7	12500	0.0	1.9	0.0	2.8
FUNK G-4611(3X)	58.3	25.0	13100	6.7	0.6	0.6	3.5
SUPERCROST 585(SX)**	61.8	28.0	13700	0.0	0.6	0.0	2.8
SUPERCROST 7772(SPX)	62.0	26.2	13100	9.2	6.5	0.0	3.5
SUPERCROST 567(SPX)	58.7	25.4	14100	0.0	4.2	0.0	3.3
SUPERCROST 5440(SX)	56.0	26.6	13000	0.0	0.6	0.0	3.8
SUPERCROST 4350(SPX)	72.6	23.2	15600	2.0	0.5	0.0	3.3
HAPPEL MS-72(SX)	54.8	27.3	12300	0.0	0.6	0.0	3.5
HAPPEL H-37(SPX)	60.6	25.2	13500	0.0	3.5	0.0	3.3
HAPPEL 3361-A(3X)	66.0	24.2	14100	0.0	1.3	0.0	3.3
LEWIS X78B(SX)	64.6	27.6	14500	0.0	3.1	0.0	3.3
LEWIS X62B(SX)	63.7	26.6	12900	0.0	2.6	0.7	3.8
LEWIS X15B(SX)	49.4	26.9	11100	0.7	0.0	0.0	4.2
LEWIS X24B(SX)	51.3	27.3	13900	0.0	1.6	0.0	3.2
LEWIS X33B(SX)	49.4	27.2	14800	0.0	1.1	0.0	3.7
LEWIS X73B(SX)	62.0	26.8	14200	0.0	5.4	0.0	3.5
M-F-A V12(SX)**	54.7	26.1	9900	0.0	2.8	0.0	3.2
M-F-A V16(SX)**	59.3	26.6	11900	0.6	2.6	0.0	3.2
M-F-A 6041(SPX)**	65.4	23.8	14900	6.3	2.4	0.0	3.2
M-F-A 6061(3X)	61.9	24.0	12900	0.0	4.6	0.0	3.2
M-F-A 5802(SX)	71.6	25.0	14200	0.0	0.5	0.0	3.8
AMERICANA 6700(SX)	65.2	27.1	16300	0.0	4.0	0.0	3.5
AMERICANA 3200(SX)	63.7	26.6	12900	0.0	2.1	0.0	3.7
AMERICANA 9500(3X)	67.9	26.4	16400	0.0	1.7	0.0	3.7
MUNCY-CHF 3X898(3X)	50.0	26.5	12500	0.8	2.8	0.0	3.0
MUNCY-CHFSX878B(SX)	49.4	26.2	10600	0.8	0.0	0.0	2.8
MCALLSTR SX6837(SX)	55.2	29.3	15400	0.0	2.1	0.0	3.3
MCCURDY MSX84(SX)	65.4	26.2	13900	0.5	0.5	0.0	3.7
MCCURDY MSX65(SX)	60.3	24.9	15300	0.7	3.1	0.0	3.7
NK PX74(SX)	57.4	26.7	8300	0.0	0.0	0.0	3.3

TABLE 7. (CONTINUED).

BRAND--HYBRID	ACRE YIELD (BU)	MOISTURE IN GAIN (%)	PLANTS PER ACRE (#)	LONGED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
				ROOT (%)	STALK (%)		
GROUP II MATURITY							
NK PX76(SX)	62.6	26.1	15000	0.0	5.8	0.0	2.8
NK PX675(3X)	59.2	25.9	13600	0.0	0.0	0.7	3.7
O*SGOLD SX5900(SX)**	66.9	26.5	15800	0.0	0.5	0.0	3.2
O*SGOLD SX5500A(SX)**	62.8	26.4	13500	0.0	0.0	0.0	3.5
O*SGOLD SX3400(SX)	67.8	26.4	13100	0.0	0.6	0.0	3.3
P-A-G SX98(SX)**	78.6	25.9	12600	0.0	1.3	0.0	3.3
P-A-G 314(SX)	58.0	26.7	11300	0.0	0.7	1.1	3.5
P-A-G 340(SX)	57.1	26.4	15200	0.0	1.0	0.0	3.3
P-A-G 7545(3X)	58.9	25.0	15000	0.0	2.9	0.0	3.3
PIONEER 3769A(SX)**	58.5	26.0	15000	0.0	5.6	0.0	3.0
PIONEER 3388(SX)**	65.3	24.0	13600	0.6	1.3	0.0	3.2
PIONEER 3219(DX)**	64.5	24.9	16200	0.0	6.9	0.0	3.5
PIONEER 3517(SX)	54.7	22.4	15300	0.0	0.5	0.0	2.7
PIONEER 3529(SX)	54.2	23.5	15300	0.0	0.0	0.0	3.0
PIONEER 3184(SX)	67.2	25.9	14500	0.0	0.0	0.0	3.3
PIONEER 3325A(SX)	59.4	26.0	16800	0.0	2.1	0.0	3.0
PIONEER 3541(SX)	62.5	21.7	14500	0.0	3.6	0.0	2.8
PIONEER 3183(SX)	68.4	25.9	10500	7.0	0.8	0.0	3.5
SECURITY 55112(SX)	69.1	26.6	11800	0.0	0.7	0.0	3.8
SECURITY 55112A(SPX)	69.7	25.0	16900	1.5	3.3	0.0	3.5
SECURITY 55118(SX)	59.6	28.2	11800	0.0	0.7	0.0	3.3
THOR-O-BREDSX650(SX)	59.9	25.5	11600	0.0	0.0	1.9	3.0
THOR-O-BREDTX635(3X)	60.3	26.4	13600	0.8	1.2	0.0	3.5
TROJAN TX5119(SX)**	62.3	26.0	14300	0.0	0.8	0.6	3.2
TROJAN TX5113(SX)	65.4	24.8	14200	4.6	2.5	0.6	2.8
TROJAN TX119A(3X)**	54.1	25.9	11000	0.0	0.6	1.2	3.2
TROJAN TX5115A(SX)	60.8	25.0	17900	0.0	0.0	0.0	3.7
TROJAN TX5117A(SX)	63.8	26.4	15200	0.0	2.2	0.0	3.5
WEATHR M. EPX12A(DX)	52.6	26.7	8500	0.0	2.4	0.0	3.8
WEATHR M. EXP888(DX)	49.8	24.0	14100	0.6	2.2	0.0	3.3
WEATHR M. EPX8888(DX)	50.3	24.8	13000	0.0	5.4	0.0	3.5
WILSTAR 6663(SX)	44.8	26.5	12700	1.1	3.5	1.1	3.8
WILSTAR 7774(SX)	52.4	24.7	12100	0.8	0.9	0.9	3.3
WILSTAR 6668(SX)	58.6	23.8	18100	0.0	1.0	0.0	3.5
US-13(DX)	51.2	26.2	13100	0.0	9.0	0.0	3.7
WALTHER W271(DX)	57.4	22.7	17200	7.6	3.2	0.0	3.5
WALTHER W80(DX)	55.2	24.5	14200	0.0	4.6	0.0	3.5
WALTHER W239(DX)	53.1	26.1	9400	0.0	0.8	0.0	3.2
MULTING X980(SX)	64.9	26.4	14300	0.0	1.4	0.0	3.3
GROUP III MATURITY							
MCCURDY MSX88(SX)	72.4	26.3	15100	0.0	2.3	0.0	3.3
AVERAGE	60.5	25.7	13788	0.9	2.3	0.1	3.3

LSD AT 5% LEVEL IS 13.8 BU. HYBRIDS DIFFERING BY MORE THAN THIS VALUE MAY BE EXPECTED TO DIFFER SIGNIFICANTLY IN YIELD 19 OF 20 TIMES GROWN.

LSD AT 20% LEVEL IS 8.8 BU. HYBRIDS DIFFERING BY MORE THAN THIS VALUE MAY BE EXPECTED TO DIFFER SIGNIFICANTLY IN YIELD 16 OF 20 TIMES GROWN.

\*WHITE HYBRID

\*\*WIDELY GROWN HYBRIDS.

TABLE 8. PERFORMANCE RECORD OF HYBRIDS EVALUATED AT THE NORTH MISSOURI RESEARCH CENTER (NMC) NEAR SPICKARD, MISSOURI (GRUNDY COUNTY) DURING THE 2-YEAR PERIOD 1975-76 AND THE 3-YEAR PERIOD 1974-76.

BRAND--HYBRID	2-YEAR AVERAGE					3-YEAR AVERAGE				
	ACRE YIELD	LODGING		DRCPPED EARS	EAR HEIGHT	ACRE YIELD	LODGING		DROPPED EARS	EAR HEIGHT
		ROOT	STALK				ROOT	STALK		
(BU)	(%)	(%)	(%)	(FT)	(BU)	(%)	(%)	(%)	(FT)	
GROUP 1 MATURITY										
HULTING X770(SX)	69.1	0.0	10.1	0.0	3.7	-	-	-	-	-
M-F-A 5001(SX)	67.6	0.3	5.8	0.7	3.7	80.7	0.3	4.2	0.8	3.7
SUPERCROST 4242(SPX)	68.8	0.5	5.4	0.0	3.8	85.9	0.5	4.7	0.9	3.7
FUNK G-4503(SX)	63.3	1.9	11.7	0.2	3.6	-	-	-	-	-
FUNK G-4507(SX)	60.6	0.3	4.1	0.5	3.7	71.4	0.3	3.6	0.8	3.7
USS AG CHEM0555A(3X)	67.2	0.0	4.6	0.6	3.8	-	-	-	-	-
USS AG CHEM 0555(3X)	60.1	1.2	2.9	1.0	3.7	-	-	-	-	-
BO-JAC X56(SX)	71.1	0.9	2.7	0.3	4.1	85.8	0.6	1.8	0.5	3.9
BO-JAC X37(SX)	65.1	0.0	0.8	0.0	3.5	79.4	0.3	1.6	0.9	3.6
BO-JAC X35(SPX)	64.8	5.6	5.3	0.0	3.7	84.2	3.9	5.3	0.5	3.8
BURRUS BX20(SX)	80.8	0.0	1.2	0.5	3.5	84.6	0.0	1.1	1.0	3.7
ACCG UC6601(SX)	66.2	0.2	11.8	0.6	3.3	80.5	0.2	8.2	0.5	3.3
GROUP 2 MATURITY										
HULTING X980(SX)	67.5	0.0	4.1	0.6	3.7	77.3	0.0	3.3	0.6	3.5
US-13(DX)	51.1	1.1	16.5	0.0	3.8	61.4	2.3	16.4	0.5	3.9
TRCJAN TXS117A(SX)	66.6	0.5	5.0	0.8	3.7	-	-	-	-	-
TROJAN TXS115A(SX)	62.8	1.1	1.7	0.5	3.8	73.2	0.9	1.6	0.5	3.9
TROJAN TXS113(SX)	64.6	3.3	2.2	0.3	3.3	80.1	2.2	2.0	0.8	3.4
TROJAN TXS119(SX)**	61.8	0.0	6.4	0.6	3.5	74.5	0.0	4.4	1.1	3.5
PIONEER 3184(SX)	65.3	0.0	3.1	0.3	3.7	-	-	-	-	-
PIONEER 3529(SX)	56.9	0.0	0.9	0.0	3.3	-	-	-	-	-
PIONEER 3517(SX)	61.6	0.8	1.5	0.2	2.7	73.4	0.5	1.7	0.5	2.9
PIONEER 3219(DX)**	66.9	0.0	11.2	0.0	3.7	81.9	0.5	7.9	0.0	3.7
PIONEER 3388(SX)**	77.2	0.6	2.0	0.0	3.3	88.5	0.6	2.1	0.0	3.3
PIONEER 3369A(SX)**	67.3	0.2	8.6	0.0	3.4	81.9	1.0	5.7	0.5	3.5
P-A-G SX98(SX)**	79.6	0.0	2.0	0.3	3.5	87.1	0.0	2.0	0.7	3.5
O*SGOLDSX5500A(SX)**	66.5	0.0	2.7	0.0	3.7	78.3	0.0	2.3	0.3	3.8
O*SGOLD SX5500(SX)**	65.5	0.0	2.3	0.3	3.3	77.0	0.0	2.0	0.9	3.6
NK PX675(3X)	62.3	0.3	2.7	1.1	4.0	76.2	0.2	2.6	1.1	3.7
NK PX76(SX)	65.1	1.0	12.1	0.0	3.4	79.4	1.3	8.6	0.0	3.4
NK PX74(SX)	63.1	0.0	0.8	0.0	3.8	73.4	0.2	0.7	0.5	3.8
MCCURDY MSX84(SX)	65.5	0.3	1.3	0.2	3.8	78.0	0.2	1.6	0.5	3.8
AMERICANA 3200(SX)	65.9	0.2	3.0	0.5	4.1	-	-	-	-	-
AMERICANA 6700(SX)	69.0	0.0	7.9	0.3	3.7	-	-	-	-	-
M-F-A 6061(3X)	60.6	0.0	4.0	0.5	3.4	73.7	0.0	3.4	1.0	3.5
M-F-A 6041(SPX)**	70.1	3.9	5.7	0.3	3.3	84.1	2.8	4.3	0.3	3.3
M-F-A V16(SX)**	68.7	0.3	5.6	0.0	3.5	80.8	0.2	3.9	0.3	3.5
M-F-A V12(SX)**	55.1	0.3	3.7	0.3	3.4	67.4	0.2	3.4	0.6	3.3
LEWIS X628(SX)	66.3	0.8	2.5	0.8	3.9	-	-	-	-	-
LEWIS X788(SX)	62.9	0.0	11.9	0.3	3.4	77.6	0.0	8.6	0.2	3.4
HAPPEL H-37(SPX)	59.6	0.4	3.8	0.0	3.7	69.8	0.3	3.1	0.4	3.8
HAPPEL MS-72(SX)	63.3	0.0	7.4	0.0	3.5	73.9	0.0	5.1	0.2	3.4
SUPERCROST 5440(SX)	61.3	0.0	3.8	0.3	3.9	71.2	0.3	3.0	0.6	3.9
SUPERCROST 7772(SPX)	58.8	5.4	12.5	0.3	3.6	74.5	3.8	8.5	0.3	3.5
SUPERCROST S85(SX)**	67.1	0.2	5.6	0.0	3.3	79.7	0.1	4.1	0.3	3.4
FUNK G-4628(SX)**	65.5	0.0	3.4	0.3	3.2	74.0	0.0	2.3	0.7	3.3
USS AG CHEM 1515(SX)	67.0	0.0	1.0	0.0	3.3	-	-	-	-	-
USS AG CHEM 1010(SX)	64.9	2.1	4.8	0.3	3.8	-	-	-	-	-
DEKALB XL81(SX)**	70.6	2.4	14.3	0.5	3.5	82.4	2.4	10.3	0.7	3.6
CARGILL 920(SX)	71.0	0.3	7.2	0.2	3.7	-	-	-	-	-
CARGILL 949(SX)	67.1	0.6	1.4	0.9	3.8	-	-	-	-	-
BO-JAC X-83(SPX)**	63.6	0.3	4.7	0.3	3.4	77.4	0.3	3.3	0.2	3.4
BO-JAC X7L(SX)	66.8	0.0	6.7	0.3	3.5	82.6	0.0	4.9	0.2	3.6
BURRUS BX25(SX)	59.3	0.0	4.2	1.0	3.5	75.8	0.0	3.1	1.5	3.5
ASGROW RX100(SX)	63.4	3.0	3.9	0.0	3.8	79.6	2.0	3.7	0.2	3.6
GROUP 3 MATURITY										
MCCURDY MSX88(SX)	71.8	0.2	7.9	0.3	3.5	82.2	0.2	5.8	0.5	3.4
AVERAGE	65.5	0.7	5.3	0.3	3.6	78.1	0.7	4.3	0.6	3.6

\*\*WHITE HYBRID.

\*\*\*WIDELY GROWN HYBRID

### DISTRICT 3

Data on the performance of hybrids evaluated at this location are presented in Tables 9 and 10.

The site was characterized by below normal rainfall for the period June, July, and August. Below normal temperatures for the same period lessened the deleterious effect of the drought.

The average yield was 83 bushels per acre from a stand of 17,500 plants. The range for hybrids was from 59 to 104 bushels per acre. This was an increase of approximately 6 bushels over the 1975 yields.

Stalk lodging was important at this site, ranging from 10.2 to 76.2%. Root lodging was also high, averaging 11.8% for all hybrids. Injury to the plants, caused by a severe hail storm the week of August 8, allowed stalk rotting organisms easy access to the plant. Stalk rot was not general in Missouri in 1976.

Weeds were not a factor in determining the final yield in 1976.

The most reliable results may be obtained from the use of hybrids that have proven their potential over a two or three-year period. Such information is available in Table 10 and 11.

### SUMMARY OF NORTHERN LOCATIONS

The average performance of hybrids evaluated at the John Jones farm near Tarkio, Missouri (Atchinson County) and the North Missouri Research Center near Spickard, Missouri (Grundy County), and the Lynn Douglas farm near Edina, Missouri (Knox County) is presented in Table 11. These data supply information from three locations, and therefore the inferences drawn from this table are more reliable than those drawn from the data in Tables 5, 7, and 9. In reliability, these data are comparable to the 3-year averages presented in Tables 6, 8, and 10.

TABLE 9. PERFORMANCE RECORD OF HYBRIDS EVALUATED ON THE LYNN DOUGLAS FARM NEAR EDINA, MISSOURI (KNOX COUNTY). PLANTED APRIL 15, 1976. HARVESTED SEPTEMBER 30, 1976.

BRAND--HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	PLANTS PER ACRE (#)	LODGED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
				FOOT (%)	STALK (%)		
GROUP I MATURITY							
ACCO UC6601(SX)	82.7	22.1	16100	5.6	64.0	0.0	3.0
BURRUS BX20(SX)	86.5	24.0	17300	38.0	20.9	0.0	3.8
BO-JAC X35(SPX)	87.4	20.2	18800	9.0	41.1	0.5	3.2
HO-JAC X56(SX)	88.6	24.8	18600	36.2	27.5	0.0	3.7
BO-JAC X28(SX)	81.0	20.4	18300	3.8	75.4	0.0	3.2
BO-JAC X27(SX)	81.1	19.6	17100	1.5	52.0	0.0	3.2
GO-JAC X337(SPX)	84.9	22.2	19000	29.6	34.9	0.0	3.5
USS AG CHEM 0555(3X)	85.0	22.7	17600	13.4	28.9	0.5	3.5
USS AG CHEM0555A(3X)	86.4	23.5	18700	6.4	40.5	0.5	3.3
FEDERAL FX34(SX)	78.9	22.3	16900	6.5	52.8	0.0	3.0
FUNK G-4507(SX)	85.3	23.9	16500	28.9	24.3	0.0	3.5
FUNK G-4503(SX)	94.7	22.8	18600	3.4	59.9	0.0	3.3
FUNK G-4520(SX)	76.1	23.0	18600	2.5	46.1	0.0	3.8
FUNK FXP27130(3X)	89.9	22.5	18700	4.4	56.6	0.0	3.5
SUPERCROST 4242(SPX)	81.5	21.5	18300	1.0	61.5	0.0	3.3
HOBLIT XR441A(SX)	95.1	24.4	17400	7.1	36.0	0.6	3.7
M-F-A 5001(SX)	83.2	20.9	17500	24.4	29.9	0.0	3.7
GROUP II MATURITY							
COKER 18(SX)	64.9	26.0	17300	7.7	43.5	0.0	3.5
COKER 22(3X)	71.9	26.9	17700	5.8	32.4	0.0	3.7
ACCO UC9451(SX)	79.9	26.4	17500	17.2	10.2	0.0	3.3
ACCO U395(3X)	80.9	26.2	18800	7.8	27.4	1.0	3.7
ACCO U390(3X)	95.1	25.5	17600	11.5	29.9	0.0	3.7
ASGROW RX92(SX)**	75.7	23.4	15300	21.2	28.2	0.0	3.7
ASGROW RX90(SX)	74.6	24.8	18900	20.8	23.5	0.0	4.0
BURRUS BX25(SX)	81.0	26.0	15800	4.6	27.0	0.0	3.5
BURRUS BX35(SX)	82.9	24.3	17000	37.9	38.8	0.0	3.5
HO-JAC X-93(SPX)**	86.7	24.6	17100	2.0	34.0	0.0	3.8
HO-JAC X-69(SX)	76.7	24.7	18800	22.1	31.4	0.0	3.7
HO-JAC X566(SPX)	98.8	24.6	16800	20.3	14.1	0.0	3.5
HO-JAC X622A(SPX)	69.0	24.6	18200	3.9	46.6	0.0	3.5
CARGILL 979(SX)**	79.3	27.0	18900	2.5	41.7	0.0	3.5
CARGILL 949(SX)	88.9	24.5	17800	16.0	35.1	0.0	3.7
CARGILL 920(SX)	86.4	20.7	17700	6.6	33.1	0.0	3.2
COOP 2318(SX)	90.5	25.8	17400	4.7	31.0	0.0	3.5
COOP 2300(SX)	75.4	23.9	13600	39.1	10.4	0.0	3.7
DEKALB XL81(SX)**	87.8	25.7	15900	8.9	16.5	0.0	3.5
DEKALB XL372(SX)**	88.2	24.2	18300	7.8	24.9	0.5	3.5
USS AG CHEM 1010(SX)	88.3	23.9	18400	13.0	29.2	0.0	3.7
USS AG CHEM 1515(SX)	83.3	27.1	18200	7.1	28.3	0.0	3.5
RING A. RA1501(SX)	91.9	24.4	16800	21.5	23.4	0.0	3.8
RING A. RA1502(SX)	78.3	24.7	17100	5.9	31.0	0.0	3.8
RING A. RA2501(SPX)	69.9	24.4	19500	2.0	47.7	0.0	3.7
RING A. RA2502(SPX)	87.4	27.2	17700	2.6	24.8	0.0	3.5
RING A. RA3502(3X)	86.1	25.8	17800	11.4	28.9	0.0	3.5
RING A. SX2766(SPX)	82.5	26.4	17700	11.0	32.7	0.0	3.5
FEDERAL FX59(SX)	88.8	26.4	17700	7.3	32.5	0.0	3.3
FUNK G-4628(SX)**	89.9	26.8	18000	3.0	41.8	0.5	3.3
FUNK G-4611(3X)	86.3	23.3	16000	17.2	24.0	0.0	3.5
SUPERCROST 585(SX)**	91.6	26.0	15400	9.1	38.3	0.0	3.5
SUPERCROST 7772(SPX)	66.7	23.5	18100	1.0	38.7	0.0	3.5
SUPERCROST 567(SPX)	89.1	23.1	17400	3.6	52.9	0.0	3.0
SUPERCROST 5440(SX)	92.2	24.7	17800	31.9	18.3	0.0	3.8
SUPERCROST 4350(SPX)	88.6	22.5	18900	7.9	33.5	0.0	3.8
HAPPEL MS-72(SX)	87.9	25.2	17700	7.5	35.3	0.6	3.5
HAPPEL H-37(SPX)	81.4	32.7	15900	4.1	42.2	0.6	3.2
HAPPEL 3361-A(3X)	81.8	24.1	17300	19.7	19.7	0.0	3.7
HOBLIT XR451(SX)	98.7	26.2	18100	4.5	53.8	0.0	3.5
IOWA-MO SX18(SX)	95.8	25.6	17100	2.3	30.4	0.0	3.2
IOWA-MO SX37(SX)	75.8	23.1	16500	1.7	55.1	0.0	3.3
IOWA-MO SX30(SX)	83.6	22.6	18600	2.5	61.3	0.0	3.5
IOWA-MO SX19(SX)	86.6	24.2	17900	13.4	43.3	0.0	3.7
IOWA-MO SPX425(SPX)	81.2	23.5	19100	8.5	39.6	1.0	3.3
IOWA-MO SX119(SX)	89.4	22.7	16200	9.8	62.0	0.0	3.5
IOWA-MO SX118(SX)	78.1	24.6	16400	11.2	43.4	0.0	3.8
LYNKS LX4510(SX)	84.6	25.3	17000	3.7	38.9	0.0	3.2
LYNKS LX4370(SX)	81.5	23.8	17700	62.1	21.5	0.0	3.8
LYNKS LX4330(SX)	88.9	23.7	17600	15.9	25.9	0.0	3.5
LEWIS X78B(SX)	84.0	26.8	16800	2.8	36.4	0.0	3.5
LEWIS X62B(SX)	87.6	25.9	18600	9.8	31.3	0.0	4.0
LEWIS X15B(SX)	70.2	22.5	16300	5.6	43.4	0.0	3.8

TABLE 9. (CONTINUED).

BRAND--HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	PLANTS PFR ACRE (#)	LODGED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
				ROOT (%)	STALK (%)		
GROUP II MATURITY							
LEWIS X248(SX)	83.4	25.9	17600	4.7	58.6	0.0	3.3
LEWIS X338(SX)	67.8	22.6	18800	1.0	44.1	0.0	3.5
LEWIS X73P(SX)	83.8	24.6	18100	10.4	20.5	0.0	3.5
LEWIS X79B(SX)	84.9	22.7	18400	4.7	26.1	0.0	3.3
M-F-A V12(SX)**	75.9	24.2	16500	25.3	20.8	0.6	3.5
M-F-A V16(SX)**	99.8	26.9	17900	7.0	35.4	0.0	3.3
M-F-A 3030(DX)	76.7	26.5	16200	11.1	20.2	0.0	3.5
M-F-A 6041(SPX)**	76.2	23.7	17300	3.7	46.3	0.0	3.3
M-F-A 5802(SX)	80.2	25.6	19200	47.3	10.5	0.0	3.8
AMERICANA 6700(SX)	87.0	25.2	18800	7.6	34.3	0.0	3.5
AMERICANA 4400(SPX)	89.9	23.6	18600	4.0	60.7	0.0	3.2
AMERICANA 3200(SX)	103.7	24.1	18200	13.6	36.4	0.0	3.7
MCALLSTR 5X6837(SX)	86.8	26.8	17500	7.7	33.3	0.0	3.5
MCALLSTR 5X7207(SX)	92.4	23.5	18100	4.3	55.0	0.0	3.7
MCALLSTR 5X7300(SX)	90.4	24.8	17900	23.3	23.5	0.6	3.7
MCCURDY MSX70(SX)	83.0	24.2	16900	10.0	42.3	0.0	3.8
MCCURDY MSX84(SX)	95.9	24.8	15900	46.4	15.4	0.0	4.0
MCCURDY MSX68(SX)	85.4	23.5	19000	6.1	42.9	0.0	3.3
NK PX74(SX)	72.3	21.6	14900	24.9	25.3	0.0	3.7
NK PX76(SX)	75.2	22.6	17100	3.4	66.1	0.0	3.3
NK PX675(3X)	80.1	24.2	17700	41.1	19.1	0.0	3.8
O*SGOLD 5X5500(SX)**	84.3	25.9	17700	7.7	23.1	0.0	3.3
O*SGOLD 5X5500A(SX)**	85.4	24.5	17800	36.5	11.7	0.0	3.7
O*SGOLD 5X3400(SX)	70.4	23.4	18800	3.7	43.5	0.0	3.5
P-A-G 5X98(SX)**	90.6	26.6	18400	1.3	30.1	0.0	3.8
P-A-G 7545(3X)	73.4	25.8	19000	5.8	33.0	0.0	3.5
PIONEER 3369A(SX)**	84.1	24.3	16700	1.0	38.4	0.0	3.5
PIONEER 3388(SX)**	81.4	22.3	14400	12.6	20.6	0.0	3.5
PIONEER 3219(DX)**	77.6	25.4	18500	2.0	31.3	0.0	3.3
PIONEER 3517(SX)	81.3	21.1	17700	2.6	23.8	0.0	3.2
PIONEER 3529(SX)	78.3	21.1	17700	2.0	37.5	0.0	3.2
PIONEER 3184(SX)	82.5	25.4	18100	8.4	26.2	0.0	3.7
PIONEER 3325A(SX)	80.8	24.4	18000	4.7	57.4	0.0	3.5
PIONEER 3541(SX)	87.1	20.2	17300	1.1	32.6	0.0	3.2
PIONEER 3193(SX)	89.1	26.5	14100	5.9	19.3	0.0	3.5
SECURITY 55112(SX)	90.7	24.6	17100	32.5	21.6	0.0	3.8
SECURITY 55112A(SPX)	67.0	22.7	18100	12.7	47.3	0.0	3.5
SECURITY 55118(SX)	77.0	26.5	13900	10.0	17.8	0.0	3.5
THOR-O-BRED 5X650(SX)	89.7	26.7	16500	2.6	43.6	0.0	3.3
THOR-O-BRED TX635(3X)	75.7	26.1	18600	5.5	25.4	0.0	3.5
TROJAN TX5119(SX)**	85.4	26.6	17800	4.7	32.5	0.0	3.2
TROJAN TX5113(SX)	79.2	22.8	18900	3.4	52.7	0.5	3.3
TROJAN TX119A(3X)**	71.0	25.8	18000	5.1	49.4	0.0	3.2
TROJAN TX5115A(SX)	86.9	23.3	17200	26.5	35.2	0.6	3.7
TROJAN TX5117A(SX)	85.9	26.3	19000	5.8	46.7	0.0	3.3
WILSTAR 7774(SX)	87.4	26.9	15800	4.7	41.8	0.0	3.5
WILSTAR 6668(SX)	83.1	23.7	17400	26.1	28.8	0.0	3.8
US-13(DX)	59.3	22.8	17700	6.8	46.6	0.0	3.5
WALTHER W239(DX)	69.1	22.7	18200	5.5	76.2	0.0	3.5
GROUP III MATURITY							
RING A. RA2672(SPX)*	57.2	28.5	16800	38.6	3.8	0.0	4.3
MCCURDY MSX88(SX)	87.4	25.1	18100	4.5	43.7	0.0	3.3
AVERAGE	83.2	24.3	17523	11.8	35.7	0.1	3.5

LSD AT 5% LEVEL IS 13.8 BU. HYBRIDS DIFFERING BY MORE THAN THIS VALUE MAY BE EXPECTED TO DIFFER SIGNIFICANTLY IN YIELD 19 OF 20 TIMES GROWN.

LSD AT 20% LEVEL IS 8.8 BU. HYBRIDS DIFFERING BY MORE THAN THIS VALUE MAY BE EXPECTED TO DIFFER SIGNIFICANTLY IN YIELD 16 OF 20 TIMES GROWN.

\*\*WHITE HYBRID

\*\*WIDELY GROWN HYBRIDS.

TABLE 10. PERFORMANCE RECORD OF HYBRIDS EVALUATED NEAR EDINA, MISSOURI (KNXCCOUNTY) DURING THE 2-YEAR PERIOD 1975-76 AND THE 3-YEAR PERIOD 1973, 1975-76. NOTE: PLOTS WERE ABANDONED IN 1974 DUE TO POOR STAND.

BRAND--HYBRID	2-YEAR AVFRAGE					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										
M-F-A 5001(SX)	83.4	12.2	15.7	0.0	3.7	-	-	-	-	-
SUPERCROST 4242(SPX)	78.7	0.5	32.8	0.0	3.4	-	-	-	-	-
FUNK G-4503(SX)	87.1	1.7	32.1	1.0	3.3	-	-	-	-	-
FUNK G-4507(SX)	81.3	14.4	12.9	0.9	3.4	-	-	-	-	-
FEDERAL FX34(SX)	74.6	3.2	27.9	0.6	3.1	-	-	-	-	-
BO-JAC X56(SX)	84.4	18.1	15.5	0.0	3.6	-	-	-	-	-
BURRUS BX20(SX)	88.1	19.0	10.7	0.0	3.8	-	-	-	-	-
ACCO UC6601(SX)	82.5	2.8	35.0	0.0	3.6	-	-	-	-	-
GROUP 2 MATURITY										
WALTHER W239(DX)	72.8	2.8	43.8	0.8	3.4	-	-	-	-	-
US-13(DX)	57.4	3.7	29.7	0.2	3.5	76.0	2.4	25.8	1.4	3.8
TRCJAN TXS115A(SX)	81.4	13.3	18.7	0.8	3.7	-	-	-	-	-
TROJAN TXS113(SX)	79.8	1.7	27.3	0.3	3.2	102.5	1.1	19.6	1.2	3.5
TROJAN TXS119(SX)**	82.1	2.3	19.6	0.0	3.4	97.5	1.6	15.2	1.4	3.7
PIONEER 3184(SX)	83.9	4.2	13.8	0.3	3.8	-	-	-	-	-
PIONEER 3529(SX)	72.8	1.0	19.6	0.0	3.0	-	-	-	-	-
PIONEER 3517(SX)	76.1	1.3	12.9	0.0	3.1	95.3	0.9	9.8	0.6	3.4
PIONEER 3219(DX)**	78.2	1.0	18.2	0.0	3.3	98.4	0.7	14.2	0.6	3.7
PIONEER 3388(SX)**	81.3	6.3	10.3	0.0	3.3	101.5	4.2	8.8	0.4	3.4
P-A-G SX98(SX)**	86.4	0.7	17.4	0.0	3.6	100.8	0.4	13.9	0.6	3.8
O*SGOLD SX5500A(SX)**	82.6	18.2	6.6	0.0	3.6	-	-	-	-	-
O*SGOLD SX5500(SX)**	80.3	3.9	12.4	0.0	3.4	98.9	2.6	10.1	2.5	3.6
NK PX675(3X)	72.9	20.6	11.3	0.0	3.6	-	-	-	-	-
NK PX76(SX)	77.1	1.7	34.6	0.0	3.3	-	-	-	-	-
NK PX74(SX)	76.9	12.4	13.6	0.0	3.5	-	-	-	-	-
MCCURDY MSX68(SX)	84.6	3.1	21.7	0.0	3.3	-	-	-	-	-
MCCURDY MSX84(SX)	90.3	23.2	9.4	1.0	3.8	-	-	-	-	-
MCCURDY MSX70(SX)	76.8	5.0	22.9	0.0	3.6	-	-	-	-	-
MCALLSTR SX7300(SX)	87.7	11.6	12.2	0.3	3.6	-	-	-	-	-
MCALLSTR SX7207(SX)	84.3	2.1	28.8	0.0	3.3	106.1	1.4	19.9	0.9	3.6
MCALLSTR SX6837(SX)	84.6	3.8	19.1	0.2	3.4	109.4	2.6	14.4	0.5	3.7
AMERICANA 3200(SX)	93.0	7.1	19.7	0.3	3.7	-	-	-	-	-
AMERICANA 4400(SPX)	83.8	2.0	30.6	0.0	3.3	-	-	-	-	-
AMERICANA 6700(SX)	80.2	3.8	18.0	0.0	3.5	96.8	2.5	14.0	0.4	3.7
M-F-A 6041(SPX)**	79.0	2.1	24.2	0.3	3.3	-	-	-	-	-
M-F-A 3030(DX)	77.1	5.8	12.1	0.3	3.4	91.5	3.9	10.1	1.6	3.7
M-F-A V16(SX)**	94.4	3.5	22.2	0.3	3.4	109.2	2.3	17.3	0.9	3.6
M-F-A V12(SX)**	73.0	12.7	11.3	0.9	3.5	88.1	8.4	10.6	1.3	3.8
LEWIS X628(SX)	86.1	4.9	16.8	0.2	3.9	104.7	3.3	11.8	1.3	4.1
LEWIS X78B(SX)	81.8	1.4	22.8	0.2	3.6	100.0	0.9	17.1	1.4	3.8
IOWA-MO SX118(SX)	76.7	5.6	22.4	0.0	3.7	-	-	-	-	-
IOWA-MO SX119(SX)	80.6	4.9	31.7	0.2	3.3	-	-	-	-	-
IOWA-MO SPX425(SPX)	79.9	4.3	23.4	1.0	3.3	-	-	-	-	-
IOWA-MO SX19(SX)	84.1	6.9	22.6	0.0	3.6	-	-	-	-	-
IOWA-MO SX37(SX)	76.3	1.1	28.9	0.0	3.2	96.1	0.7	20.9	0.2	3.6
HAPPEL H-37(SPX)	73.1	2.1	22.6	0.3	3.3	88.3	1.4	17.1	1.1	3.6
HAPPEL MS-72(SX)	84.1	3.7	21.7	0.3	3.5	99.2	2.5	17.0	2.9	3.7
SUPERCROST 5440(SX)	88.9	15.9	9.5	0.4	3.5	-	-	-	-	-
SUPERCROST 7772(SPX)	70.3	0.5	22.0	0.0	3.4	-	-	-	-	-
SUPERCROST S85(SX)**	80.6	4.6	21.7	0.8	3.6	98.9	3.0	15.3	1.4	3.7
FUNK G-4628(SX)**	87.8	1.5	23.1	0.5	3.3	100.7	1.0	17.5	2.7	3.6
FEDERAL FX59(SX)	81.9	3.6	20.3	0.3	3.5	-	-	-	-	-
DEKALB XL81(SX)**	82.6	4.5	11.1	0.0	3.3	94.2	3.0	8.9	1.7	3.6
CARGILL 920(SX)	88.5	3.3	20.2	0.0	3.0	-	-	-	-	-
CARGILL 949(SX)	82.2	8.0	18.1	0.5	3.6	-	-	-	-	-
CARGILL 979(SX)**	79.8	1.2	23.0	0.3	3.3	97.0	0.8	18.1	0.5	3.6
BURRUS BX25(SX)	84.1	2.5	16.5	0.2	3.5	-	-	-	-	-
ASGROW RX90(SX)	72.6	10.4	12.5	0.5	3.8	-	-	-	-	-
ACCC U395(3X)	82.9	4.2	16.7	1.4	3.5	-	-	-	-	-
ACCC UC9451(SX)	82.8	10.0	7.9	0.5	3.4	-	-	-	-	-
GROUP 3 MATURITY										
AVERAGE	81.0	6.1	20.0	0.3	3.5	97.9	2.2	15.1	1.2	3.7

\*WHITE HYBRID.

\*\*WIDELY GROWN HYBRID



TABLE 11. SUMMARY PERFORMANCE RECORD OF CORN HYBRIDS GROWN AT THREE NORTH MISSOURI LOCATIONS (ATCHISON, GRUNDY, AND KNOX COUNTIES) IN 1976.

BRAND--HYBRID	ACRE YIELD (BU)	LODGED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
		ROOT (%)	STALK (%)		
GROUP 1 MATURITY ( 3-LOCATION AVERAGE )					
ACCO UC6601(SX)	88.7	1.9	23.6	0.2	3.0
BO-JAC X35(SPX)	95.3	6.7	15.5	0.2	3.1
BO-JAC X56(SX)	106.0	12.1	9.8	0.0	3.7
BO-JAC X28(SX)	87.7	1.4	32.0	0.0	3.1
BO-JAC X27(SX)	72.6	0.5	23.8	0.2	2.6
BO-JAC X337(SPX)	91.1	9.9	12.4	0.0	3.4
USS AG CHEM 0555(3X)	91.9	4.5	10.2	0.2	3.6
USS AG CHEM0555A(3X)	95.1	2.1	15.0	0.2	3.5
FUNK G-4507(SX)	93.8	9.6	8.6	0.0	3.5
FUNK G-4503(SX)	98.9	2.2	21.4	0.0	3.4
FUNK G-4520(SX)	87.3	0.8	17.3	0.0	3.5
FUNK EXP27130(3X)	99.1	1.5	19.9	0.0	3.3
SUPERCROST 4242(SPX)	95.9	0.3	24.4	0.0	3.5
M-F-A 5001(SX)	95.2	8.1	10.7	0.3	3.7
GROUP 2 MATURITY ( 3-LOCATION AVERAGE )					
ACCO U390(3X)	96.1	6.8	10.8	0.0	3.7
ASGROW RX92(SX)**	87.2	7.3	9.6	0.0	3.4
BO-JAC X-83(SPX)**	95.3	0.7	12.2	0.0	3.6
CARGILL 979(SX)**	93.8	0.8	14.8	0.0	3.3
CARGILL 949(SX)	103.3	5.3	12.9	0.0	3.6
CARGILL 920(SX)	100.0	2.2	11.9	0.0	3.2
COOP 2318(SX)	95.2	1.6	10.5	0.0	3.4
COOP 2300(SX)	88.8	15.7	3.5	0.3	3.5
DEKALB XL81(SX)**	93.5	4.6	7.5	0.0	3.3
DEKALB XL372(SX)**	94.0	2.6	8.5	0.2	3.4
USS AG CHEM 1010(SX)	101.3	5.9	9.9	0.0	3.6
USS AG CHEM 1515(SX)	89.4	2.4	9.6	0.0	3.2
RING A. RA1501(SX)	100.5	7.2	8.5	0.3	3.8
RING A. RA2502(SPX)	82.8	1.0	9.1	0.0	3.2
FUNK G-4628(SX)**	97.1	1.0	14.7	0.2	3.1
FUNK G-4611(3X)	91.1	8.0	8.7	0.2	3.5
SUPERCROST S85(SX)**	92.7	3.0	13.1	0.0	3.3
SUPERCROST 5440(SX)	97.0	10.6	6.3	0.0	3.7
SUPERCROST 4350(SPX)	101.8	3.8	12.4	0.0	3.6
HAPPEL MS-72(SX)	90.8	2.5	12.1	0.2	3.5
HAPPEL H-37(SPX)	85.0	1.4	15.6	0.2	3.2
HAPPEL 3361-A(3X)	93.7	6.6	7.0	0.0	3.6
LEWIS X78B(SX)	90.9	0.9	13.3	0.0	3.4
LEWIS X62B(SX)	101.6	3.3	12.2	0.2	3.9
LEWIS X15B(SX)	84.4	2.1	16.3	0.0	3.9
LEWIS X24B(SX)	92.1	1.6	20.8	0.0	3.3
LEWIS X33B(SX)	82.4	0.6	15.7	0.0	3.4
LEWIS X73B(SX)	96.6	3.6	8.6	0.0	3.6
M-F-A V12(SX)**	82.3	8.7	8.3	0.2	3.3
M-F-A V16(SX)**	98.3	2.6	12.7	0.0	3.2
M-F-A 6041(SPX)**	85.6	3.3	17.2	0.0	3.2
M-F-A 5802(SX)	100.9	16.3	4.1	0.0	3.9
MCALLSTP SX6837(SX)	86.9	2.6	12.7	0.0	3.4
MCCURDY MSX84(SX)	108.2	16.0	5.4	0.0	3.7
NK PX74(SX)	88.9	8.3	8.6	0.0	3.6
NK PX76(SX)	89.3	1.1	24.0	0.0	3.1
NK PX675(3X)	93.8	13.7	6.4	0.2	3.8

TABLE 11. (CONTINUED).

BRAND--HYBRID	ACRE YIELD (BU)	LODGED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
		ROOT (%)	STALK (%)		
O'SGOLD SX5500(SX)**	93.6	2.6	8.2	0.0	3.3
O'SGOLDSX5500A(SX)**	97.1	12.2	4.2	0.0	3.6
O'SGOLD SX3400(SX)	85.9	1.2	15.2	0.2	3.4
P-A-G SX98(SX)**	102.7	0.4	10.7	0.0	3.6
P-A-G 7545(3X)	88.0	1.9	12.9	0.0	3.4
PIONEER 3369A(SX)**	93.5	0.3	15.4	0.0	3.3
PIONEER 3388(SX)**	89.8	4.4	7.9	0.0	3.3
PIONEER 3219(DX)**	86.2	0.7	13.2	0.0	3.3
PIONEER 3517(SX)	74.9	1.1	8.8	0.0	2.8
PIONEER 3529(SX)	79.9	0.7	13.2	0.0	3.0
PIONEER 3184(SX)	97.9	2.8	8.9	0.0	3.6
PIONEER 3325A(SX)	90.9	1.6	20.0	0.0	3.2
PIONEER 3541(SX)	90.2	0.4	12.7	0.0	2.9
PIONEER 3183(SX)	99.1	4.5	7.3	0.0	3.7
SECURITY SS112A(SPX)	96.1	4.7	17.5	0.0	3.5
SECURITY SS118(SX)	80.1	3.3	6.4	0.0	3.4
TROJAN TXS119(SX)**	94.2	1.6	11.1	0.4	3.3
TROJAN TXS113(SX)	86.5	2.7	18.7	0.4	3.0
TROJAN TX119A(3X)**	84.2	1.7	16.7	0.4	3.3
TROJAN TXS115A(SX)	102.4	9.0	12.0	0.2	3.6
TROJAN TXS117A(SX)	98.4	2.5	17.2	0.0	3.4
WILSTAR 7774(SX)	84.7	1.8	14.5	0.3	3.4
US-13(DX)	67.8	2.3	19.7	0.0	3.7
WALTHER W239(DX)	80.9	1.8	28.5	0.0	3.3
GROUP 3 MATURITY ( 3-LOCATION AVERAGE )					
MCCURDY MSX88(SX)	97.2	1.5	16.0	0.2	3.3
MEAN	92.0	4.1	13.1	0.1	3.4

\*WHITE HYBRID.

#### DISTRICT 4

Data for District 4 are presented in Tables 12 and 13. A summary of cultural practices is presented in Table 4.

This site was characterized by below normal rainfall throughout the growing season (Table 2). However, the effect was alleviated to a degree by temperatures which were below normal.

The average yield from a harvest stand of 17,700 plants was 81 bushels per acre, down 7 bushels from the 1975 average yield. However, it was still 65 bushels below the average acre yield of 1973. The average stand loss was 16% or 1% greater than was allowed for at planting time. Individual hybrid stands ranged from 14,900 to 20,400 plants per acre (29% and 3% losses, respectively). This extensive loss by some hybrids indicates considerable differences existed in seed quality and seedling vigor among hybrids evaluated in 1976.

Stalk lodging, ranged from 0% to 23% for individual hybrids. The average for all hybrids was only 2.6%, indicating that lodging was not important for most hybrids. Root lodging was not important in 1976. These data emphasize the wide differences that exist among today's corn hybrids.

Weeds were not a significant factor in determining 1976 yields.

For more reliable results, hybrids that have proven their potential over a two or three-year period should be considered. Such information is found in Tables 13 and 16.

TABLE 12. PERFORMANCE RECORD OF HYBRIDS EVALUATED ON THE LYNN DYER FARM NEAR HIGGINSVILLE, MISSOURI (LAFAYETTE COUNTY). PLANTED APRIL 14, 1976. HARVESTED SEPTEMBER 23, 1976.

BRAND--HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	PLANTS PER ACRE (#)	LODGED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
				ROOT (%)	STALK (%)		
GROUP I MATURITY							
ACCO U385(3X)	74.0	14.7	18600	0.0	6.8	0.0	3.3
BURRUS BX27(SX)	92.5	15.5	20100	1.9	1.4	0.0	3.5
HO-JAC X56(SX)	84.4	16.0	20400	6.6	0.5	0.0	3.5
RO-JAC X337(SPX)	90.5	14.7	19200	0.0	0.5	0.0	3.8
USS AG CHEM 0555(3X)	99.4	15.5	17200	0.0	1.1	0.0	3.5
FUNK G-4507(SX)	96.0	15.7	16900	2.8	1.2	0.0	3.5
FUNK G-4503(SX)	78.8	15.1	18100	0.0	0.6	0.0	3.3
FUNK G-4520(SX)	65.3	15.5	16900	8.9	1.6	0.0	3.3
FUNK EXP27130(3X)	78.7	15.6	18300	0.5	1.3	0.0	3.3
FUNK EXP22352(SX)*	43.8	20.3	19400	0.0	0.4	0.0	3.8
FRONTIER SX-233(SX)	78.3	15.7	20300	2.1	0.0	0.0	3.5
SUPERCROST 4242(SPX)	87.0	14.6	17000	3.1	2.3	0.0	3.5
M-F-A 5001(SX)	96.8	14.7	16700	0.6	1.2	0.0	3.7
MCALLSTR SX7408(SX)	82.4	15.2	17500	0.0	0.0	0.0	3.8
TAYLR-EV TE6992(SX)	84.3	15.8	17700	5.7	4.1	0.0	3.3
TAYLR-EV TE6995(SX)	84.3	15.8	17600	2.6	1.3	0.0	3.5
GROUP II MATURITY							
ACCO X48951(SX)	93.8	17.3	16800	0.0	2.3	0.0	4.0
ACCO U395(3X)	89.8	17.1	17100	1.1	13.0	0.0	3.3
ASGROW RX101(SPX)	62.5	17.8	16500	1.1	4.0	0.0	3.3
BURRUS BX25(SX)	77.4	16.5	18200	0.0	1.6	0.0	3.5
BURRUS BX35(SX)	80.5	15.1	20700	0.0	1.3	0.0	3.7
HO-JAC X-83(SPX)**	81.6	17.4	17300	2.6	2.1	0.0	3.7
HO-JAC X-69(SX)	77.6	15.2	19500	0.0	0.5	0.0	3.7
RO-JAC X566(SPX)	78.2	15.7	16900	3.7	1.6	0.0	3.3
CARGILL 979(SX)**	100.2	17.0	18300	0.0	0.0	0.0	3.3
CARGILL 949(SX)	90.6	14.7	17700	0.0	2.3	0.0	3.7
CARGILL 920(SX)	96.4	14.4	16900	4.9	2.8	0.0	3.2
COMP 2318(SX)	77.9	16.4	19900	0.0	1.5	0.0	3.3
COMP 2300(SX)	99.1	15.1	16600	0.0	0.0	0.0	3.7
DEKALB XL81(SX)**	92.3	17.3	17600	0.0	4.8	0.0	3.0
DEKALB XL372(SX)**	85.2	15.3	19900	0.0	0.4	0.0	3.3
DEKALB XL72B(SX)	89.4	16.5	17200	3.8	0.0	0.0	3.2
USS AG CHEM 1010(SX)	88.9	15.1	18900	0.0	1.0	0.0	3.3
USS AG CHEM 1515(SX)	84.7	17.1	17700	0.0	1.1	0.0	3.5
GLDNHRVSTH2450(SX)**	80.4	14.9	17200	0.0	0.6	0.0	3.5
RING A. RA1501(SX)	87.9	15.1	19900	2.2	1.5	0.0	3.5
RING A. RA2502(SPX)	85.8	16.5	19200	0.0	0.6	0.0	3.3
FUNK G-4628(SX)**	77.8	16.6	16500	0.0	0.6	0.0	3.2
FUNK G-4611(3X)	90.9	16.0	18500	0.0	0.5	0.0	3.3
FUNK G-4776(3X)	62.1	18.3	17200	2.8	9.2	0.0	4.2
FRONTIER SX-244(SX)	78.5	15.0	15900	0.6	4.7	0.0	3.5
SUPERCROST 585(SX)**	70.5	16.3	16900	0.0	3.8	0.0	3.5
SUPERCROST 5444(SX)	88.8	15.6	17600	0.0	0.6	0.0	3.5
SUPERCROST 4350(SPX)	88.3	15.0	18100	4.2	6.5	0.0	3.5
HAPPEL MS-72(SX)	80.2	16.0	18100	0.0	1.4	0.0	3.8
HAPPEL H-37(SPX)	80.9	15.6	16000	0.0	0.0	0.0	3.0
HAPPEL 3361-A(3X)	74.4	15.4	18900	3.9	1.0	0.0	3.5
LEWIS X788(SX)	89.3	15.3	16900	0.0	1.1	0.0	3.3
LEWIS X628(SX)	82.1	15.8	19900	0.0	1.2	0.0	4.2
LEWIS X843(SX)	91.4	16.9	17500	1.5	5.1	0.0	3.3
LEWIS X159(SX)	85.3	14.8	17000	0.5	1.4	0.0	4.0
LEWIS X248(SX)	83.9	15.9	17700	0.5	7.5	0.0	3.5
LEWIS X338(SX)	86.2	14.6	18700	0.0	1.0	0.0	3.3
LEWIS X738(SX)	85.6	15.5	17700	4.3	1.1	0.0	3.5
LEWIS X798(SX)	79.4	14.4	19300	2.3	0.0	0.0	3.0
LEWIS X718(SX)	97.4	16.6	18000	0.0	2.5	0.0	3.5
M-F-A V12(SX)**	70.1	15.0	17200	0.0	1.1	0.0	3.5
M-F-A V16(SX)**	74.0	16.3	16900	0.0	2.0	0.0	3.2
M-F-A 3030(DX)	88.1	17.6	16200	0.0	1.8	0.0	3.5
M-F-A 6041(SPX)**	96.1	15.3	18200	0.5	1.4	0.0	3.0
M-F-A 6061(3X)	84.2	15.2	18600	0.0	0.4	0.0	3.5
M-F-A 5802(SX)	96.3	16.0	16900	0.0	0.0	0.0	4.0
MUNCY-CHEF H764(DX)	77.6	15.6	18000	6.8	3.1	0.0	3.5
MUNCY-CHEF SX662(SX)	70.4	15.9	16900	7.2	3.2	0.0	2.7
MCALLSTR SX6837(SX)	79.4	16.7	15600	0.0	3.7	0.0	3.2
MCCURDY MSX85(SX)	63.6	14.9	17400	0.5	2.6	0.0	3.5
MCCURDY MSP888(3X)	84.1	15.6	17400	0.0	3.2	0.0	3.2
MCCURDY MSX70(SX)	90.4	15.5	17700	2.2	0.0	0.0	3.5
MCCURDY MSX84(SX)	91.9	15.5	16900	0.0	3.3	0.0	3.7
NC+85(SX)	80.6	16.9	17700	0.0	2.1	0.0	3.2

TABLE 12. (CONTINUED).

BRAND--HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	PLANTS PER ACRE (#)	LODGED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
				ROOT (%)	STALK (%)		
GROUP II MATURITY							
NC+59(SX)	103.8	15.2	17100	4.3	0.6	0.0	3.7
NC+76(3X)	81.7	15.8	17400	1.1	3.8	0.0	3.5
NK PX74(SX)	84.9	15.6	15000	1.2	0.7	0.0	3.5
NK PX76(SX)	86.3	15.3	17700	0.0	1.0	0.0	3.2
NK PX675(3X)	90.0	15.5	17900	0.5	0.0	0.0	3.7
O*SGOLD SX5500(SX)**	68.9	16.4	19000	0.0	1.5	0.0	3.2
O*SGOLD SX5500A(SX)**	97.3	15.5	18100	3.0	1.1	0.0	3.7
O*SGOLD SX3400(SX)	65.0	15.0	19500	1.1	1.0	0.0	3.3
P-A-G SX98(SX)**	78.8	17.0	18800	0.0	1.4	0.0	3.3
P-A-G 7545(3X)	79.0	16.8	18200	1.6	2.0	0.0	3.5
PIONEER 3359A(SX)**	77.8	15.4	17300	0.0	2.6	0.6	3.5
PIONEER 3388(SX)**	73.5	15.9	15800	0.0	0.5	0.0	3.5
PIONEER 3219(DX)**	72.3	15.9	19000	0.0	4.9	0.0	3.0
PIONEER 3517(SX)	82.7	14.4	16100	4.3	0.0	0.0	3.0
PIONEER 3529(SX)	84.7	13.9	18900	0.0	0.0	0.0	2.7
PIONEER 3184(SX)	99.6	16.6	17700	0.0	1.0	0.0	3.5
PIONEER 3325A(SX)	75.3	15.7	17100	0.0	2.8	0.0	3.3
PIONEER 3541(SX)	85.4	14.3	16200	0.6	1.2	0.0	3.0
PIONEER 318J(SX)	92.8	15.6	17400	0.0	1.1	0.0	3.7
POIPOT 6H(DX)	56.9	17.6	16100	1.0	20.9	0.0	3.8
SECURITY SS112A(SPX)	83.4	15.2	19000	3.5	3.7	0.0	3.5
SECURITY SS118(SX)	77.4	16.2	14900	0.0	3.1	0.0	3.3
TAYLR-EV TE6968(SX)	79.3	15.7	16500	0.0	1.6	0.0	3.0
TAYLR-FV TE6980(SX)	83.1	17.0	17300	0.5	2.6	0.0	3.5
TROJAN TX5119(SX)**	81.4	16.9	16500	0.0	3.7	0.0	3.5
TROJAN TX5113(SX)	88.0	15.3	17800	0.0	2.1	0.0	3.2
TROJAN TX119A(3X)**	77.6	16.0	18100	0.0	1.9	0.5	3.3
TROJAN TX5115A(SX)	80.9	15.2	16600	2.5	0.0	0.0	3.6
TROJAN TX5117A(SX)	89.6	15.6	18000	0.0	1.0	0.0	3.5
WEATHR M. EPX12(DX)	79.4	17.5	17000	0.6	0.5	0.0	3.3
WEATHR M. EPX12A(DX)	80.2	15.8	17700	0.0	0.0	0.0	3.2
WEATHR M. EXPRE8(DX)	84.7	16.4	17400	3.1	1.1	0.0	3.8
WEATHR M. EPXB888(DX)	82.1	15.5	18000	1.0	1.0	0.5	3.7
WEATHR M. SX97A(DX)	75.8	16.0	18800	0.0	10.1	0.0	3.3
(R73XMD17)(SX)	90.4	15.1	19000	1.0	1.9	0.0	3.5
WILSTAR 6563(SX)	82.7	15.5	16300	0.0	1.8	0.0	3.7
WILSTAR 7770(SX)	93.2	16.0	15300	0.6	4.7	0.0	3.2
WILSTAR 7774(SX)	73.8	17.4	16500	0.0	1.1	0.0	3.3
WILSTAR 6668(SX)	69.0	14.9	17500	0.0	0.5	0.0	3.5
US-13(DX)	60.6	15.0	18800	0.0	10.9	0.0	3.8
WALTHER W271(DX)	64.0	14.9	17200	0.6	2.1	0.0	3.2
WALTHER W90(DX)	63.7	14.7	17300	0.6	10.3	0.5	3.2
WALTHER W239(DX)	75.7	15.3	17000	2.2	7.2	0.0	3.5
GROUP III MATURITY							
RING A. RA2601(SPX)	57.5	22.1	16500	0.5	8.2	0.0	3.5
RING A. RA3502(3X)	53.5	19.1	17600	0.0	3.6	0.0	3.7
RING A. RA2602(SPX)*	68.6	22.0	15700	0.6	1.8	0.0	4.2
FUNK G-4747(SPX)*	57.4	21.9	20000	1.4	1.4	0.0	4.5
FUNK G-4848(SX)	80.1	20.6	19500	0.6	1.5	0.0	3.8
NK PX95(SX)	69.9	17.5	20000	0.0	8.5	0.0	3.8
P-A-G SX70W(SX)**	57.3	21.2	17200	1.0	22.0	0.5	3.8
MCCURDY MSX88(SX)	76.0	16.2	16100	0.6	1.6	0.0	3.2
AVERAGE	81.0	16.1	17665	1.1	2.6	0.0	3.5

LSD AT 5% LEVEL IS 13.7 BU. HYBRIDS DIFFERING BY MORE THAN THIS VALUE MAY BE EXPECTED TO DIFFER SIGNIFICANTLY IN YIELD 19 OF 20 TIMES GROWN.

LSD AT 20% LEVEL IS 8.8 BU. HYBRIDS DIFFERING BY MORE THAN THIS VALUE MAY BE EXPECTED TO DIFFER SIGNIFICANTLY IN YIELD 16 OF 20 TIMES GROWN.

\*WHITE HYBRID

\*\*WIDELY GROWN HYBRIDS.

TABLE 13. PERFORMANCE RECORD FOR HYBRIDS EVALUATED NEAR HIGGINSVILLE, MISSOURI (LAFAYETTE COUNTY) DURING THE 2-YEAR PERIOD 1975-76 AND THE 3-YEAR PERIOD 1973, 1975-76. NOTE: PLOTS ABANDONED IN 1974 DUE TO POOR STAND.

BRAND--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										
M-F-A 5001(SX)	98.3	10.3	16.5	0.0	3.8	-	-	-	-	-
SUPERCROST 4242(SPX)	80.7	2.1	34.2	0.0	3.4	-	-	-	-	-
FUNK G-4503(SX)	83.0	2.6	18.8	0.0	3.5	-	-	-	-	-
FUNK G-4507(SX)	92.2	9.4	11.4	0.0	3.7	-	-	-	-	-
USS AG CHEM 0555(3X)	97.2	1.7	29.9	0.0	3.6	-	-	-	-	-
BO-JAC X56(SX)	95.8	10.5	17.4	0.0	3.4	-	-	-	-	-
BURRUS BX20(SX)	90.8	15.1	13.1	0.0	3.6	-	-	-	-	-
GROUP 2 MATURITY										
WALTHER W239(DX)	82.5	1.1	41.5	0.0	3.7	-	-	-	-	-
WALTHER W80(DX)	70.1	0.5	34.1	0.2	3.3	-	-	-	-	-
WALTHER W271(DX)	76.7	1.3	29.0	0.0	3.1	-	-	-	-	-
US-13(DX)	63.1	0.6	36.1	0.3	3.8	78.7	2.3	40.4	0.8	3.9
(B73XMD17)(SX)	101.6	8.9	17.7	0.0	3.6	-	-	-	-	-
TROJAN TXS117A(SX)	89.1	7.3	20.3	0.3	3.7	-	-	-	-	-
TROJAN TXS115A(SX)	82.0	9.3	18.5	0.0	3.8	-	-	-	-	-
TROJAN TXS113(SX)	91.3	0.8	35.5	0.0	3.3	102.0	1.8	29.3	0.2	3.3
TROJAN TXS119(SX)**	82.0	0.3	32.5	0.0	3.5	99.9	2.6	24.5	0.4	3.6
PIONEER 3184(SX)	104.6	2.9	2.7	0.0	3.5	-	-	-	-	-
PIONEER 3529(SX)	82.1	0.0	11.3	0.0	3.0	-	-	-	-	-
PIONEER 3517(SX)	88.1	2.2	20.3	0.0	3.3	100.5	2.0	14.8	0.0	3.3
PIONEER 3219(DX)**	82.0	0.5	33.0	0.0	3.2	100.0	1.0	28.2	0.4	2.9
PIONEER 3388(SX)**	83.1	4.9	19.9	0.0	3.5	88.9	5.8	16.2	0.2	3.6
P-A-G SX98(SX)**	83.3	0.3	26.7	0.3	3.4	103.2	1.1	20.2	1.3	3.6
O*SGOLD SX5500(SX)**	72.1	0.0	30.0	0.0	3.3	94.1	0.4	21.6	0.2	3.4
NK PX76(SX)	86.3	0.6	38.3	0.0	3.2	-	-	-	-	-
NK PX74(SX)	88.2	6.2	11.2	0.0	3.8	-	-	-	-	-
NC+59(SX)	102.4	8.6	16.5	0.0	3.8	-	-	-	-	-
NC+ES(SX)	80.9	0.0	29.2	0.0	3.4	-	-	-	-	-
MCCURDY MSX84(SX)	101.5	2.9	14.0	0.0	3.8	-	-	-	-	-
MCCURDY MSX70(SX)	88.3	5.2	14.2	0.0	3.6	96.0	5.8	12.2	0.9	3.7
MCCURDY MSP888(3X)	84.6	0.3	22.7	0.0	3.3	102.2	1.7	17.9	0.5	3.4
MCCURDY MSX85(SX)	79.3	4.6	22.5	0.0	3.6	96.5	8.2	17.0	0.2	3.7
MUNCY-CHF SX662(SX)	69.4	4.2	39.2	0.0	2.8	-	-	-	-	-
MUNCY-CHF H764(DX)	74.6	6.1	29.5	0.3	3.4	-	-	-	-	-
M-F-A 6061(3X)	84.3	1.1	25.2	0.0	3.6	-	-	-	-	-
M-F-A 6041(SPX)**	96.3	0.5	38.6	0.0	3.2	-	-	-	-	-
M-F-A 3030(DX)	87.3	0.0	28.3	0.0	3.3	100.0	1.2	24.2	1.4	3.4
M-F-A V16(SX)**	79.8	0.2	27.5	0.0	3.3	99.6	1.2	21.4	1.2	3.6
M-F-A V12(SX)**	69.6	0.3	30.8	0.3	3.3	82.9	0.8	25.0	0.2	3.4
LEWIS X84B(SX)	90.0	0.8	45.6	0.0	3.6	-	-	-	-	-
LEWIS X62B(SX)	95.4	12.5	10.9	0.0	3.8	111.5	8.7	10.1	0.2	3.9
LEWIS X78B(SX)	81.4	0.0	32.2	0.0	3.5	100.8	0.7	24.0	0.8	3.6
HAPPEL H-37(SPX)	80.1	1.7	10.7	0.6	3.3	95.0	1.7	10.5	1.0	3.4
HAPPEL MS-72(SX)	84.3	0.3	30.2	0.0	3.6	100.1	2.3	23.3	0.9	3.7
SUPERCROST 5440(SX)	95.3	11.1	6.4	0.0	3.6	-	-	-	-	-
SUPERCROST 585(SX)**	76.8	0.0	25.5	0.0	3.5	88.4	1.6	19.4	1.0	3.6
FUNK G-4628(SX)**	77.8	0.0	26.8	0.3	3.3	96.3	0.7	20.1	0.9	3.6
GLDNHRVSTH2650(SX)**	84.0	0.6	24.8	0.0	3.3	-	-	-	-	-
USS AG CHEM 1515(SX)	87.9	1.2	21.1	0.0	3.4	-	-	-	-	-
USS AG CHEM 1010(SX)	96.3	16.2	9.0	0.0	3.6	-	-	-	-	-
DEKALB XL81(SX)**	86.9	0.5	29.3	0.0	3.1	96.4	0.7	24.4	0.5	3.3
COOP 2300(SX)	90.9	6.8	8.0	0.0	3.8	-	-	-	-	-
COOP 2318(SX)	83.7	0.3	25.6	0.0	3.3	100.6	0.7	19.2	0.4	3.4
CARGILL 920(SX)	95.4	3.4	17.6	0.0	3.6	-	-	-	-	-
CARGILL 949(SX)	99.2	7.2	14.6	0.0	3.8	-	-	-	-	-
BO-JAC X-69(SX)	89.8	0.0	15.2	0.0	3.8	-	-	-	-	-
BO-JAC X-83(SPX)**	93.2	1.3	7.2	0.0	3.7	106.2	3.2	9.1	2.0	3.7
BURRUS EX25(SX)	77.5	0.5	31.7	0.0	3.3	-	-	-	-	-
ACCO U395(3X)	88.3	3.2	43.5	0.5	3.6	-	-	-	-	-
ACCO X48951(SX)	93.3	3.9	27.9	0.0	4.0	-	-	-	-	-
GROUP 3 MATURITY										
FUNK G-4747(SPX)*	71.4	3.0	17.6	0.0	4.4	-	-	-	-	-
AVERAGE										
	86.1	3.5	23.7	0.1	3.5	97.5	2.4	20.6	0.7	3.5

\*WHITE HYBRID.

\*\*WIDELY GROWN HYBRID

## DISTRICT 5

Data from District 5 are presented in Tables 14 and 15.

The average acre yield of the hybrids evaluated was 43 bushels, down 38 bushels from the 1975 yield. The range was from 11 to 66 bushels. This was 88 bushels below the 1973 record yield. Again, as in 1974 and 1975, the reduced yield was due to a prolonged drought (Table 2). Precipitation during the growing season in central Missouri was an all time recorded low.

Stalk and root lodging were not important in these plots, nor were weeds a problem.

The most reliable results may be obtained from the use of hybrids that have proven their potential over a two or three-year period. Such information is available in Tables 15 and 16.

## SUMMARY OF CENTRAL LOCATIONS

The average performance of hybrids evaluated at the Lynn Dyer farm near Higginsville, Missouri (Lafayette County) and the Agronomy Research Center-Bradford Farm near Columbia, Missouri (Boone County) is presented in Table 16. This table supplies information from two locations, and therefore the inferences drawn from it are more reliable than those drawn from the one-year data in Tables 12 and 14.

TABLE 14. PERFORMANCE RECORD OF HYBRIDS EVALUATED AT THE AGRONOMY RESEARCH CENTER (ARC-BRADFORD FARM) NEAR COLUMBIA, MISSOURI (BOONE COUNTY). PLANTED APRIL 13, 1976. HARVESTED SEPTEMBER 22, 1976.

BRAND--HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	PLANTS PER ACRE (#)	LODGED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
				ROOT (%)	STALK (%)		
GROUP I MATURITY							
ACCO U385(3X)	17.5	25.3	14300	0.0	6.0	0.0	2.7
BO-JAC X56(SX)	52.2	26.8	16800	0.0	0.0	0.0	3.0
BO-JAC X337(SPX)	45.0	22.7	16200	0.0	1.3	0.0	2.8
USS AG CHEM 0555(3X)	45.5	22.9	16100	0.0	2.0	0.0	2.7
FEDERAL FX34(SX)	15.7	24.4	13300	0.0	5.3	1.6	2.2
FUNK G-4507(SX)	47.3	26.0	15100	0.0	0.6	0.0	2.8
FUNK G-4503(SX)	63.4	25.2	16100	0.0	1.8	0.0	2.5
FUNK G-4520(SX)	32.6	24.9	15100	1.3	1.3	0.0	2.7
FUNK EXP27130(3X)	55.6	24.7	14600	0.6	2.0	0.0	3.0
SUPERCROST 4242(SPX)	40.7	24.6	15200	1.6	6.2	0.0	2.8
M-F-A 5001(SX)	43.2	22.1	15000	0.0	1.3	0.0	2.3
MCALLSTR SX7408(SX)	50.0	23.9	16000	0.0	0.0	0.6	2.8
TAYLR-EV TE6992(SX)	51.3	25.4	12200	0.0	2.5	0.0	3.0
TAYLR-EV TE6995(SX)	53.2	28.6	14200	0.0	2.6	0.0	3.0
GROUP II MATURITY							
COKER 18(SX)	33.3	26.3	16600	0.6	0.6	0.0	2.7
COKER 22(3X)	24.8	28.7	15400	0.0	1.2	0.0	2.8
ACCO X48951(SX)	47.3	28.5	15900	0.0	1.2	0.0	2.7
ACCO U395(3X)	63.3	28.8	13400	0.8	0.7	0.0	2.7
BO-JAC X7L(SX)	64.7	23.8	15800	0.0	0.0	0.0	2.8
BO-JAC X-83(SPX)**	38.1	29.1	14200	0.0	2.3	0.6	2.3
BO-JAC X-69(SX)	48.2	25.0	17600	0.0	0.0	0.0	3.2
BO-JAC X-52A(SX)	33.6	27.4	17000	0.0	0.0	0.0	2.7
CARGILL 979(SX)**	38.4	28.5	12900	0.0	1.5	0.0	2.7
CARGILL 949(SX)	58.0	26.6	16900	0.0	1.6	0.0	3.0
CARGILL 920(SX)	66.3	23.6	16500	0.0	1.7	0.0	2.8
COOP 2318(SX)	43.8	31.5	13900	0.6	1.3	0.0	2.7
COOP 2300(SX)	51.2	26.1	11800	0.7	1.5	0.7	3.2
DEKALB XL91(SX)**	56.5	26.5	15000	0.0	2.8	0.0	3.0
DEKALB XL372(SX)**	46.8	25.9	16500	0.0	0.6	0.0	2.3
DEKALB XL72B(SX)	52.6	24.8	15900	1.1	1.7	0.0	2.3
USS AG CHEM 1010(SX)	44.1	27.3	15700	0.0	0.6	0.0	2.7
USS AG CHEM 1515(SX)	57.7	26.9	16300	0.0	1.1	0.6	2.7
GLDNHRVSTH2650(SX)**	51.4	28.4	14500	0.0	0.0	0.0	2.7
RING A. RA1501(SX)	54.5	26.0	17600	0.0	0.6	0.0	2.5
RING A. RA2502(SPX)	60.5	27.5	14800	0.0	1.2	0.0	2.5
FEDERAL FX59(SX)	46.2	27.4	14600	0.0	0.7	0.0	2.5
FUNK G-462A(SX)**	55.5	27.1	13600	0.0	2.8	0.0	2.7
FUNK G-4611(3X)	39.6	24.6	14700	0.0	0.6	0.0	2.7
FUNK G-4776(3X)	51.2	27.3	16100	0.0	0.5	0.5	2.8
SUPERCROST S85(SX)**	62.5	27.4	14100	0.0	1.4	0.7	2.7
SUPERCROST 7772(SPX)	46.2	23.4	16600	0.0	2.2	0.0	2.5
SUPERCROST S67(SPX)	15.8	26.6	13100	1.3	13.2	0.0	2.5
SUPERCROST S440(SX)	47.7	28.4	15400	0.0	0.6	0.0	2.8
SUPERCROST 4350(SPX)	55.6	25.3	16600	0.0	0.0	0.0	2.8
HAPPEL M5-72(SX)	50.4	23.8	15000	0.0	1.7	0.0	2.3
HAPPEL H-37(SPX)	24.0	25.5	14500	0.6	2.5	0.0	2.7
HAPPEL 3361-A(3X)	45.4	24.8	16700	0.0	2.7	0.0	2.7
LEWIS X789(SX)	44.5	30.0	12400	0.0	1.4	0.0	2.5
LEWIS X62B(SX)	42.7	27.9	17100	0.0	0.6	0.0	2.7
LEWIS X84B(SX)	49.6	27.0	13000	0.0	2.6	0.0	2.3
LEWIS X150(SX)	27.3	26.8	13400	0.7	6.2	0.0	2.8
LEWIS X24B(SX)	22.4	27.6	15000	0.0	2.6	0.0	2.3
LEWIS X33B(SX)	27.0	23.5	16600	0.6	2.8	0.0	2.5
LEWIS X73B(SX)	40.7	27.6	14700	0.0	2.4	0.0	2.3
LEWIS X79B(SX)	33.7	24.1	15000	0.0	0.0	0.0	2.7
LEWIS X71B(SX)	28.7	29.5	13800	0.6	3.9	0.0	2.7
M-F-A V12(SX)**	38.4	27.9	14800	0.0	0.6	0.0	2.5
M-F-A V16(SX)**	52.2	25.4	14500	0.0	1.9	0.0	2.7
M-F-A 3030(DX)	59.7	27.6	15900	0.0	3.4	0.0	2.5
M-F-A 6041(SPX)**	20.0	27.3	11300	1.5	9.1	0.0	2.5
M-F-A 5802(SX)	50.7	26.2	17200	0.0	1.6	0.0	2.8
AMERICANA 6700(SX)	55.0	26.8	15400	0.0	0.6	0.0	3.0
AMERICANA 3200(SX)	44.9	29.2	14100	0.0	0.0	0.0	2.2
AMERICANA 9500(3X)	49.1	25.6	16800	0.0	0.5	0.0	2.8
MUNCY-CHF H764(DX)	42.7	27.3	15000	0.0	1.3	0.0	2.5
MUNCY-CHF SX878(SX)	43.4	27.4	13400	0.0	2.1	0.0	2.5
MUNCY-CHF SX777(SX)	46.4	24.1	16000	0.0	1.8	0.0	2.8
MUNCY-CHF 3X898(3X)	52.3	24.6	16500	0.0	5.7	0.0	2.3
MUNCY-CHF SX662(SX)	16.0	24.4	13500	0.0	3.9	0.0	2.2
MUNCY-CHFSX808B(SX)	34.5	26.5	12000	0.0	3.2	0.0	2.7



TABLE 14. (CONTINUED).

BRAND--HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	PLANTS PER ACRE (#)	LOGGED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
				POOT (%)	STALK (%)		
GROUP II MATURITY							
MCALLSTR SX6837(SX)	52.9	28.5	11500	0.0	3.3	0.0	2.7
MCCURDY MSX70(SX)	46.3	29.0	13000	0.0	0.7	0.0	2.5
MCCURDY MSX84(SX)	50.9	27.5	16500	0.0	1.6	0.0	2.5
MCCURDY MSX68(SX)	45.5	23.3	13600	0.7	3.4	0.0	2.7
MCCURDY MSX65(SX)	30.7	28.6	13400	0.0	4.2	0.0	2.8
NK PX74(SX)	42.0	27.6	13400	0.0	0.0	0.0	2.5
NK PX76(SX)	17.8	24.8	14100	1.1	7.9	0.0	2.3
NK PX675(3X)	53.1	26.5	16900	0.0	1.1	0.0	3.0
O'SGOLD SX5500(SX)**	46.2	27.9	15300	0.0	3.6	0.5	2.5
O'SGOLD SX5500A(SX)**	48.2	28.2	15600	0.0	0.6	0.6	2.8
O'SGOLD SX5400(SX)	40.5	25.2	14200	0.0	6.3	0.0	3.0
O'SGOLD SX3400(SX)	27.3	26.2	14700	1.7	3.2	0.0	2.3
P-A-G SX98(SX)**	59.5	28.6	13700	0.0	2.1	0.0	3.0
P-A-G 314(SX)	58.3	25.8	16200	0.0	0.6	0.0	2.7
P-A-G 340(SX)	19.2	25.6	12900	0.0	3.6	0.0	2.5
P-A-G 7545(3X)	30.7	24.3	14600	0.0	3.3	0.0	2.5
PIONEER 3369A(SX)**	38.5	24.0	16400	0.0	1.7	0.0	2.5
PIONEER 3388(SX)**	32.1	21.3	14800	0.0	0.6	0.0	2.3
PIONEER 3219(DX)**	27.0	27.1	13300	0.7	1.4	0.0	2.8
PIONEER 3517(SX)	26.1	21.9	13400	0.0	0.7	0.0	2.0
PIONEER 3529(SX)	33.8	21.2	16100	0.0	0.5	0.0	2.5
PIONEER 3184(SX)	63.6	28.5	14500	0.0	0.0	0.0	2.5
PIONEER 3325A(SX)	30.7	24.0	13100	0.0	6.9	0.0	2.5
PIONEER 3541(SX)	33.7	21.6	13600	0.0	0.6	0.0	2.7
PIONEER 3183(SX)	55.0	29.3	14800	0.5	0.0	0.0	2.7
SECURITY SS112(SX)	38.2	28.8	16100	1.3	2.9	0.0	3.0
SECURITY SS118(SX)	47.6	26.0	12600	0.0	4.0	0.8	2.5
TAYLR-EV TE6968(SX)	10.9	24.5	12600	0.0	19.3	1.5	2.3
TAYLR-EV TE6980(SX)	49.2	26.6	16100	0.0	0.6	0.0	2.3
TROJAN TXS119(SX)**	53.2	26.9	14000	0.0	0.0	0.0	2.5
TROJAN TXS113(SX)	23.0	23.3	13100	0.0	13.3	0.0	2.5
TROJAN TX119A(3X)**	44.5	27.4	14900	0.0	0.7	0.6	2.8
TROJAN TXS115A(SX)	57.0	26.8	17300	0.0	0.5	0.0	2.7
TROJAN TXS117A(SX)	38.6	26.8	15300	1.1	1.9	0.0	2.5
(B73XMO17)(SX)	36.7	27.0	17100	0.6	1.1	0.0	2.8
WILSTAR 6663(SX)	42.8	26.7	14100	0.0	2.0	0.0	3.0
WILSTAR 7774(SX)	48.4	28.4	14900	0.0	0.7	0.0	2.8
WILSTAR 6668(SX)	47.4	26.4	15600	0.0	0.6	0.6	2.5
US-13(DX)	29.7	25.8	15700	0.0	1.8	0.0	2.8
WALTHER W271(DX)	34.9	22.7	14900	0.0	2.4	0.6	2.3
WALTHER W80(DX)	33.8	23.7	18000	0.0	3.5	0.0	2.5
WALTHER W45(SX)	46.6	28.6	14100	0.0	2.8	0.0	2.3
WALTHER W239(DX)	42.5	24.4	18500	0.0	2.0	0.0	2.5
MULTING X980(SX)	52.6	26.3	15700	1.2	1.7	0.0	2.8
MULTING X880(SX)	47.3	27.1	15900	1.1	0.6	0.0	2.8
GROUP III MATURITY							
RING A. RA2601(SPX)	33.4	28.5	14500	0.6	5.2	0.0	3.0
RING A. RA3602(3X)	44.0	31.1	16500	0.5	1.1	0.5	2.5
RING A. RA2602(SPX)*	51.7	31.8	14800	0.0	0.6	0.0	2.8
FUNK G-4848(SX)	37.4	30.6	15800	0.0	0.0	0.0	2.8
P-A-G SX77W(SX)**	44.8	28.8	14800	0.0	5.8	0.0	2.7
MCCURDY MSX88(SX)	51.5	28.7	15800	0.0	2.9	0.0	2.7
AVERAGE	43.0	26.4	14963	0.2	2.3	0.1	2.6

LSD AT 5% LEVEL IS 12.6 BU. HYBRIDS DIFFERING BY MORE THAN THIS VALUE MAY BE EXPECTED TO DIFFER SIGNIFICANTLY IN YIELD 19 OF 20 TIMES GROWN.

LSD AT 20% LEVEL IS 8.1 BU. HYBRIDS DIFFERING BY MORE THAN THIS VALUE MAY BE EXPECTED TO DIFFER SIGNIFICANTLY IN YIELD 16 OF 20 TIMES GROWN.

\*WHITE HYBRID

\*\*WIDELY GROWN HYBRIDS.

TABLE 15. PERFORMANCE RECORD OF HYBRIDS EVALUATED AT THE AGRONOMY RESEARCH CENTER (ARC-BRACFCRD FARM) NEAR COLUMBIA, MISSOURI (BOONE COUNTY) DURING THE 2-YEAR PERIOD 1975-76 AND THE 3-YEAR PERIOD 1974-76.

BRAND--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)
		RCCT (%)	STALK (%)				RCCT (%)	STALK (%)		
GROUP 1 MATURITY										
M-F-A 5001(SX)	62.1	23.8	8.4	1.6	2.9	67.1	16.4	8.3	1.1	3.0
SUPERCROST 4242(SPX)	61.4	1.7	32.5	0.9	3.0	-	-	-	-	-
FUNK G-4503(SX)	78.8	4.2	19.5	0.3	2.9	-	-	-	-	-
FUNK G-4507(SX)	76.3	11.3	6.7	0.3	3.2	69.6	7.5	5.6	0.3	3.3
USS AG CHEM 0555(3X)	73.1	0.0	7.1	2.5	3.2	-	-	-	-	-
BO-JAC X56(SX)	72.1	18.3	7.8	0.7	3.3	69.4	12.5	6.9	0.4	3.4
GROUP 2 MATURITY										
MULTING X880(SX)	76.9	10.7	11.6	0.3	3.3	-	-	-	-	-
MULTING X980(SX)	61.0	3.5	22.6	0.0	3.2	69.0	2.3	16.9	0.0	3.1
WALTHER W239(DX)	55.5	1.5	35.9	0.3	2.9	57.0	2.0	24.9	0.4	3.0
WALTHER W45(SX)	68.6	6.2	21.9	0.3	3.0	73.8	4.1	16.5	0.4	3.0
WALTHER W80(DX)	52.9	0.6	34.9	0.3	2.9	51.9	1.6	24.5	0.6	2.9
WALTHER W271(DX)	62.3	4.2	20.4	1.2	3.1	62.2	4.7	14.5	0.8	3.1
US-13(DX)	43.6	1.3	38.2	1.0	3.3	44.1	2.5	29.1	0.6	3.4
(B73XMC17)(SX)	68.0	10.0	6.6	0.6	3.3	-	-	-	-	-
TROJAN TXS117A(SX)	61.4	6.1	18.6	0.6	3.2	59.0	4.1	14.3	0.4	3.3
TROJAN TXS115A(SX)	76.1	12.1	4.0	0.0	3.3	73.1	8.2	4.0	0.0	3.3
TROJAN TXS119(SX)**	67.3	2.2	18.6	0.3	3.1	70.5	1.5	12.7	0.2	3.2
TAYLR-EV TE6980(SX)	65.6	0.8	20.1	0.0	3.1	69.4	0.9	13.9	0.0	3.2
TAYLR-EV TE6968(SX)	43.9	4.0	43.0	1.1	2.8	51.0	3.3	29.5	0.7	2.9
PIONEER 3184(SX)	77.1	1.2	1.1	0.0	3.2	-	-	-	-	-
PICNEER 3529(SX)	50.1	0.7	12.9	0.8	2.8	-	-	-	-	-
PICNEER 3517(SX)	49.8	0.3	26.3	0.0	2.7	57.8	0.9	17.7	0.0	2.7
PICNEER 3219(DX)**	55.8	2.0	14.2	0.4	3.2	52.2	1.4	10.2	0.3	3.1
PICNEER 3388(SX)**	59.0	2.5	5.1	0.0	2.7	63.3	1.7	3.9	0.2	2.8
PICNEER 3369A(SX)**	73.6	3.2	17.6	0.0	3.1	-	-	-	-	-
P-A-G SX98(SX)**	73.4	3.3	17.6	0.6	3.3	75.9	2.3	13.1	0.4	3.3
O*SGOLD SX5500(SX)**	62.3	0.7	18.1	0.9	3.1	66.8	0.4	14.3	0.9	3.1
NK PX675(3X)	73.2	7.8	7.3	0.6	3.3	67.5	5.7	6.7	0.6	3.3
NK PX76(SX)	50.6	4.3	24.3	0.3	2.9	52.7	4.7	17.5	0.2	3.0
NK PX74(SX)	65.6	12.0	5.5	0.3	3.1	62.4	8.5	5.6	0.4	3.2
MCCURDY MSX68(SX)	63.2	4.2	24.5	0.3	3.1	-	-	-	-	-
MCCURDY MSX84(SX)	71.4	24.4	6.0	0.6	3.1	69.9	16.5	6.8	0.4	3.2
MCCURDY MSX70(SX)	66.6	7.3	19.6	0.0	3.1	73.7	5.8	15.4	0.0	3.2
MCALLSTR SX6837(SX)	74.3	4.0	11.9	0.3	3.0	77.5	2.7	8.8	0.3	3.1
MUNCY-CHF SX662(SX)	39.9	1.1	30.8	0.0	2.8	48.3	0.9	22.9	0.4	2.6
MUNCY-CHF 3X898(3X)	57.1	3.0	18.2	0.8	3.0	58.4	2.9	13.0	0.5	3.1
MUNCY-CHF SX777(SX)	56.3	3.1	6.0	0.6	3.3	56.2	3.3	6.3	0.4	3.2
MUNCY-CHF SX878(SX)	55.6	2.3	24.7	0.4	3.2	51.4	2.0	17.6	0.2	3.2
MUNCY-CHF H764(DX)	53.4	1.6	21.6	0.0	3.2	-	-	-	-	-
AMERICANA 6700(SX)	60.1	0.7	15.1	0.0	3.3	63.7	0.5	10.3	0.0	3.3
M-F-A 6041(SPX)**	49.9	0.7	21.2	1.1	3.0	57.6	0.9	14.9	0.7	3.1
M-F-A 3030(DX)	68.3	5.1	10.7	1.1	3.1	67.2	3.6	8.8	0.7	3.1
M-F-A V16(SX)**	65.8	7.7	15.9	0.6	3.2	73.5	5.1	11.8	0.4	3.2
M-F-A V12(SX)**	55.0	1.3	14.5	0.6	2.9	55.3	0.9	9.7	0.8	2.9
LEWIS X84B(SX)	67.3	2.5	26.0	1.0	3.2	67.8	2.1	18.2	0.8	3.2
LEWIS X62B(SX)	72.6	17.2	10.9	0.0	3.2	-	-	-	-	-
LEWIS X78B(SX)	64.3	2.6	10.4	0.0	2.9	66.5	1.9	7.8	0.0	3.0
HAPPEL H-37(SPX)	44.6	6.0	10.1	0.0	3.3	53.0	4.0	7.3	0.2	3.4
HAPPEL MS-72(SX)	68.3	3.8	14.4	0.3	3.0	73.5	2.5	12.1	0.2	3.1
SUPERCROST 5440(SX)	70.2	8.7	6.0	0.3	3.3	-	-	-	-	-
SUPERCROST 7772(SPX)	61.8	0.7	14.2	0.0	2.9	-	-	-	-	-
SUPERCROST 585(SX)**	67.4	1.3	22.9	1.4	3.0	-	-	-	-	-
FUNK G-4628(SX)**	77.3	0.6	12.9	0.0	3.2	75.5	0.8	9.6	0.2	3.1
FEDERAL FX59(SX)	64.3	6.7	18.7	0.9	3.0	70.5	4.7	12.4	0.6	3.0
USS AG CHEM 1515(SX)	70.7	5.1	12.2	1.2	3.3	-	-	-	-	-
USS AG CHEM 1010(SX)	70.0	7.6	3.4	0.4	3.3	-	-	-	-	-
DEKALB XL81(SX)**	69.8	0.6	36.0	0.0	3.3	65.6	0.6	24.2	0.0	3.2
COOP 2300(SX)	59.6	11.1	10.2	0.4	3.5	-	-	-	-	-
COOP 2318(SX)	62.9	4.1	12.3	0.3	3.1	69.0	2.7	9.2	0.2	3.1
CARGILL 920(SX)	75.3	1.0	17.0	0.3	3.2	-	-	-	-	-
CARGILL 949(SX)	74.2	13.4	5.6	0.3	3.4	-	-	-	-	-
CARGILL 979(SX)**	61.1	3.6	17.3	0.9	3.2	65.1	2.6	12.6	0.8	3.2
BO-JAC X-52A(SX)	57.6	2.3	11.9	0.0	3.2	-	-	-	-	-
BO-JAC X-69(SX)	70.7	12.4	4.7	0.0	3.5	-	-	-	-	-
BO-JAC X-83(SPX)**	67.9	0.6	8.0	0.3	3.0	63.6	0.9	5.9	0.2	3.1
BO-JAC X7L(SX)	71.9	6.5	15.4	0.6	3.2	81.3	4.7	11.9	0.4	3.2
ACCC U395(3X)	73.3	5.9	18.8	1.5	3.1	-	-	-	-	-
GROUP 3 MATURITY										
AVERAGE	64.1	5.2	16.3	0.5	3.1	64.2	3.8	13.1	0.4	3.1

\*\*WHITE HYBRID.

\*\*\*WIDELY GROWN HYBRID

TABLE 16. SUMMARY PERFORMANCE RECORD FOR CORN HYBRIDS EVALUATED AT TWO CENTRAL MISSOURI LOCATIONS (LAFAYETTE AND BOONE COUNTIES) IN 1976.

BRAND--HYBRID	ACRE YIELD (BU)	LODGED PLANTS		DROPPED EARS (%)	EAR HEIGHT (FT)
		ROOT (%)	STALK (%)		
GROUP 1 MATURITY ( 2-LOCATION AVERAGE )					
ACCO U385(3X)	45.8	0.0	6.4	0.0	3.0
BO-JAC X56(SX)	68.3	3.3	0.3	0.0	3.3
BO-JAC X337(SPX)	67.8	0.0	0.9	0.0	3.3
USS AG CHEM 0555(3X)	72.4	0.0	1.5	0.0	3.1
FUNK G-4507(SX)	71.6	1.4	0.9	0.0	3.2
FUNK G-4503(SX)	71.1	0.0	1.2	0.0	2.9
FUNK G-4520(SX)	48.9	5.1	1.4	0.0	3.0
FUNK EXP27130(3X)	67.1	0.6	1.8	0.0	3.2
SUPERCROST 4242(SPX)	63.8	2.3	4.3	0.0	3.2
M-F-A 5001(SX)	70.0	0.3	1.2	0.0	3.0
MCALLSTR SX7408(SX)	66.2	0.0	0.0	0.3	3.3
TAYLR-EV TE6992(SX)	67.8	2.9	3.3	0.0	3.2
TAYLR-EV TF6995(SX)	68.8	1.3	1.9	0.0	3.3
GROUP 2 MATURITY ( 2-LOCATION AVERAGE )					
ACCO X48951(SX)	70.6	0.0	1.7	0.0	3.3
ACCO U395(3X)	72.1	1.0	6.8	0.0	3.0
BO-JAC X-83(SPX)**	59.9	1.3	2.2	0.3	3.0
BO-JAC X-69(SX)	62.9	0.0	0.2	0.0	3.4
CARGILL 979(SX)**	69.3	0.0	0.7	0.0	3.0
CARGILL 949(SX)	74.3	0.0	1.9	0.0	3.3
CARGILL 920(SX)	81.3	2.5	2.3	0.0	3.0
COOP 2318(SX)	60.8	0.3	1.4	0.0	3.0
COOP 2300(SX)	75.1	0.4	0.8	0.4	3.4
DEKALB XL81(SX)**	74.4	0.0	3.8	0.0	3.0
DEKALB XL372(SX)**	66.0	0.0	0.5	0.0	2.8
DEKALB XL72B(SX)	71.0	2.4	0.8	0.0	2.8
USS AG CHEM 1010(SX)	66.5	0.0	0.8	0.0	3.0
USS AG CHEM 1515(SX)	71.2	0.0	1.1	0.3	3.1
GLDNHRVSTH2650(SX)**	65.9	0.0	0.3	0.0	3.1
RING A. RA1501(SX)	71.2	1.1	1.0	0.0	3.0
RING A. RA2502(SPX)	73.1	0.0	0.9	0.0	2.9
FUNK G-4628(SX)**	66.6	0.0	1.7	0.0	2.9
FUNK G-4611(3X)	65.3	0.0	0.6	0.0	3.0
FUNK G-4776(3X)	56.6	1.4	4.9	0.3	3.5
SUPERCROST S85(SX)**	66.5	0.0	2.6	0.4	3.1
SUPERCROST 5440(SX)	68.3	0.0	0.6	0.0	3.2
SUPERCROST 4350(SPX)	71.9	2.1	3.2	0.0	3.2
HAPPEL MS-72(SX)	65.3	0.0	1.6	0.0	3.1
HAPPEL H-37(SPX)	52.4	0.3	1.2	0.0	2.8
HAPPEL 3361-A(3X)	59.9	1.9	1.9	0.0	3.1
LEWIS X788(SX)	66.9	0.0	1.2	0.0	2.9
LEWIS X62B(SX)	62.4	0.0	0.9	0.0	3.4
LEWIS X84B(SX)	70.5	0.8	3.8	0.0	2.8
LEWIS X15B(SX)	56.3	0.6	3.8	0.0	3.4
LEWIS X24B(SX)	53.1	0.2	5.1	0.0	2.9
LEWIS X33B(SX)	56.6	0.3	1.9	0.0	2.9
LEWIS X73B(SX)	63.1	2.1	1.7	0.0	2.9
LEWIS X79B(SX)	56.5	1.2	0.0	0.0	2.8
LEWIS X71B(SX)	63.0	0.3	3.2	0.0	3.1
M-F-A V12(SX)**	54.3	0.0	0.9	0.0	3.0
M-F-A V16(SX)**	63.1	0.0	2.0	0.0	2.9
M-F-A 3030(DX)	73.9	0.0	2.6	0.0	3.0
M-F-A 6041(SPX)**	58.1	1.0	5.3	0.0	2.8
M-F-A 5802(SX)	73.5	0.0	0.8	0.0	3.4

TABLE 16. (CONTINUED).

BRAND--HYBRID	ACRE YIELD (BU)	LODGED ROOT (%)	PLANTS STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
MUNCY-CHF H764(DX)	60.1	3.4	2.2	0.0	3.0
MUNCY-CHF SX662(SX)	43.2	3.6	3.5	0.0	2.4
MCALLSTR SX6837(SX)	66.1	0.0	3.5	0.0	2.9
MCCURDY MSX70(SX)	68.3	1.1	0.4	0.0	3.0
MCCURDY MSX84(SX)	71.4	0.0	2.4	0.0	3.1
NK PX74(SX)	63.4	0.6	0.3	0.0	3.0
NK PX575(3X)	71.6	0.2	0.5	0.0	3.3
C'SGOLD SX5500(SX)**	57.5	0.0	2.6	0.3	2.8
C'SGOLDSX5500A(SX)**	72.8	1.5	0.8	0.3	3.3
O'SGOLD SX3400(SX)	46.1	1.4	2.1	0.0	2.8
P-A-G SX98(SX)**	69.1	0.0	1.8	0.0	3.2
P-A-G 7545(3X)	54.8	0.8	2.7	0.0	3.0
PIONEER 3369A(SX)**	58.1	0.0	2.1	0.3	3.0
PIONEER 3388(SX)**	51.3	0.0	0.6	0.0	2.9
PIONEER 3219(DX)**	49.6	0.4	3.2	0.0	2.9
PIONEER 3517(SX)	54.4	2.2	0.4	0.0	2.5
PIONEER 3529(SX)	59.3	0.0	0.2	0.0	2.6
PIONEER 3184(SX)	81.6	0.0	0.5	0.0	3.0
PIONEER 3325A(SX)	53.0	0.0	4.9	0.0	2.9
PIONEER 3541(SX)	59.5	0.3	0.9	0.0	2.8
PIONEER 3183(SX)	73.9	0.3	0.5	0.0	3.2
SECURITY S5118(SX)	62.5	0.0	3.5	0.4	2.9
TAYLR-EV TE6968(SX)	45.1	0.0	10.4	0.7	2.7
TAYLR-EV TE6980(SX)	66.1	0.3	1.6	0.0	2.9
TROJAN TXS119(SX)**	67.3	0.0	1.9	0.0	3.0
TROJAN TXS113(SX)	55.5	0.0	7.7	0.0	2.8
TROJAN TX119A(3X)**	61.1	0.0	1.3	0.6	3.1
TROJAN TXS115A(SX)	68.9	1.3	0.2	0.0	3.1
TROJAN TXS117A(SX)	64.1	0.6	1.4	0.0	3.0
(B73XMO17)(SX)	63.5	0.8	1.5	0.0	3.2
WILSTAR 6663(SX)	62.8	0.0	1.9	0.0	3.3
WILSTAR 7774(SX)	61.1	0.0	0.9	0.0	3.1
WILSTAR 6668(SX)	58.2	0.0	0.5	0.3	3.0
US-13(DX)	45.1	0.0	6.3	0.0	3.3
WALTHER W271(DX)	49.4	0.3	2.2	0.3	2.8
WALTHER W80(DX)	48.8	0.3	6.9	0.2	2.8
WALTHER W239(DX)	59.1	1.1	4.6	0.0	3.0

## GROUP 3 MATURITY ( 2-LOCATION AVERAGE)

RING A. RA2601(SPX)	45.4	0.6	6.7	0.0	3.3
RING A. RA3602(3X)	48.8	0.3	2.4	0.3	3.1
RING A. RA2602(SPX)*	60.1	0.3	1.2	0.0	3.5
FUNK G-4848(SX)	58.8	0.3	0.8	0.0	3.3
P-A-G SX70W(SX)**	51.1	0.5	13.9	0.2	3.3
MCCURDY MSX88(SX)	63.8	0.3	2.3	0.0	2.9
MEAN	62.7	0.6	2.3	0.1	3.0

\*WHITE HYBRID.

#### DISTRICT 6

No evaluation plots were located in this district during 1976.

#### DISTRICT 7

An irrigation trial was located in this district at the Southwest Center near Mt. Vernon, Missouri (Lawrence County). The agronomic performance data for the period 1974-75 are presented in Table 20. The 1976 plots were abandoned because of poor stand which was caused by a late spring freeze.

#### DISTRICT 8

Since less than one percent of the land in this district is planted to corn, no hybrid evaluation trials were conducted.

#### DISTRICT 9

Summary data from District 9 for the years 1972, 1974, and 1975 are presented in Table 17. The plots were abandoned in 1976 because of poor stand and excessive weed problems.

The most reliable results may be obtained from the use of hybrids that have proven their potential over a two or three-year period. Such information is available in Table 18.

TABLE 17. PERFORMANCE RECORD OF HYBRIDS EVALUATED AT THE DELTA CENTER NEAR PORTAGEVILLE, MO. (PEMISCOT COUNTY) DURING THE 2-YEAR PERIOD 1974-75 AND THE 3-YEAR PERIOD 1972, 1974-75. NOTE: PLOTS ABANDONED IN 1976 DUE TO POOR STAND AND WEEDS.

BRAND--HYBRID	2-YEAR AVERAGE					3-YEAR AVERAGE				
	ACRE YIELD (BU)	LOGGING ROOT (%)	LOGGING STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)	ACRE YIELD (BU)	LOGGING ROOT (%)	LOGGING STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
GROUP 1 MATURITY										
PICNEER 3390(SPX)	85.8	1.3	2.7	0.3	2.8	91.4	2.0	2.7	0.2	2.9
PAG SX7(SX)	81.6	0.7	3.9	0.0	2.5	-	-	-	-	-
FUNKS G-4507(SX)	106.3	1.6	6.0	0.5	3.2	-	-	-	-	-
GROUP 2 MATURITY										
US-13(DX)	64.3	7.2	11.7	0.8	3.2	72.2	5.9	12.6	0.5	3.3
TROJAN TXS117A(SPX)	97.4	0.0	1.9	0.3	3.1	-	-	-	-	-
TROJAN TXS115A(SX)	92.8	0.8	5.2	1.1	3.3	-	-	-	-	-
TROJAN TXS119(SX)	87.3	0.0	4.4	0.0	3.1	96.9	0.0	4.2	0.0	3.1
TE 6980(SX)	91.8	0.0	3.1	0.9	2.8	-	-	-	-	-
TE 6568(SX)	97.2	0.5	4.0	0.0	2.8	-	-	-	-	-
PRINCETON SX805(SX)	88.6	0.7	4.9	1.3	2.8	-	-	-	-	-
PRINCETON SX910(SX)*	119.5	1.1	6.5	0.8	3.7	-	-	-	-	-
PRINCETON SX850(SX)	106.1	0.0	3.0	1.1	2.8	111.0	0.2	2.8	0.7	2.9
PICNEER 3368(SPX)	112.3	0.5	3.3	0.6	3.1	118.6	0.3	3.0	0.4	3.2
PICNEER 3369A(SX)	108.8	0.3	3.6	1.1	2.8	116.2	0.2	3.4	0.7	3.1
PAG SX98(SX)	92.3	0.0	1.7	0.3	2.8	98.1	0.2	1.7	0.2	3.0
PAG SX39(SX)	98.6	0.5	3.7	0.5	3.0	-	-	-	-	-
MCNAIR X-210(SX)	100.8	0.0	13.5	1.6	2.9	-	-	-	-	-
MCCURDY MSP888(3X)	109.6	0.2	3.6	0.3	3.0	109.1	0.6	2.9	0.2	3.2
MUNCYCHIEF SX662(SX)	82.4	0.3	6.7	0.9	2.7	-	-	-	-	-
MUNCYCHIEF SX777(SX)	86.6	0.5	5.0	1.5	2.9	-	-	-	-	-
MUNCYCHIEF SX878(SX)	91.3	0.5	5.9	1.1	2.9	97.4	0.3	4.7	0.7	3.1
MFA EXP54434(SX)	94.3	1.0	5.1	0.7	3.0	-	-	-	-	-
MFA 6061(3X)	80.8	0.0	4.5	0.0	3.2	-	-	-	-	-
MFA 6041(SPX)	106.7	0.6	4.0	0.8	3.0	-	-	-	-	-
MFA 3030(DX)	85.0	0.3	4.0	0.3	2.9	93.0	0.6	3.8	0.2	3.1
MFA V-16(SX)	84.4	1.1	4.7	0.2	2.8	90.8	0.7	4.9	0.2	2.9
FUNKS G-5666(DX)	102.1	0.2	3.5	0.3	3.1	-	-	-	-	-
FUNKS G-4737(SX)	94.6	1.0	5.7	1.3	2.7	-	-	-	-	-
FUNKS G-4628(SX)	84.3	0.6	4.7	0.8	2.8	-	-	-	-	-
FUNKS G-4646(SPX)	100.6	0.0	5.2	0.3	2.9	-	-	-	-	-
FUNKS G-4697(SPX)	81.0	2.0	4.1	0.7	2.7	86.0	2.7	3.6	0.7	2.9
DEKALB XL72A(SX)	86.1	0.0	5.1	0.0	2.8	-	-	-	-	-
DEKALB XL81(SX)	101.0	0.0	4.7	0.5	2.9	106.2	0.0	4.2	0.4	3.0
BO-JAC X83(SPX)	113.3	0.3	2.8	0.7	2.8	-	-	-	-	-
ASGROW RX100(SX)	89.6	0.0	6.4	2.4	2.8	-	-	-	-	-
GROUP 3 MATURITY										
TE 6969(SX)	73.9	2.9	7.6	1.2	2.9	-	-	-	-	-
N-K PX91(SX)	79.8	0.5	5.2	0.0	3.1	-	-	-	-	-
MCNAIR X-233(SX)*	121.9	1.4	6.4	1.5	3.5	-	-	-	-	-
LEWIS X80B(SX)	74.6	1.8	3.5	0.5	2.8	-	-	-	-	-
FUNKS G-5757(DX)	90.2	1.8	2.3	0.3	3.3	96.2	6.3	2.8	0.2	3.3
BO-JAC X7L-24(SPX)	99.3	0.5	3.6	0.6	2.9	-	-	-	-	-
BO-JAC X91(SPX)	100.3	0.8	4.4	0.8	2.9	105.1	1.3	4.5	0.5	3.0
GROUP 4 MATURITY										
MCCURDY 67-14(SX)	120.1	0.2	2.9	0.5	3.2	128.1	0.3	3.4	0.3	3.4
AVERAGE	94.5	0.8	4.8	0.7	2.9	101.0	1.4	4.1	0.4	3.1

\*WHITE HYBRID.

\*\*WIDELY GROWN HYBRID

## IRRIGATION EXPERIMENTS

Irrigation experiments were conducted at two locations to assess hybrid performance independent of stress caused by irregular precipitation patterns. These experiments were located at two of the Agricultural Experiment Station Research Centers: Claypan Research Station near McCredie in Callaway County and the Southwest Center near Mt. Vernon in Lawrence County. The plots at the Southwest Center were abandoned in 1976 because of a poor stand caused by a late spring freeze. The cultural practices applied to the 1976 irrigation experiments are listed in Table 4.

Figure 2 presents the inches of accumulated precipitation (includes rainfall and water applied in several irrigations) at McCredie. The cross-hatched area represents optimum soil moisture. Accumulated precipitation above this area represents excess moisture and run-off. The precipitation line below this area represents soil moisture stress and the need for supplemental irrigation.

The acre yield ranged from a high of 175 bushels to a low of 106 bushels per acre at McCredie. Because of a late spring frost a number of hybrids had poor stands, thus they were deleted from Table 18.

Lodging was not important in 1976.

Data from McCredie in 1976 and for the period 1974-76 are presented in Tables 18 and 19. Data from the Southwest Center for 1973-75 are presented in Table 20.

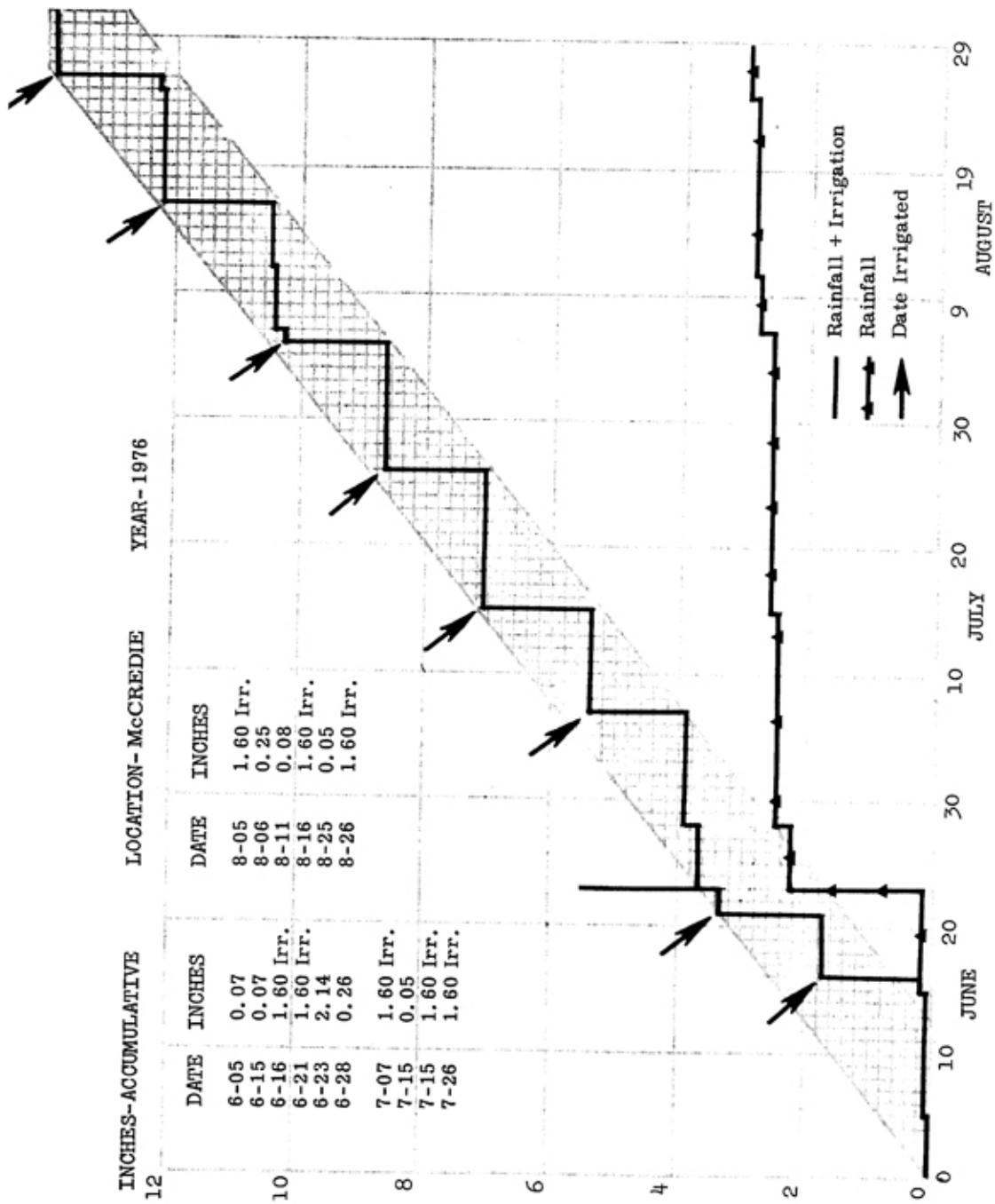


Figure 2. Record of precipitation pattern and irrigation schedule for 1976.



TABLE 18. PERFORMANCE RECORD OF HYBRIDS EVALUATED UNDER IRRIGATION AT THE CLAYPAN RESEARCH STATION (CR5) NEAR MCCREDIE, MISSOURI (CALLAWAY COUNTY). PLANTED APRIL 9, 1976. HARVESTED SEPTEMBER 28, 1976.

BRAND--HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	PLANTS PER ACRE (#)	LODGED PLANTS		DROPPED FARS (%)	FAR HEIGHT (FT)
				POOD (%)	STALK (%)		
GROUP I MATURITY							
ACCO UC7601(SX)	123.7	22.7	22800	0.0	1.4	0.0	3.2
40-JAC X56(SX)	174.8	23.4	21800	0.0	0.8	0.4	4.0
FEDERAL FX34(SX)	106.3	22.8	17700	0.0	0.0	0.0	3.0
FUNK G-4577(SX)	162.5	22.1	19400	0.0	0.9	0.0	3.7
FRONTIER SX-233(SX)	140.7	23.1	16500	0.0	0.0	0.0	3.3
CORN KING 1138(SX)	112.3	22.7	21000	0.0	0.9	0.0	3.2
MCALLSTR SX7408(SX)	145.5	22.5	21200	0.0	0.0	0.4	3.5
TAYLR-EV TE6995(SX)	148.7	24.1	18100	0.0	0.5	0.5	3.7
GROUP II MATURITY							
COKER 16(SPX)	120.9	23.7	20800	0.0	0.9	0.0	3.3
ACCO X49951(SX)	167.2	25.8	19700	0.0	0.0	0.0	3.8
ASGR0W RX90(SX)	145.9	22.7	20000	0.0	0.0	0.0	3.5
ASGR0W RX4589(SX)	125.5	24.0	16900	0.0	0.5	0.0	3.3
HO-JAC X7L(SX)	145.3	26.6	17600	0.0	0.5	0.0	3.5
CARGILL 949(SX)	173.5	23.1	21300	0.0	2.6	0.0	3.7
CARGILL 920(SX)	116.5	20.9	18900	0.0	1.6	0.0	3.3
COOP 2318(SX)		25.6	13800	0.0	0.0	0.8	3.2
COOP 2300(SX)		23.8	11400	0.0	0.0	0.7	3.5
USS AG CHEM 1010(SX)	161.8	22.5	19700	0.0	0.0	0.0	3.7
USS AG CHEM 1515(SX)	124.5	24.6	18200	0.0	0.0	0.0	3.3
RING A. RA1501(SX)	130.1	22.2	18600	0.0	0.0	0.0	3.5
RING A. RA2502(SPX)	137.8	24.6	17600	0.0	1.7	0.0	3.2
FEDERAL FX59(SX)	138.9	25.2	18600	0.0	1.0	0.5	3.5
FUNK G-4628(SX)**	103.1	24.2	14900	0.0	0.0	0.0	3.2
FRONTIER SX-244(SX)	124.4	22.2	17500	0.5	0.0	0.0	3.5
SUPERCROST 5440(SX)	151.2	23.3	16700	0.0	0.0	0.0	3.7
SUPERCROST 6880(SX)	109.0	21.7	15800	0.0	0.0	0.0	3.2
IOWA-MD SX119(SX)	170.9	22.1	22400	0.0	1.6	0.0	3.5
IOWA-MD SX118(SX)	129.6	24.0	19100	0.0	1.9	0.0	3.3
LEWIS X789(SX)	145.8	25.3	16600	0.0	0.5	0.0	3.5
M-F-A V16(SX)**	129.0	25.7	14300	0.0	1.2	0.0	3.3
M-F-A 5H02(SX)	146.0	23.4	17900	0.0	0.0	0.0	4.2
AMERICANA 6700(SX)	143.5	25.7	19000	0.0	0.5	0.0	3.5
AMERICANA 3200(SX)	154.5	23.3	17700	0.0	0.4	0.0	3.2
MUNCY-CHF SX878(SX)	115.8	24.5	15700	0.0	1.8	0.0	3.2
MUNCY-CHF SX878H(SX)		23.6	12200	0.0	2.0	0.0	3.0
MCALLSTR SX6837(SX)	135.0	24.6	18600	0.0	3.4	0.0	3.3
MCCURDY MSXP4(SX)	150.7	22.9	17400	0.0	0.0	0.0	3.7
MCNAIR X-194(SX)	140.8	23.1	17700	0.6	1.5	0.0	3.7
NC+59(SX)	144.9	22.2	18000	0.0	0.8	0.0	3.8
NC+76(SX)	150.4	23.4	20800	0.0	0.4	0.0	3.5
NK PX74(SX)	122.6	23.1	15200	0.0	0.0	0.0	3.7
NK PX675(SX)	134.8	22.3	21000	0.0	1.3	0.0	3.8
D*SGOLD SX5500(SX)**	106.9	25.4	15000	0.0	0.0	0.0	3.0
D*SGOLD SX5500A(SX)**	121.5	23.0	15900	0.0	0.0	0.0	5.1
P-A-G 314(SX)	158.6	22.5	21900	0.0	0.0	0.0	4.0
P-A-G 340(SX)	101.8	24.0	16500	0.0	0.0	0.0	3.2
PIONEER 3184(SX)	164.1	24.0	19900	0.0	0.0	1.8	3.5
PIONEER 3183(SX)	154.3	23.9	16600	0.0	0.6	0.0	3.7
PIROT 68(DX)	126.5	24.5	19800	0.0	2.7	0.9	3.8
PRINCETON SX910(SX)*	163.7	29.8	20500	0.0	1.4	0.0	5.3
PRINCETON SX840(SX)	119.0	25.4	16300	0.0	0.0	0.6	3.5
SECURITY 55112(SX)	155.5	22.3	19100	0.0	0.0	0.0	4.0
SECURITY 55118(SX)		24.5	13000	0.0	0.0	0.0	3.5
TAYLR-EV TE6968(SX)	121.5	22.7	17600	0.0	1.0	0.0	3.3
THOR-D-BREDSX650(SX)	129.5	25.0	17000	0.0	2.4	0.0	3.5
THOR-D-BREDSX548(SX)	129.2	23.0	17200	0.0	0.5	0.0	3.3
TROJAN TX5119(SX)**	124.3	25.8	15700	0.0	0.6	0.6	3.7
TROJAN TX5115A(SX)	162.0	21.9	19900	0.0	0.0	0.0	3.5
WEATHR M. EXP888(DX)		21.7	11400	0.0	0.7	0.0	3.5
WILSTAR 7770(SX)	95.4	22.3	18200	0.0	4.0	0.0	3.0
WALTHER W80(DX)	128.8	22.5	24200	0.0	0.0	0.0	3.5
HULTING X980(SX)	140.5	24.5	18500	0.0	2.4	0.0	3.5
HULTING X880(SX)	139.7	23.9	17800	0.0	0.0	0.0	4.0
GROUP III MATURITY							
MCCURDY MSX88(SX)	141.2	24.7	15400	0.0	0.0	0.5	3.2
AVERAGE	133.5	23.8	17887	0.0	0.7	0.1	3.5

LSD AT 5% LEVEL IS 24.4 BU. HYBRIDS DIFFERING BY MORE THAN THIS VALUE MAY BE EXPECTED TO DIFFER SIGNIFICANTLY IN YIELD OF 20 TIMES GROWN.  
LSD AT 20% LEVEL IS 15.6 BU. HYBRIDS DIFFERING BY MORE THAN THIS VALUE MAY BE EXPECTED TO DIFFER SIGNIFICANTLY IN YIELD OF 20 TIMES GROWN.

\*WHITE HYBRID

\*\*WIDELY GROWN HYBRIDS.