Missouri Crop Performance

1975

Part I: Corn

Part II: Grain Sorghum

Part III: Soybeans

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PART I, CORN

INTRODUCTION

Synopsis

The fall and winter of 1974-75 was open and corn harvesting was greater than 90% completed by November 15. Spring plowing proceeded slowly at first, but rapidly after April 20. Planting was completed relatively early in most sections of the state.

Total precipitation for the period May 1 through August 31 was considerably below normal in all sections of the state. Monthly average temperatures were generally below normal with the exception of northwest and northeast Missouri.

Stalk lodging was quite severe at most locations -- ranging as high as 85% in some hybrids. Root lodging was less of a problem, largely because of application of insecticides to control the western corn root worm.

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

Table 1. 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	Rain	Days With Rain	Rain	Days With Rain	Rain	Days With Rain	Rain	Days With Rain	
Tarkio	15.23	34	6.06	12	5.72	11	1.11	4	2.34	7	(7-24 to 8-9)
Spickard	12.60	41	4.85	11	3.05	13	1.32	7	3.38	10	
Edina	12.17	32	3.76	10	3.66	12	1.19	2	3.56	8	
Palmyra	18.46	41	6.71	12	6.58	12	1.80	7	3.37	10	
Higginsville	13.34	31	3.30	10	4.92	8	0.89	3	4.23	10	(6-24 to 7-8)
Norborne	16.27	42	6.20	15	4.01	12	0.98	7	5.08	8	
Columbia	16.56	33	4.00	10	3.83	8	0.55	7	8.18	8	(7-24 to 8-12)
Mexico	15.29	37	4.04	12	4.85	11	2.02	6	4.38	8	
McCredie	16.75	31	3.05	10	4.40	6	0.96	6	8.34	9	(6-18 to 7-5)
Appleton City	19.43	32	4.51	10	5.44	10	0.22	3	9.26	9	(6-26 to 7-17); (7-24 to 8-12)
Mt. Vernon	14.80	37	2.58	12	5.49	11	0.68	5	6.05	9	
Portageville	19.39	38	3.44	12	2.76	6	5.49	10	7.70	10	(6-17 to 7-5)

*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 2. Summary of temperature data for the period May 1 through August 31 at various Missouri locations.

Location	Month	Avg. Temp.	Degrees From Normal	Number of Days Above 90°	Number of Days Above 100°	Location	Month	Avg. Temp.	Degrees From Normal	Number of Days Above 90°	Number of Days Above 100°
Tarkio	May	65.8	2.4	2	0	Columbia	May	65.0	0.6	0	0
	June	72.3	0.3	6	0		June	72.3	-0.7	0	0
	July	78.4	1.6	21	1		July	76.2	-1.1	16	0
	August	78.3	3.2	22	0		August	75.7	-0.3	11	0
Spickard	May	65.2	1.5	0	0	Mexico	May	65.6	1.7	0	0
	June	72.5	-0.0	5	0		June	73.0	0.1	7	0
	July	76.5	-0.2	20	0		July	76.8	-0.4	19	1
	August	77.0	2.0	18	1		August	78.3	2.5	18	2
Edina	May	65.3	2.2	0	0	McCredie	May	65.6	1.7	0	0
	June	72.4	0.8	3	0		June	73.0	0.1	7	0
	July	76.5	0.5	16	0		July	76.8	-0.4	19	1
	August	76.6	2.2	14	0		August	78.3	2.5	18	2
Palmyra	May	65.9	2.4	0	0	Appleton City	May	68.6	2.6	2	0
	June	71.9	-0.5	4	0		June	75.3	0.9	12	0
	July	75.5	-0.8	15	0		July	79.3	0.7	27	4
	August	76.5	1.7	13	1		August	79.2	1.3	25	3
Higginsville	May	66.2	-0.4	0	0	Mt. Vernon	May	66.3	1.1	0	0
	June	73.5	-1.3	4	0		June	73.0	-0.7	0	0
	July	78.3	-1.0	20	1		July	77.6	-0.3	18	0
	August	79.1	0.7	18	1		August	78.1	0.9	13	0
Norborne	May	67.4	3.4	1	0	Portageville	May	70.9	1.8	3	0
	June	74.1	1.3	10	0		June	76.0	-0.7	16	0
	July	78.0	1.8	23	1		July	77.9	-1.0	16	0
	August	77.4	2.4	16	1		August	76.9	-1.1	7	0

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

Inches Between Each Plant in Row	Row Width in Inches				
	20	30	36	38	40
6	---	34,850	29,040	27,540	26,130
7	---	29,870	24,890	23,630	22,410
8	---	26,140	21,780	20,640	19,600
9	---	23,230	19,360	18,340	17,424
10	31,360	20,910	17,420	16,510	15,680
12	26,140	17,420	14,520	13,750	13,070
14	22,400	14,930	12,450	11,790	11,200
16	19,600	13,010	10,890	10,317	9,800
18	17,420	11,620	9,680	9,170	8,710
20	15,680	10,450	8,710	8,250	7,840

Date of Planting

Hybrids should be planted as soon as soil and climate permit. Research conducted at the North Missouri Research Center[1] indicates highest yield can be expected from plantings made between April 20 and May 10. A reduction of 0.4 of a bushel resulted for each day of delay in planting after May 10 until June 1. For each day of delay after June 1 a reduction of 2.4 bushels occurred.

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

At Columbia[2] a decrease of about 12 bushels per acre occurred when planting was delayed from April 20 to May 20. Only a small difference in yield was noted among the April 1, April 20, and May 10 plantings at the Delta Center[3]. After May 10 a reduction of one bushel occurred for each day of delay in planting. In addition to higher yield, early planted corn generally had less lodging, lower ear height, less European corn borer and less earworm damage.

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

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

EXPERIMENTAL PROCEDURE

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. All of the corn test locations were harvested. 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 1975 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. The stand loss at Columbia (Boone County) was slightly higher than at the other sites, but all stands were acceptable.

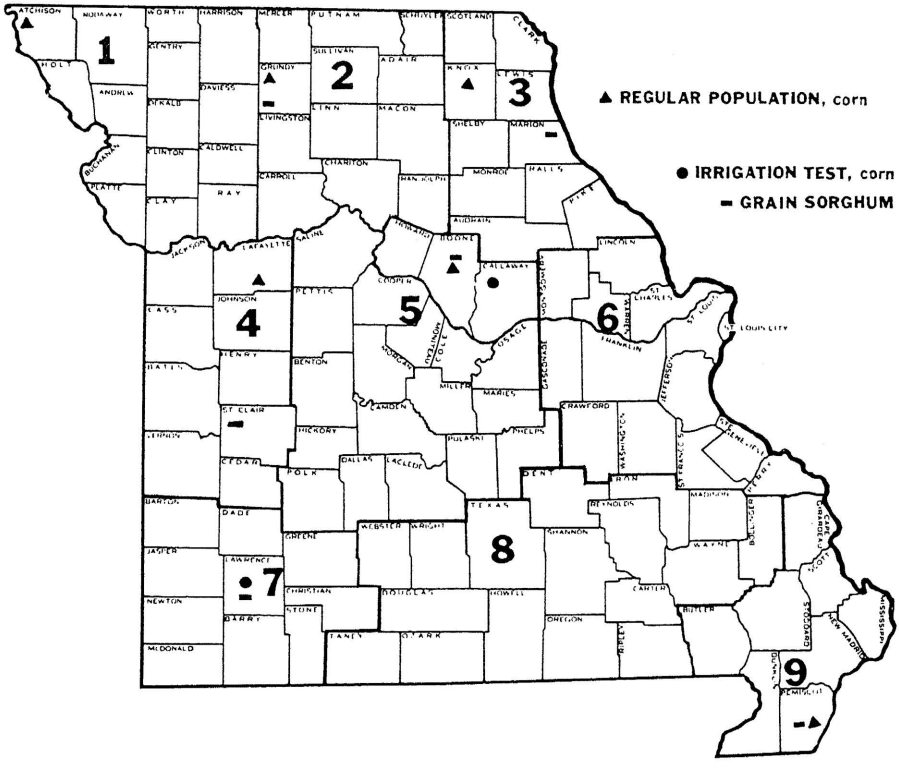

FIGURE 1. TEST SITE LOCATION.

Table 4. Cultural practices of 1975 hybrid corn evaluation plots.

Location	Soil Test O. M.	Soil Test P_2O_5	Soil Test K	Fertilizer Added	Insecticide*	Herbicide*	Row Width (in.)	Planting Rate (Per/A)	Date Planted	Date Harvested	Cooperator-(Town)
District 1 (Atchison Co.)	4.0	316	500	150-50-50	None	Bladex + Lasso	38	22,000	4-29	9-26	John Jones (Tarkio)
District 2 (Grundy Co.)	3.6	230	360	150-50-150	None	Lasso + AAtrex	30	21,000	5-05	10-01	North Missouri Center (Spickard)
District 3 (Knox Co.)	2.2	436	350	150-50-140	Aldrin	Atrazine+ Lasso	30	21,000	5-02	9-22	Lynn Douglas (Edina)
District 4 (Lafayette Co.)	3.7	314	280	150-60-120	Furdan	AAtrex + Lasso	30	21,000	5-01	9-29	Lynn Dyer (Higginsville)
District 5 (Boone Co.)	2.2	141	300	125-80-80	None	Bladex + Lasso	30	21,000	4-21	9-24	Agronomy Research Center (Columbia)
District 9 (Pemiscot Co.)	2.2	396	420	150-75-75	None	AAtrex	30	21,000	4-05	9-17	Delta Center (Portageville)
Irrigation Test (Lawrence Co.)	2.6	448	400	300-200-200	Furdan	Sutan + Atrazine	30	28,000	4-10	9-05	Southwest Center (Mt. Vernon)
Irrigation Test (Callaway Co.)	2.4	346	350	120-95-95	Furdan	Lasso + Atrazine	30	28,000	4-17	9-23	Claypan Research Station (McCredie)

*Applied at recommended rates. See MU Guide 4136 for 1975 weed control recommendation.

Lodging

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

Dropped Ears

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

Ear Height

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

Yield

The corn from each plot was harvested with a two-row combine. The shelled corn was then weighed in the field. Yield was determined on the basis of shelled corn with a moisture content of 15.5 percent. Adjustments were not made for stand deviations. The reported yield for each hybrid is the average yield of three two-row plots at all locations.

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.

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.

RESULTS

Results are reported on a relative maturity group basis. This is the approximate number of days from planting until physiological maturity or the number of days from planting until maximum dry matter content is reached. The relative maturity groups are as follows: Group I, approximately 90-110 days; Group II, 110-120 days; Group III, 120-130 days; Group IV, 130-140 days. Results reported for each district are for tests conducted in 1975. Period-of-years summary tables are also presented.

By checking the table of contents, the table and page numbers for the different open-pedigree hybrids, closed-pedigree hybrids, and sources of seed can be determined.

DISTRICT 1

Data for District 1 are presented in Tables 5 and 6. A summary of cultural practices is presented in Table 4.

This site was characterized by a lack of subsoil moisture going into the spring. Precipitation in May was 1.4 inches above normal, but the latter part of June, and the months of July and August showed significant deficits. The total deficit for the season was 3.48 inches of precipitation. During the growing season the temperature ranged from 0.3 to 3.2 degrees above normal.

The average yield from a harvest stand of 18,000 plants was 79.2 bushels, up 7.9 bushels from the 1974 average and down 67 bushels from the 1973 average. The yield ranged from 48 to 107 bushels per acre. The average stand loss for the hybrids was within the 15% allowance made at planting time. However, the stand loss for individual hybrids was as large as 27.2% and as small as 4.4% indicating a considerable difference in seed quality and seedling vigor.

Stalk lodging ranged from 1.9 to 85.4%, with the average for all hybrids being 33.9%. Root lodging ranged from 0 to 23.4%, with the average over all hybrids being 4.5%. Dropped ears were less than 1.5%.

Weeds were not a problem during the season.

For more reliable results, hybrids that have proven their potential over two or three-year periods should be considered. 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 29, 1975. HARVESTED SEPTEMBER 26, 1975.

BRAND--HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	PLANTS PER ACRE (#)	LODGED PLANTS ROOT (%)	LODGED PLANTS STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
	GROUP I MATURITY						
ACCO UC4601(SX)	73.0	18.8	17700	0.0	54.0	0.0	3.7
ACCO UC6601(SX)	78.9	19.1	17900	5.4	70.8	0.0	3.7
BC-JAC X35(SPX)	89.9	18.6	19100	1.4	66.6	0.0	4.2
BC-JAC X37(SX)	77.8	18.5	16800	5.5	31.2	0.6	4.0
BC-JAC X56(SX)	82.7	19.7	19100	1.5	16.9	0.0	4.3
USS 0555(3X)	83.8	18.7	17600	6.3	34.7	0.0	4.2
USS 0555A(3X)	73.7	18.7	15500	3.0	30.2	0.6	4.0
GLDNHRVST H2500(SX)	74.4	19.9	17100	8.1	15.6	0.0	4.2
GLDNHRVST H2580(SPX)	77.7	19.5	17400	3.2	23.8	0.0	4.3
FUNKS G-4507(SX)	84.5	21.6	18300	9.4	21.3	0.0	4.0
FUNKS G-4503(SX)	96.3	19.6	19500	8.5	9.3	0.5	4.2
SUPERCROST 4242(SPX)	83.4	17.7	18100	1.7	71.4	0.0	4.0
MFA 5001(SX)	84.8	18.3	18400	5.8	28.4	0.0	4.7
MCALLSTR SX7408(SX)	78.3	18.5	19400	6.9	9.9	0.5	4.3
N-K PX65(SX)	81.1	18.3	17700	13.2	20.1	0.0	4.7
N-K PX606(3X)	68.1	18.4	17400	8.2	27.4	0.0	4.2
PIONEER 3390(SPX) **	63.5	20.5	17600	2.1	15.2	0.5	3.8
PIONEER 3388(SPX) **	107.0	19.7	17700	5.3	26.3	0.0	4.0
PIONEER 3517(SPX)	77.8	18.3	16800	4.3	31.3	0.0	3.5
PIONEER 3424(DX)	89.4	18.0	18000	2.7	43.8	0.0	3.7
PIONEER X2226(SPX)	84.9	19.7	15900	1.8	10.9	0.0	3.3
TROJAN TXS108A(SPX)	83.0	18.1	17400	5.5	31.4	3.0	4.2
FULTING X770(SX)	104.1	18.5	18700	17.7	53.3	0.0	4.3
	GROUP II MATURITY						
HORIZON KR870(SX)	78.4	19.8	18800	4.1	16.4	0.0	4.3
HORIZON KR870A(SX)	95.0	21.2	17800	1.5	22.2	0.0	4.2
HORIZON KR871(SX)	71.8	23.1	17000	6.2	16.5	0.0	4.2
HORIZON KR861(SX)	92.6	18.9	15300	6.5	16.8	0.0	4.3
ACCO UC9301(SX)	98.0	19.6	17800	3.3	67.0	0.0	3.5
ACCO UC9451(SX)	55.4	21.2	18500	0.0	67.4	0.0	3.8
ACCO EXP48951(SX)	72.7	22.8	18300	3.1	26.5	0.0	4.5
ASGROW RX100(SX)	75.9	21.1	19700	3.7	56.5	0.0	4.2
BC-JAC X7L(SX)	67.9	20.4	17700	1.5	58.9	0.0	3.7
BC-JAC X1A(SX)	68.4	21.5	17400	8.9	26.8	0.0	4.2
BC-JAC X83(SPX)	100.4	22.2	18600	4.8	18.0	0.0	4.3
BC-JAC X69(SX)	75.7	18.9	18800	9.9	2.9	0.0	4.5
BC-JAC X52A(SX)	73.0	20.7	18300	6.3	48.0	0.0	4.0
BC-JAC X52C(SX)	83.4	20.3	19100	4.8	48.3	0.0	4.0
CARGILL 949	80.6	19.7	18100	2.1	12.3	0.0	4.2
COOP 2318(SX)	79.2	21.2	17400	4.8	31.9	0.0	3.7
COOP 3300(3X)	71.2	19.7	17600	8.1	22.9	0.0	4.0
COOP 2300(SX)	70.1	20.2	17000	2.8	15.3	0.0	4.3
DEKALB XL81(SX)**	85.5	21.4	18400	1.5	61.5	0.0	4.0
DEKALB XL72A(SX)**	69.8	21.4	16800	2.1	39.0	0.0	4.0
USS 1010(SX)	86.7	19.9	16900	5.4	17.7	0.0	4.3
USS 1515(SX)	78.7	21.0	19300	0.5	22.9	0.0	4.0
GLDNHRVST H2655(SX)	74.1	18.6	17700	1.5	59.4	0.5	3.7
GLDNHRVST H2650(SX)	71.2	20.0	18600	2.0	55.0	0.0	3.8
GLDNHRVST H2615(SPX)	63.2	21.5	18300	5.0	24.8	0.0	4.2
FEDERAL FX59(SX)	65.7	20.2	18500	1.5	38.4	0.0	3.7
FEDERAL 47(DX)	59.9	19.2	17000	5.8	45.2	0.6	4.2
FONTANELLE 660(SX)	66.4	21.1	16500	0.5	52.1	0.5	4.3
FONTANELLE 590(SX)	91.7	18.5	19000	4.8	5.2	0.0	4.3
FUNKS G-4628(SX)	99.3	21.8	19900	0.5	43.4	0.0	3.7
FUNKS G-4737(SX)	69.8	20.1	19800	0.9	70.7	0.0	3.5
FUNKS G-5666(DX)	81.2	20.1	19200	1.4	50.2	0.0	3.7
SUPERCROST S-85(SX)	77.7	19.8	17300	2.8	34.2	0.0	3.8
SUPERCROST 5440(SX)	71.0	19.8	16000	2.7	12.1	0.0	4.0
HAPPEL 3361(3X)	68.1	20.6	17600	1.5	53.0	0.6	3.8
HAPPEL MS-72(SX)	72.8	19.6	18800	3.0	66.4	0.0	3.8
HAPPEL H-37(SPX)	60.9	19.7	17600	0.0	11.0	0.0	3.8
LEWIS X788(SX)	74.7	20.9	17000	1.1	54.6	0.0	4.0
LEWIS X348(SX)	90.3	19.5	18500	4.0	62.9	0.0	4.0
LEWIS X628(SX)	103.7	20.8	19700	3.4	32.7	0.0	4.0
LEWIS X288(SX)	95.2	18.8	20000	6.5	11.6	0.0	4.3
LEWIS 708B(3X)	76.5	20.6	17400	4.3	28.0	0.0	4.2
MFA V-12(SX)**	73.2	19.4	17700	3.6	30.6	0.0	4.0
MFA V-16(SX)**	73.9	21.3	17700	8.6	26.2	0.0	4.0
MFA 3030(DX)	79.1	23.6	17400	5.4	33.5	0.5	3.7
MFA 6041(SPX)	83.1	19.0	18400	3.1	59.4	0.0	3.7
MFA 6061(3X)	71.0	19.6	17800	1.0	23.0	0.5	4.0

TABLE 5. (CONTINUED).

BRAND--HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	PLANTS PER ACRE (#)	LODGED PLANTS ROOT (%)	LODGED PLANTS STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
	GROUP II MATURITY						
MFA EXPS4434(SX)	64.0	19.4	18700	3.0	27.4	0.0	4.2
MCALLSTR SX6837(SX)	80.3	20.5	17400	1.7	31.6	0.0	3.7
MCALLSTR SX7207(SX)	75.6	19.1	18000	4.3	85.4	0.0	4.0
MCALLSTR SX7300(SX)	83.5	20.2	16200	2.5	18.1	0.0	4.2
MCCURDY MSX85(SX)	85.6	19.2	18200	6.4	16.8	0.0	4.2
MCCURDY MSP888(3X)	74.9	20.2	19700	2.7	28.1	0.0	4.2
MCCURDY MSX70(SX)	77.0	19.1	16500	3.2	15.5	0.0	4.3
MCCURDY 73-101(3X)	65.5	21.1	18900	3.0	37.5	0.0	4.7
NC+ 77(SX)	80.4	20.1	19000	2.5	18.6	0.0	4.2
NC+ 85(SX)	74.1	21.2	17700	2.7	55.3	0.0	3.8
NC+ 59(SX)	105.6	19.8	17800	6.6	28.6	0.0	4.2
N-K PX616(3X) **	71.4	19.5	15800	1.1	31.7	0.0	3.5
N-K PX74(SX)	86.6	19.5	19000	4.9	16.9	1.0	4.3
N-K PX76(SX)	91.1	20.2	18500	6.4	53.1	0.0	3.8
N-K PX675(3X)	87.6	19.9	18500	23.4	12.7	0.0	4.0
O*S GOLD SX5500(SX)**	76.5	20.1	17300	1.0	38.6	0.5	3.5
O*S GOLD TX105E(3X)	74.6	20.2	17200	2.6	22.3	0.0	4.3
O*S GOLD SX5500A(SX)	90.2	20.7	17400	8.6	12.5	0.0	4.0
PAG S>98(SX) **	71.0	21.4	17400	0.0	40.7	0.0	3.8
PAG 494(SX)	85.3	20.2	17500	11.6	35.8	0.0	3.8
PIONEER 3369A(SX)**	78.6	19.6	17200	2.6	47.5	0.0	3.8
PIONEER 3219(DX)	76.4	20.4	17000	2.3	15.0	0.0	3.8
PIONEER 3325(SX)	89.0	19.9	19100	2.5	16.1	0.0	4.0
PIONEER 3184(SX)	77.5	21.1	19700	9.0	1.9	0.0	4.7
PIONEER 3315(3X)	73.4	20.9	19100	3.8	31.5	0.0	4.0
TROJAN TXS119(SX)**	69.3	20.2	18000	1.1	45.1	0.0	3.5
TROJAN TXS111(SX)	82.4	19.1	18000	5.9	13.6	0.0	4.3
TROJAN TXS113(SPX)**	94.8	19.7	18800	6.7	48.1	0.0	3.7
TROJAN TXS114(SX)	83.6	21.9	18000	11.7	31.8	0.0	4.3
TROJAN TXS118A(SX)**	80.8	18.7	16700	3.0	46.7	0.0	3.8
TROJAN TXS115A(SX)	87.8	20.9	18800	1.9	17.8	0.0	4.5
TROJAN TXS117A(SPX)	85.2	21.0	19000	1.5	43.6	0.5	4.3
MC (MO17XB73)(SX)	88.5	20.2	17700	8.0	31.5	0.0	4.0
(FR37 X H84)H98(3X)	94.7	19.7	17900	4.0	62.1	0.0	3.8
(FRN28XB73)MO17(3X)	71.8	21.1	16800	5.6	32.1	0.0	4.2
MC (MO17XN28)(SX)	93.2	21.4	19500	2.0	17.5	0.5	4.0
B73 X VA26 H7(SX)	81.1	19.5	18400	3.6	31.3	0.0	4.2
B73 X H98(SX)	67.1	20.8	17400	3.1	31.1	0.0	3.8
B73 X FR177(SX)	72.3	21.5	16500	2.2	36.8	0.6	4.0
(H93 X H84)VA26(3X)	94.3	19.2	19100	12.7	45.3	0.0	4.0
(FR37XB73)VA26H7(3X)	75.8	19.4	18700	6.0	60.9	0.5	4.0
US-13(DX)	48.1	20.9	15800	8.1	43.6	1.3	4.2
WALTHER W271(DX)	69.7	19.1	19100	2.5	38.5	0.5	4.2
WILSON 1800(SX)	76.7	20.4	16400	4.7	4.4	0.0	4.3
WILSON 1040(SX)	93.6	18.1	16500	3.0	11.7	0.0	4.2
WILSON 1790(3X)	87.2	20.5	17800	2.5	31.8	0.0	4.0
	GROUP III MATURITY						
FUNKS G-4538W(SX)*	73.7	20.3	20100	7.3	50.2	0.0	4.2
FUNKS G-4747W(SPX)*	48.4	24.1	19400	9.0	15.1	0.0	5.0
LEWIS X808(SX)	87.6	21.7	18000	3.7	37.6	0.0	4.5
MCCURDY MSX68(SX)	63.2	20.7	18700	0.5	48.7	0.0	4.0
PIONEER 3177(3X)	74.8	21.8	17100	10.7	42.1	0.0	4.7
AVERAGE	79.2	20.1	17976	4.5	33.9	0.1	4.1

LSD AT 5% LEVEL IS 18.2 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 11.7 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 TWO-YEAR PERIOD 1974-75 AND THE THREE-YEAR PERIOD 1973-75.

BRAND--HYBRID	2-YEAR AVERAGE					3-YEAR AVERAGE				
	ACRE YIELD (BU)	LODGING ROOT (%)	LODGING STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)	ACRE YIELD (BU)	LODGING ROOT (%)	LODGING STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
					GROUP 1 MATURITY					
ACCO UC6601(SX)	71.9	2.9	36.8	0.0	3.6	-	-	-	-	-
EO-JAC X35(SPX)	83.9	1.1	36.3	0.2	4.0	109.0	0.7	28.0	0.4	3.9
EO-JAC X37(SX)	82.9	2.7	16.1	0.5	3.8	-	-	-	-	-
EO-JAC X56(SX)	79.8	0.7	8.6	0.2	4.1	108.0	0.5	7.8	0.3	4.1
FUNKS G-4507(SX)	73.3	4.7	11.2	0.5	4.0	-	-	-	-	-
MFA 5001(SX)	79.9	2.9	14.8	0.0	4.1	-	-	-	-	-
PIONEER 3390(SPX)	72.3	1.1	8.4	0.6	3.8	96.6	0.7	8.2	1.2	3.8
PIONEER 3388(SPX)	97.0	2.7	13.7	0.0	3.8	112.8	1.8	10.1	0.5	3.8
PIONEER 3517(SPX)	77.4	2.2	15.7	0.2	3.4	95.3	1.4	10.8	0.4	3.4
PIONEER 3424(DX)	75.2	1.8	23.3	0.0	3.7	-	-	-	-	-
					GROUP 2 MATURITY					
ACCO UC9301(SX)	85.5	5.0	33.7	0.0	3.5	-	-	-	-	-
ASGROW RX100(SX)	66.9	2.8	28.6	0.0	3.8	95.0	1.8	20.8	0.1	3.8
EO-JAC X7L(SX)	69.9	0.9	29.8	0.5	3.7	101.2	0.6	21.0	0.9	3.7
EO-JAC X1A(SX)	67.7	4.6	16.4	0.0	4.0	94.8	3.1	15.1	1.0	3.9
COOP 2318(SX)	76.6	2.4	16.1	0.0	3.6	102.3	1.6	12.1	0.7	3.5
DEKALB XL81(SX)	82.3	1.3	31.2	0.0	3.9	94.0	0.9	22.1	0.6	3.8
DEKALB XL72A(SX)	69.4	1.2	20.8	0.0	3.8	-	-	-	-	-
FEDERAL FX59(SX)	74.3	1.0	20.3	0.0	3.7	-	-	-	-	-
FONTANELLE 660(SX)	72.2	0.3	26.5	0.6	4.1	99.3	0.2	19.7	1.2	3.9
FUNKS G-4628(SX)	84.6	0.5	22.4	0.2	3.6	111.2	0.3	16.0	0.4	3.6
FUNKS G-4737(SX)	70.9	0.5	36.6	0.0	3.5	98.1	0.3	27.2	0.1	3.4
FUNKS G-5666(DX)	72.6	1.1	26.1	0.0	3.8	-	-	-	-	-
HAPPEL 3361(3X)	69.1	1.3	27.8	0.3	3.8	86.9	0.9	22.0	1.2	3.8
HAPPEL MS-72(SX)	71.9	1.5	34.1	0.2	3.8	97.0	1.0	24.7	0.8	3.8
HAPPEL H-37(SPX)	73.9	0.0	5.9	0.2	3.8	92.9	0.0	6.0	0.4	3.9
LEWIS X78B(SX)	80.3	0.9	27.5	0.2	3.8	105.8	0.6	19.4	0.7	3.6
LEWIS X348(SX)	87.1	3.1	32.6	0.0	3.8	-	-	-	-	-
MFA V-12(SX)	74.1	1.8	16.1	0.0	3.9	103.9	1.2	12.1	0.0	3.8
MFA V-16(SX)	74.4	4.3	13.3	0.2	3.8	101.4	2.8	10.2	0.3	3.6
MFA 3030(DX)	72.6	2.9	17.1	0.9	3.7	96.6	1.9	13.3	0.8	3.6
MFA 6041(SPX)	82.1	3.0	30.5	0.2	3.7	-	-	-	-	-
MFA 6061(3X)	74.5	1.2	11.7	0.3	3.8	-	-	-	-	-
MFA EXP54434(SX)	73.5	1.5	14.1	0.0	4.0	-	-	-	-	-
MCALLSTR SX6837(SX)	83.6	0.9	16.2	0.2	3.6	106.1	0.6	17.4	0.3	3.6
MCALLSTR SX7207(SX)	74.8	3.2	43.8	0.3	3.9	-	-	-	-	-
MCALLSTR SX7300(SX)	82.3	1.3	9.1	0.0	4.1	-	-	-	-	-
MCCURDY MSX85(SX)	85.3	3.2	9.7	0.0	4.0	109.9	2.1	9.3	0.4	4.0
MCCURDY MSP888(3X)	76.4	1.4	14.8	0.0	3.9	102.9	0.9	12.6	0.3	3.9
MCCURDY MSX70(SX)	74.0	1.8	8.7	0.0	4.1	99.8	1.2	8.4	0.5	3.9
N-K PX616(3X)	61.7	0.6	16.9	0.0	3.5	89.0	0.4	13.7	0.4	3.6
N-K PX74(SX)	82.3	2.4	8.5	0.7	4.1	-	-	-	-	-
N-K PX76(SX)	81.1	4.7	28.0	0.0	3.7	-	-	-	-	-
N-K PX675(3X)	79.3	11.7	6.7	0.2	3.8	-	-	-	-	-
O*S GOLD SX5500(SX)	80.8	0.5	19.5	0.2	3.7	101.8	0.3	14.5	0.4	3.6
O*S GOLD SX5500A(SX)	88.1	4.3	6.2	0.4	3.9	-	-	-	-	-
PAG SX98(SX)	73.0	0.0	20.5	0.0	3.7	-	-	-	-	-
PIONEER 3369A(SX)	72.8	1.4	23.8	0.0	3.8	97.4	0.9	17.4	0.5	3.8
PIONEER 3219(DX)	73.2	1.2	7.8	0.0	3.7	97.0	0.8	6.4	0.0	3.7
PIONEER 3325(SX)	82.0	1.3	8.6	0.0	3.9	-	-	-	-	-
TROJAN TXS119(SX)	69.1	0.5	22.7	0.0	3.5	99.4	0.4	16.1	0.6	3.6
TROJAN TXS113(SPX)	88.4	3.4	24.6	0.0	3.5	104.9	2.2	17.9	0.6	3.4
TROJAN TXS118A(SX)	77.4	1.5	23.7	0.4	3.8	-	-	-	-	-
TROJAN TXS115A(SX)	72.4	1.0	9.1	0.6	4.3	-	-	-	-	-
MO (MO17XB73)(SX)	78.8	4.0	16.3	0.4	3.9	-	-	-	-	-
US-13(DX)	44.1	4.6	24.6	1.4	4.0	66.0	3.1	25.7	2.9	4.1
WILSON 1800(SX)	74.3	2.5	3.0	0.2	4.2	-	-	-	-	-
WILSON 1040(SX)	85.8	2.5	6.1	0.4	3.8	-	-	-	-	-
					GROUP 3 MATURITY					
MCCURDY MSX88(SX)	68.6	0.6	24.6	0.2	3.9	96.6	0.4	17.1	0.5	3.8
AVERAGE	76.5	2.2	19.4	0.2	3.8	99.2	1.1	15.6	0.6	3.7

*WHITE 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 droughty period during the 1975 growing season. June, July, and August showed precipitation deficits of 1.67, 2.87, and 0.48 inches, respectively. The average temperatures were above normal for these months. A complete summary of precipitation and temperature is presented in Tables 1 and 2.

The average yield of 66 bushels per acre was 35 bushels below the 1974 average and 81 bushels below the 1973 average. The range in yield was from a low of 49 to a high of 89 bushels per acre. The average harvest stand was 17,600 plants per acre, which was a stand loss of approximately 15%.

Average stalk lodging was 8.3%. The range for the individual hybrids was 1.0% to 29.7%. Root lodging and dropped ears were minimal, averaging only 1.0% and 0.5%, respectively.

Weeds were not a factor in determining the final yield at this location in 1975.

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 MAY 5, 1975. HARVESTED OCTOBER 1, 1975.

BRAND--HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	PLANTS PER ACRE (#)	LODGED PLANTS ROOT (%)	LODGED PLANTS STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
GROUP I MATURITY							
ACCO UC6601(SX)	77.8	23.5	18500	0.5	17.4	0.5	3.7
BURRUS EX20(SX)	73.2	24.9	19800	0.0	2.3	0.9	3.8
BC-JAC X35(SPX)	63.7	27.8	16800	0.0	8.1	0.0	4.4
EC-JAC X37(SX)	64.3	23.2	19300	0.0	1.0	0.0	4.0
EC-JAC X56(SX)	70.0	25.2	18800	1.9	5.3	0.5	4.3
USS 0855(3X)	56.2	23.9	19400	2.4	5.2	1.9	3.9
USS 0555A(3X)	67.9	25.7	15700	0.0	7.4	1.1	4.0
FUNKS G-4507(SX)	67.3	26.4	18000	0.5	8.2	1.1	3.8
FUNKS G-4503(SX)	69.3	24.5	18400	0.5	19.4	0.5	3.8
SUPERCROST 4242(SPX)	69.8	23.8	17900	1.0	5.1	0.0	3.7
SUPERCROST 2890(SX)	62.5	22.5	17100	1.0	3.7	0.0	3.3
NFA 5001(SX)	66.5	21.4	19300	0.5	10.3	0.5	4.0
MCALLSTR SX7408(SX)	49.0	25.9	16200	4.7	2.8	0.6	4.3
PAG SX7(SX) **	66.5	23.1	19200	0.0	12.1	0.0	3.4
PAG 424(SX)	57.3	23.0	16400	5.6	29.7	0.6	3.5
PIONEER 3390(SPX) **	61.8	23.3	16000	0.5	11.6	1.2	3.7
PIONEER 3388(SPX) **	89.1	23.5	18700	0.5	2.8	0.0	3.5
PIONEER 3517(SPX)	68.6	21.9	18300	1.5	2.5	0.5	2.8
PIONEER 3424(DX)	59.6	22.5	18700	0.0	4.6	0.0	3.7
PIONEER X2226(SPX)	59.6	24.9	15300	0.0	1.8	0.0	3.7
TROJAN TXS108A(SPX)	60.9	22.3	18800	0.0	1.5	0.5	4.2
HULTING X770(SX)	71.0	23.5	17900	0.0	5.2	0.0	3.7
GROUP II MATURITY							
ACCO UC9351(SX)	61.6	25.8	19000	1.5	19.3	0.5	3.5
ACCO UC9451(SX)	49.2	24.9	18400	4.0	21.3	3.0	4.5
ASGROW RX100(SX)	62.9	28.0	17700	1.0	5.4	0.0	4.3
ASGROW RX90(SX)	58.2	25.4	16000	1.1	2.9	2.9	4.1
BURRUS EX25(SX)	65.5	27.2	18700	0.0	7.3	1.0	3.8
BURRUS EX30(SX)	65.4	24.1	15500	1.3	1.8	0.6	4.0
BC-JAC X7L(SX)	68.7	28.2	18800	0.0	13.4	0.5	3.7
EC-JAC X83(SPX)	66.0	27.1	17100	0.5	8.0	0.5	3.6
BC-JAC X69(SX)	61.3	26.3	18800	0.9	4.8	1.0	4.2
EC-JAC X52A(SX)	61.4	27.0	17400	0.0	8.5	0.0	3.7
EC-JAC X52B(SX)	68.2	23.0	19300	1.0	4.8	0.0	4.1
CARGILL 949	67.7	26.6	15800	1.2	2.3	1.7	4.2
CARGILL 920	71.3	25.2	17400	0.6	12.6	0.5	4.0
DEKALB XL81(SX) **	76.9	25.0	17700	0.0	23.6	1.1	3.7
DEKALB XL72A(SX) **	69.5	25.5	17400	0.0	12.2	1.0	3.8
USS 1010(SX)	69.4	25.5	16400	0.0	9.2	0.6	4.0
USS 1515(SX)	78.2	28.3	18900	0.0	1.5	0.0	3.7
FUNKS G-4697(SPX) **	60.6	24.5	17200	9.0	13.1	0.0	4.0
FUNKS G-4628(SX)	73.4	25.3	17100	0.0	4.9	0.6	3.6
FUNKS G-4737(SX)	67.3	28.2	17500	0.5	8.6	0.0	3.7
FUNKS G-5666(DX)	60.2	26.6	19300	0.0	8.5	1.5	3.7
SUPERCROST S-85(SX)	72.4	26.4	18100	0.4	10.6	0.0	3.7
SUPERCROST 7772(SPX)	55.5	25.1	16600	1.6	18.4	0.5	3.6
SUPERCROST 5440(SX)	66.5	25.6	17100	0.0	7.0	0.6	4.1
HAPPEL 3361(3X)	61.8	23.3	18300	1.0	17.0	2.0	4.0
HAPPEL MS-72(SX)	71.9	27.1	18500	0.0	14.2	0.0	3.5
HAPPEL H-37(SPX)	58.7	25.2	13300	0.8	4.1	0.0	4.0
LEWIS X78B(SX)	61.3	25.0	17000	0.0	20.7	0.6	3.5
LEWIS X34B(SX)	65.3	23.7	17100	1.2	3.2	0.0	3.5
LEWIS X628(SX)	68.9	25.0	19100	1.5	2.3	0.9	4.1
LEWIS X28B(SX)	57.2	25.4	17400	2.1	2.1	0.0	4.2
LEWIS 708B(3X)	68.3	27.0	18500	0.0	5.5	0.5	3.8
NFA V-12(SX) **	55.5	25.4	16200	0.5	4.5	0.6	3.7
NFA V-16(SX)	78.1	24.3	17400	0.0	8.6	0.0	3.9
NFA 3030(DX)	63.7	26.1	15800	2.8	9.3	0.0	4.1
NFA 6041(SPX)	74.9	24.4	18100	1.6	9.0	0.5	3.5
NFA 6061(3X)	59.3	24.8	16800	0.0	3.5	1.0	3.7
NFA EXP54434(SX)	71.4	24.7	18500	0.0	2.6	1.9	4.0
MORTON 6700(SX)	72.9	27.1	15700	0.0	11.7	0.7	3.8
MORTON 9300(3X)	64.5	24.9	18400	2.4	3.4	0.0	3.5
MORTON 3200(SX)	68.2	25.0	19600	0.5	3.8	0.9	4.5
MCALLSTR SX7207(SX)	63.1	23.5	18200	2.5	6.6	0.0	4.0
MCALLSTR SX7300(SX)	70.0	26.0	18800	0.5	5.5	0.0	4.3
MCCURDY MSX84(SX)	65.7	24.2	18800	0.0	2.0	0.5	4.0
N-K PX616(3X) **	64.2	25.0	14400	2.5	14.1	0.0	3.5
N-K PX77(SX) **	64.2	24.0	19200	0.5	2.8	0.0	3.6
N-K PX74(SX)	68.8	25.8	16700	0.0	1.6	0.0	4.3
N-K PX76(SX)	67.6	24.8	17700	2.0	18.5	0.0	4.0

TABLE 7. (CONTINUED).

BRAND--HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	PLANTS PER ACRE (#)	LODGED ROOT (%)	LODGED PLANTS STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
	GROUP II MATURITY						
N-K PX675(3X)	65.4	24.6	18800	0.5	5.4	1.5	4.3
O*S GOLD SX5500(SX)	64.2	29.4	16100	0.0	4.0	0.6	3.5
O*S GOLD TX104B(3X)	67.3	24.9	16000	0.0	11.4	0.0	4.2
O*S GOLD SX5500A(SX)	70.2	25.3	16800	0.0	5.5	0.0	3.9
PAG SX98(SX)	80.6	27.9	16400	0.0	2.7	0.6	3.7
PAG 494(SX)	63.6	23.6	17700	4.8	3.2	0.0	3.6
PIONEER 3369A(SX)	76.1	22.7	18100	0.5	11.7	0.0	3.8
PIONEER 3219(DX)	69.3	25.9	17800	0.0	15.4	0.0	3.9
PIONEER 3325(SX)	67.0	24.9	17300	0.5	4.3	0.0	4.2
PIONEER 3184(SX)	63.5	29.1	18500	0.0	6.2	0.5	4.0
PIONEER 3315(3X)	52.5	26.9	18700	0.5	10.4	0.0	3.7
TROJAN TXS119(SX)	61.2	26.9	19000	0.0	12.0	0.5	3.8
TROJAN TXS111(SX)	64.1	23.6	16100	1.1	2.9	1.7	3.8
TROJAN TXS113(SPX)	63.8	25.3	18000	2.1	2.0	0.0	3.7
TROJAN TXS114(SX)	67.6	24.7	20000	0.0	11.6	0.0	4.3
TROJAN TXS115A(SX)	64.9	24.1	17100	2.1	3.3	1.1	4.0
TROJAN TXS117A(SPX)	69.4	27.3	17700	1.0	7.8	1.6	3.8
WC (MO17XB73)(SX)	64.5	26.4	16700	0.5	1.7	0.0	4.2
(FR37 X H84)H98(3X)	52.1	23.2	17700	1.0	21.8	0.0	3.6
WC (MO17XN28)(SX)	62.4	26.0	17600	0.6	7.0	0.0	4.0
B73 X VA26 H7(SX)	72.7	25.6	15000	0.0	2.3	0.0	4.2
B73 X H98(SX)	56.3	25.3	12600	0.0	18.7	0.7	4.0
(H93 X H84)VA26(3X)	68.8	25.7	16500	4.9	2.2	0.0	3.7
US-13(DX)	51.0	25.2	16500	2.1	24.0	0.0	3.9
FULTING X9880(3X)	70.0	26.0	17200	3.3	7.5	1.6	3.9
FULTING X980(SX)	70.1	24.7	17200	0.0	6.7	1.2	4.0
	GROUP III MATURITY						
FUNKS G-5757(DX)	60.0	30.3	16500	5.3	7.6	0.5	4.2
LEWIS X808(SX)	73.6	26.7	16600	0.0	6.6	0.0	3.8
MCCURDY MSX88(SX)	70.8	24.7	19200	0.5	13.6	0.5	3.7
PIONEER 3177(3X)	49.7	24.6	17600	3.5	17.4	0.0	4.6
AVERAGE	65.7	25.3	17501	1.0	8.3	0.5	3.9

LSD AT 5% LEVEL IS 10.8 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 6.9 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 CENTER (NMC) NEAR SPICKARD, MISSOURI (GRUNDY COUNTY) DURING THE TWO-YEAR PERIOD 1974-75 AND THE THREE-YEAR PERIOD 1973-75.

BRAND--HYBRID	2-YEAR AVERAGE					3-YEAR AVERAGE				
	ACRE YIELD (BU)	LODGING ROOT (%)	LODGING STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)	ACRE YIELD (BU)	LODGING ROOT (%)	LODGING STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
					GROUP 1 MATURITY					
ACCO UC6601(SX)	93.4	0.2	9.2	0.5	3.4	-	-	-	-	-
BURRUS BX20(SX)	82.6	0.0	1.7	1.5	3.9	-	-	-	-	-
BO-JAC X35(SPX)	93.3	0.3	6.7	0.7	4.2	-	-	-	-	-
BO-JAC X37(SX)	86.1	0.5	2.0	1.3	3.8	-	-	-	-	-
BO-JAC X56(SX)	92.5	0.9	2.7	0.7	4.0	-	-	-	-	-
FUNKS G-4507(SX)	80.1	0.5	5.5	1.2	3.8	-	-	-	-	-
SUPERCROST 4242(SPX)	94.9	0.7	4.2	1.3	3.6	-	-	-	-	-
MFA 5001(SX)	86.8	0.5	5.6	0.7	3.9	-	-	-	-	-
PAG SX7(SX)	82.8	0.0	8.8	0.5	3.4	103.8	0.9	9.1	1.1	3.4
PIONEER 3390(SPX)	85.4	0.3	6.0	0.8	3.6	106.4	0.7	8.9	0.7	3.7
PIONEER 3388(SPX)	100.1	0.5	2.6	0.0	3.3	111.4	0.3	4.7	0.2	3.4
PIONEER 3517(SPX)	82.8	0.8	2.3	0.8	3.1	106.5	0.5	4.8	0.7	3.3
PIONEER 3424(DX)	83.8	0.2	2.5	0.0	3.4	-	-	-	-	-
					GROUP 2 MATURITY					
ASGROW RX100(SX)	87.4	0.5	4.4	0.2	3.8	110.8	0.3	5.1	0.6	3.9
ASGROW RX90(SX)	76.1	0.6	2.1	2.2	3.9	-	-	-	-	-
BURRUS BX25(SX)	87.3	0.0	4.1	1.7	3.7	-	-	-	-	-
BURRUS BX30(SX)	80.7	0.6	2.0	1.0	3.9	-	-	-	-	-
BO-JAC X7L(SX)	91.3	0.0	7.4	0.3	3.8	114.8	0.0	8.2	0.2	3.9
BO-JAC X83(SPX)	86.5	0.5	4.2	0.5	3.4	108.1	0.5	5.6	0.7	3.7
DEKALB XL81(SX)	91.4	1.2	13.0	1.0	3.7	105.6	1.0	12.1	1.2	3.9
DEKALB XL72A(SX)	83.3	0.0	6.1	1.8	3.8	108.8	0.4	5.7	1.5	3.9
FUNKS G-4697(SPX)	74.8	5.2	8.8	0.0	3.8	98.8	3.8	8.4	0.2	3.8
FUNKS G-4628(SX)	82.2	0.0	2.5	1.1	3.5	109.3	0.0	2.7	1.3	3.8
FUNKS G-4737(SX)	81.1	0.3	5.7	0.2	3.3	99.6	0.2	9.4	0.2	3.5
FUNKS G-5666(DX)	80.6	0.5	4.2	1.0	3.6	-	-	-	-	-
SUPERCROST S-85(SX)	88.7	0.2	5.8	0.5	3.6	103.8	0.1	5.9	0.7	3.8
SUPERCROST 7772(SPX)	80.8	1.1	9.5	0.5	3.5	-	-	-	-	-
SUPERCROST 5440(SX)	78.8	0.5	4.2	0.9	3.9	-	-	-	-	-
TAPPEL 3361(3X)	86.9	1.2	6.7	1.7	3.9	97.4	1.0	12.2	1.5	4.0
TAPPEL MS-72(SX)	83.4	0.0	7.4	0.3	3.4	105.6	0.2	7.1	0.4	3.7
TAPPEL H-37(SPX)	74.3	0.4	2.9	0.6	4.1	92.7	0.6	4.4	0.6	4.2
LEWIS X788(SX)	84.1	0.0	11.4	0.3	3.4	112.1	0.2	10.6	0.2	3.6
LEWIS X348(SX)	89.1	0.6	2.1	0.0	3.5	115.8	0.8	3.8	0.3	3.7
MFA V-12(SX)	73.8	0.3	3.8	0.9	3.3	96.2	0.2	4.9	0.6	3.6
MFA V-16(SX)	91.6	0.0	4.5	0.5	3.7	117.1	0.0	5.3	0.7	3.9
MFA 3030(DX)	81.8	1.4	5.2	0.8	3.9	103.4	3.6	5.6	0.7	4.0
MFA 6041(SPX)	93.4	1.0	5.2	0.5	3.4	-	-	-	-	-
MFA 6061(3X)	79.6	0.0	2.8	1.5	3.7	-	-	-	-	-
MFA EXP5443(SX)	76.2	0.3	2.3	1.2	4.2	-	-	-	-	-
MCALLSTR SX7207(SX)	88.1	1.5	4.0	0.7	3.8	-	-	-	-	-
MCALLSTR SX7300(SX)	84.5	0.3	2.7	0.5	4.1	-	-	-	-	-
MCCURDY MSX84(SX)	84.3	0.0	2.2	0.7	3.8	-	-	-	-	-
N-K PX616(3X)	76.1	2.0	8.1	1.5	3.5	97.0	1.6	10.0	1.4	3.7
N-K PX77(SX)	81.6	0.2	1.6	0.5	3.5	105.2	4.6	2.7	0.3	3.8
N-K PX74(SX)	81.4	0.3	1.1	0.7	4.1	-	-	-	-	-
N-K PX76(SX)	87.8	2.0	10.0	0.0	3.8	-	-	-	-	-
N-K PX675(3X)	84.7	0.3	3.9	1.3	3.8	-	-	-	-	-
O'S GOLD SX5500(SX)	82.1	0.0	2.8	1.3	3.8	101.1	0.2	4.2	1.2	3.9
O'S GOLD TX104B(3X)	80.6	2.3	6.4	0.2	4.1	-	-	-	-	-
O'S GOLD SX5500A(SX)	86.1	0.0	3.4	0.5	3.9	-	-	-	-	-
PAG SX98(SX)	91.3	0.0	2.4	1.1	3.5	-	-	-	-	-
PIONEER 3369A(SX)	93.6	1.5	5.8	0.8	3.8	114.9	1.2	6.0	1.5	4.0
PIONEER 3219(DX)	90.6	0.7	8.4	0.0	3.9	119.2	0.5	6.9	0.2	3.9
PIONEER 3325(SX)	89.0	0.3	2.2	0.0	4.0	-	-	-	-	-
TROJAN TXS119(SX)	80.6	0.0	6.2	1.3	3.7	107.5	0.0	7.4	1.2	3.9
TROJAN TXS113(SPX)	87.4	1.0	1.7	0.9	3.7	108.4	1.6	2.9	0.6	3.9
TROJAN TXS115A(SX)	79.4	1.3	2.4	0.8	4.0	-	-	-	-	-
(FR37 X H84)H98(3X)	78.6	1.0	11.9	0.0	3.6	-	-	-	-	-
US-13(DX)	66.5	3.5	20.2	0.7	4.0	82.1	2.9	23.2	0.5	4.3
HULTING X9880(3X)	83.0	1.9	4.7	2.1	3.9	-	-	-	-	-
HULTING X980(SX)	83.6	0.0	4.3	0.9	3.6	-	-	-	-	-
					GROUP 3 MATURITY					
FUNKS G-5757(DX)	69.5	4.2	4.1	0.9	3.8	92.6	6.3	5.8	0.8	4.0
MCCURDY MSX88(SX)	86.9	0.2	7.5	0.8	3.4	108.4	0.3	7.0	0.7	3.7
AVERAGE	84.2	0.7	5.2	0.8	3.7	105.3	1.1	7.1	0.7	3.8

*WHITE 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 drought during July and August when precipitation was 3.73 and 0.72 inches below normal, respectively. Temperatures ranged from 0.5 degrees above normal in July and 2.2 degrees above normal in May and August.

The average yield was 77 bushels per acre from a stand of 18,000 plants. The range for hybrids was from 56 to 90 bushels per acre.

Stalk lodging varied from 0% to 12.8%, with the average over all hybrids being 3.9%. Root lodging and dropped ears were negligible for most hybrids.

Weeds were not a factor in determining the final yield in 1975.

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 10 and 11.

SUMMARY OF NORTHERN LOCATIONS

The average performance of hybrids evaluated at the John Jones farm near Tarkio, Missouri (Atchison 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, and 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 MAY 2, 1975. HARVESTED SEPTEMBER 22, 1975.

BRAND--HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	PLANTS PER ACRE (#)	LODGED PLANTS ROOT (%)	LODGED PLANTS STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
	GROUP I MATURITY						
ACCO UC6601(SX)	82.4	22.6	19100	0.0	6.0	0.0	4.2
BURRUS BX20(SX)	89.6	26.1	19100	0.0	0.5	0.0	3.8
BC-JAC X56(SX)	80.3	27.9	18800	0.0	3.5	0.0	3.5
CARGILL 880(SX)**	70.2	23.8	17700	1.1	4.7	0.0	2.8
GLDNHRVST H2500(SX)	84.7	27.8	18900	0.0	3.4	0.5	3.7
GLDNHRVST H2580(SPX)	80.1	26.0	18100	0.0	3.1	0.5	3.7
FEDERAL FX34(SPX)	70.3	24.3	14500	0.0	3.0	1.2	3.2
FUNKS G-4507(SX)	77.4	27.7	20100	0.0	1.4	1.8	3.3
FUNKS G-4503(SX)	79.6	27.5	18700	0.0	4.4	2.0	3.3
SUPERCROST 4242(SPX)	75.9	23.8	18400	0.0	4.0	0.0	3.5
SUPERCROST 2890(SX)	70.0	23.2	17700	0.0	0.0	0.6	3.3
MFA 5001(SX)	83.7	20.5	18300	0.0	1.5	0.0	3.7
MCALLSTR SX7408(SX)	70.3	19.5	17800	0.0	1.6	0.5	3.5
MCCURDY MSX60(SX)	71.0	24.7	18600	0.0	1.0	0.0	3.7
N-K PX50A(SX)**	65.9	21.8	18100	0.0	3.5	0.5	2.8
PIONEER 3390(SPX)**	65.8	25.8	16300	0.5	4.5	0.5	3.3
PIONEER 3388(SPX)**	81.3	23.3	18900	0.0	0.0	0.0	3.2
PIONEER 3517(SPX)	70.8	24.3	17600	0.0	2.1	0.0	3.0
PIONEER 3424(DX)	72.4	23.7	15600	0.0	3.8	0.0	3.3
PIONEER X2226(SPX)	67.4	23.4	16000	0.0	1.7	0.0	2.8
	GROUP II MATURITY						
ACCO UC8801(SX)	79.9	26.7	16700	0.0	4.4	1.7	3.3
ACCO UC9451(SX)	85.7	27.4	19400	2.8	5.6	0.9	3.5
ACCO U395(3X)	85.0	26.5	19400	0.5	6.0	1.9	3.3
ASGROW RX100(SX)**	85.9	27.8	19100	0.0	3.9	0.0	3.3
ASGROW RX90(SX)	70.5	26.4	17400	0.0	1.6	1.1	3.5
BURRUS BX25(SX)	87.1	27.9	19600	0.5	6.0	0.5	3.5
BURRUS EX30(SX)	74.2	25.5	16600	0.0	1.1	0.0	3.5
BC-JAC X7L(SX)	84.0	28.1	20100	0.0	9.2	0.4	3.7
BC-JAC X52A(SX)	71.7	27.4	17300	0.0	4.3	0.0	3.3
CARGILL 979(SX)	80.4	28.0	17800	0.0	4.3	0.6	3.2
CARGILL 949	75.5	27.2	17000	0.0	1.1	1.0	3.5
CARGILL 920	90.7	23.8	16500	0.0	7.4	0.0	2.8
DEKALB XL81(SX)**	77.3	27.1	19800	0.0	5.7	0.0	3.0
DEKALB XL72A(SX)**	80.0	27.5	17800	0.0	7.0	0.0	3.3
GLDNHRVST H2655(SX)	71.6	24.2	17600	0.0	0.0	0.0	3.2
GLDNHRVST H2650(SX)	85.8	27.5	18800	0.0	5.5	0.0	3.5
GLDNHRVST H2615(SPX)	80.3	28.1	18600	0.0	4.9	0.5	3.5
FEDERAL FX59(SX)	75.0	27.6	17900	0.0	8.1	0.5	3.7
FUNKS G-4697(SPX) **	71.2	27.2	17500	0.0	5.8	0.0	3.3
FUNKS G-4628(SX)	85.6	26.9	19200	0.0	4.4	0.4	3.3
FUNKS G-4737(SX)	69.9	27.0	18600	0.0	6.8	0.0	3.0
FUNKS G-5666(DX)	78.5	27.2	18500	0.0	9.4	0.0	3.2
SUPERCROST S-85(SX)	69.5	27.5	18200	0.0	5.0	1.5	3.7
SUPERCROST 7772(SPX)	74.0	26.3	16800	0.0	5.4	0.0	3.3
SUPERCROST 5440(SX)	85.7	26.1	15800	0.0	0.7	0.7	3.2
HAPPEL 3361(3X)	76.1	26.5	17700	0.6	4.6	2.1	3.3
HAPPEL MS-72(SX)	80.3	26.9	18400	0.0	8.1	0.0	3.5
HAPPEL H-37(SPX)	64.8	26.0	15500	0.0	3.0	0.0	3.5
IOWA-MO SX37(SX)	76.7	24.4	17500	0.5	2.6	0.0	3.0
IOWA-MO SX22(SX)	57.9	27.9	18800	0.0	1.4	0.0	3.7
IOWA-MO SX19(SX)	81.7	28.0	19200	0.5	1.9	0.0	3.5
IOWA-MO SPX-425(SPX)	78.6	26.2	18800	0.0	7.2	1.0	3.2
IOWA-MO SX119(SX)	71.9	27.3	20100	0.0	1.4	0.5	3.2
IOWA-MO SX118(SX)	75.3	27.9	19000	0.0	1.5	0.0	3.5
LEWIS X788(SX)	79.7	27.5	18300	0.0	9.1	0.5	3.7
LEWIS X348(SX)	74.9	23.6	16500	0.0	3.7	0.0	3.2
LEWIS X628(SX)	84.7	25.9	19500	0.0	2.3	0.5	3.8
LEWIS X288(SX)	68.9	26.8	19200	0.0	0.5	0.0	3.7
LEWIS 7088(3X)	67.9	26.8	18500	0.0	2.9	0.0	3.5
MFA V-12(SX)**	70.1	28.7	16200	0.0	1.8	1.2	3.5
MFA V-16(SX)**	85.1	27.7	18600	0.0	9.1	0.5	3.5
MFA 3030(DX)	77.6	27.6	16500	0.6	3.9	0.6	3.3
MFA 6041(SPX)	81.9	24.4	17200	0.6	2.1	0.6	3.2
MFA 6061(3X)	76.2	27.0	17700	0.0	2.6	0.0	3.7
MFA EXPS4434(SX)	82.4	26.8	17900	0.0	2.5	0.0	3.5
MORTON 6700(SX)	73.4	28.3	16200	0.0	1.6	0.0	3.5
MORTON 4400(SPX)	77.6	24.9	17600	0.0	0.5	0.0	3.3
MORTON 3200(SX)	82.4	26.8	17700	0.5	3.1	0.5	3.7
MCALLSTR SX6837(SX)	82.4	27.7	18800	0.0	4.9	0.5	3.3
MCALLSTR SX7207(SX)	76.2	23.9	18400	0.0	2.6	0.0	3.0

TABLE 9. (CONTINUED).

BRAND--HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	PLANTS PER ACRE (#)	LODGED PLANTS ROOT (%)	LODGED PLANTS STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
	GROUP II MATURITY						
MCALLSTR SX7300(SX)	85.0	26.5	19100	0.0	0.9	0.0	3.5
MCALLSTR SX7411(SX)	64.7	24.8	18000	0.0	2.1	0.0	3.5
MCCURDY MSX70(SX)	70.7	26.3	18400	0.0	3.5	0.0	3.3
MCCURDY MSX84(SX)	84.7	27.0	18900	0.0	3.4	1.9	3.7
MCCURDY MSP736(3X)	75.1	25.5	19300	0.0	2.4	0.5	3.7
MCCURDY MSX68(SX)	83.8	26.7	18800	0.0	0.5	0.0	3.2
MCNAIR X-170(SX)	79.3	24.7	19900	0.0	3.6	0.0	4.7
MCNAIR X-194(SX)	69.8	28.7	17600	0.0	3.4	0.0	3.8
N-K PX74(SX)	81.5	26.5	19000	0.0	1.9	0.0	3.3
N-K PX76(SX)	79.1	24.5	17600	0.0	3.1	0.0	3.3
N-K PX675(3X)	65.8	26.0	18000	0.0	3.6	0.0	3.3
O'S GOLD SX5500(SX) **	76.4	26.8	17300	0.0	1.6	0.0	3.5
O'S GOLD TX1048(3X)	83.5	24.5	14600	0.0	5.6	0.0	3.5
O'S GOLD SX5500A(SX)	79.9	27.0	17900	0.0	1.5	0.0	3.5
PAG SX98(SX)**	82.1	28.4	18300	0.0	4.6	0.0	3.3
PAG 494(SX)	80.8	24.4	18400	0.5	0.0	0.0	3.2
PIONEER 3219(DX)	78.8	27.2	16500	0.0	5.0	0.0	3.3
PIONEER 3325(SX)	70.3	25.9	17100	0.0	1.7	0.6	4.5
PIONEER 3184(SX)	85.4	26.5	18800	0.0	1.5	0.5	4.0
PIONEER 3315(3X)	77.3	26.3	19700	0.0	6.2	0.0	3.7
TROJAN TXS119(SX) **	78.9	27.7	18200	0.0	6.8	0.0	3.7
TROJAN TXS111(SX)	66.0	24.8	18100	0.0	0.0	0.0	3.7
TROJAN TXS113(SPX)	80.4	24.8	19100	0.0	2.0	0.0	3.0
TROJAN TXS115A(SX)	75.9	27.3	18700	0.0	2.1	0.9	3.7
WO (MO17XB73)(SX)	84.3	26.0	18700	0.5	2.0	0.5	3.7
(FR37 X H84)H98(3X)	70.5	24.8	18500	0.0	9.9	0.0	3.2
(FRN28XB73)MO17(3X)	66.2	27.3	18400	0.0	2.5	0.5	3.5
WC (MC17XN26)(SX)	55.2	27.3	16800	0.0	8.4	0.0	3.5
B73 X VA26 H7(SX)	73.4	19.1	16400	0.0	1.1	2.8	3.7
B73 X H98(SX)	69.0	27.0	13900	0.0	5.7	0.0	3.7
B73 X FR177(SX)	78.7	26.0	15300	0.0	4.2	0.0	3.3
(H93 X H84)VA26(3X)	71.3	24.9	17200	0.0	1.5	0.0	3.2
(FR37 X B73)MO17(3X)	81.9	25.9	18000	0.0	3.1	1.6	3.5
(FR37XB73)VA26H7(3X)	63.0	24.3	17000	0.0	3.2	1.0	3.2
US-13(DX)	55.6	24.7	18700	0.5	12.8	0.5	3.5
WALTHER W239(DX)	76.5	26.5	18000	0.0	11.5	1.7	3.3
	GROUP III MATURITY						
FUNKS G-5757(DX) **	71.9	29.7	18000	1.4	8.2	0.0	3.5
LEWIS X808(SX)	82.1	27.4	19900	1.8	7.6	0.0	3.5
MCCURDY MSX88(SX)	86.0	25.8	18000	0.0	9.3	0.0	3.5
PIONEER 3177(3X)	70.6	20.3	19100	0.5	9.6	0.0	3.8
AVERAGE	76.7	26.0	18047	0.1	3.9	0.4	3.4

LSD AT 5% LEVEL IS 17.8 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 11.4 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 (KNOX COUNTY) DURING THE 2-YEAR PERIOD 1973 & 1975 AND THE 3-YEAR PERIOD 1972, 1973, & 1975.
NOTE: THE TEST IN 1974 WAS ABANDONED DUE TO POOR STAND.

	2-YEAR AVERAGE					3-YEAR AVERAGE				
		LODGING					LODGING			
BRAND--HYBRID	ACRE YIELD (BU)	ROOT (%)	STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)	ACRE YIELD (BU)	ROOT (%)	STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
					GROUP 1 MATURITY					
CARGILL 880(SX)	94.5	0.5	5.4	3.2	3.4	109.8	0.4	6.9	2.8	3.7
PIONEER 3390(SPX)	101.4	0.3	3.7	0.5	3.8	113.9	0.2	6.2	1.1	3.9
PIONEER 3388(SPX)	111.6	0.0	2.9	0.6	3.3	-	-	-	-	-
PIONEER 3517(SPX)	102.3	0.0	2.9	0.9	3.5	-	-	-	-	-
					GROUP 2 MATURITY					
ACCO UC8801(SX)	101.2	0.0	7.3	3.1	3.8	-	-	-	-	-
ASGROW RX100(SX)	108.7	0.0	4.3	0.9	3.7	-	-	-	-	-
BO-JAC X7L(SX)	106.7	0.0	8.2	1.4	3.9	119.2	0.0	6.7	1.7	3.9
CARGILL 979(SX)	105.9	0.0	6.3	0.7	3.6	-	-	-	-	-
DEKALB XL81(SX)	97.3	0.0	5.2	2.6	3.6	108.8	0.0	4.2	1.9	3.6
FUNKS G-4697(SPX)	99.9	0.0	7.7	1.8	3.8	-	-	-	-	-
FUNKS G-4628(SX)	106.1	0.0	5.4	3.9	3.7	-	-	-	-	-
FUNKS G-4737(SX)	109.0	0.0	6.9	0.4	3.4	-	-	-	-	-
SUPERCROST S-85(SX)	102.6	0.0	3.8	2.1	3.8	-	-	-	-	-
HAPPEL 3361(3X)	97.2	0.3	4.2	3.9	3.7	105.9	0.2	5.1	2.6	3.7
HAPPEL MS-72(SX)	104.8	0.0	7.8	4.0	3.8	119.3	0.0	9.5	2.7	3.8
HAPPEL H-37(SPX)	91.8	0.0	4.6	1.3	3.8	-	-	-	-	-
IOWA-MO SX37(SX)	106.3	0.3	3.8	0.3	3.7	123.5	0.2	3.8	0.4	3.9
LEWIS X788(SX)	108.0	0.0	7.5	2.1	3.9	123.7	0.0	7.2	1.4	3.9
LEWIS X628(SX)	113.2	0.0	2.1	2.0	4.2	-	-	-	-	-
MFA V-12(SX)	94.1	0.0	5.4	1.7	3.9	98.2	0.0	5.4	1.1	4.0
MFA V-16(SX)	113.9	0.0	8.2	1.4	3.8	127.2	0.0	7.7	0.9	3.9
MFA 3030(DX)	98.9	0.3	5.0	2.5	3.8	-	-	-	-	-
MORTON 6700(SX)	101.6	0.0	3.9	0.7	3.8	114.3	0.0	4.7	0.4	3.8
MCALLSTR SX6837(SX)	120.7	0.0	5.0	0.8	3.8	134.0	0.0	5.3	0.5	3.8
MCALLSTR SX7207(SX)	113.0	0.0	2.3	1.3	3.6	-	-	-	-	-
O'S GOLD SX5500(SX)	106.3	0.0	3.7	3.7	3.8	121.5	0.0	3.7	2.5	3.8
PAG SX98(SX)	105.9	0.0	5.8	0.9	3.8	117.9	0.0	6.1	0.6	3.8
PIONEER 3219(DX)	108.8	0.0	5.7	0.9	3.8	114.6	0.0	5.4	0.6	3.9
TROJAN TXS119(SX)	103.5	0.0	6.5	2.1	3.9	121.3	0.0	6.0	1.9	3.9
TROJAN TXS113(SPX)	114.2	0.0	3.0	1.6	3.6	131.9	0.0	2.5	1.1	3.8
US-13(DX)	84.4	0.3	15.3	2.1	4.0	101.2	0.2	16.3	2.2	4.3
					GROUP 3 MATURITY					
FUNKS G-5757(DX)	105.6	0.7	7.9	0.9	3.9	114.4	0.5	5.2	0.8	4.1
MCCURDY MSX88(SX)	107.6	0.0	7.2	1.7	3.8	121.8	0.0	6.4	1.4	3.9
AVERAGE	104.5	0.1	5.6	1.8	3.7	117.1	0.1	6.2	1.4	3.9

*WHITE HYBRID.

TABLE 11. SUMMARY PERFORMANCE RECORD FOR CORN HYBRIDS GROWN AT THREE NORTH MISSOURI LOCATIONS (ATCHISON, GRUNDY, AND KNOX COUNTIES) IN 1975.

BRAND--HYBRID	ACRE YIELD (BU)	LODGED PLANTS ROOT (%)	LODGED PLANTS STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
	GROUP 1 MATURITY (3-LOCATION AVERAGE)				
ACCO UC6601(SX)	79.7	2.0	31.4	0.2	3.8
BC-JAC X56(SX)	77.7	1.1	8.6	0.2	4.1
FUNKS G-4507(SX)	76.4	3.3	10.3	1.0	3.7
FUNKS G-4503(SX)	81.7	3.0	11.0	1.0	3.8
SUPERCROST 4242(SPX)	76.4	0.9	26.8	0.0	3.7
MFA 5001(SX)	78.3	2.1	13.4	0.2	4.1
MCALLSTR SX7408(SX)	65.9	3.9	4.8	0.5	4.1
PIONEER 3390(SPX)	65.0	1.0	10.5	0.8	3.6
PIONEER 3388(SPX)	92.5	1.9	9.7	0.0	3.6
PIONEER 3517(SPX)	72.4	2.0	12.0	0.2	3.1
PIONEER 3424(DX)	73.8	0.9	17.4	0.0	3.6
PIONEER X2226(SPX)	70.6	0.6	4.8	0.0	3.3
	GROUP 2 MATURITY (3-LOCATION AVERAGE)				
ACCO UC9451(SX)	63.4	2.3	31.4	1.3	3.9
ASGROW RX100(SX)	74.9	1.6	21.9	0.0	3.9
BO-JAC X7L(SX)	73.5	0.5	27.2	0.3	3.7
BC-JAC X52A(SX)	68.7	2.1	20.3	0.0	3.7
CARGILL 949	74.6	1.1	5.2	0.9	3.9
DEKALB XL81(SX)	79.9	0.5	30.3	0.4	3.6
DEKALB XL72A(SX)	73.1	0.7	19.4	0.3	3.7
FUNKS G-4628(SX)	86.1	0.2	17.6	0.3	3.5
FUNKS G-4737(SX)	69.0	0.5	28.7	0.0	3.4
FUNKS G-5666(DX)	73.3	0.5	22.7	0.5	3.5
SUPERCROST S-85(SX)	73.2	1.1	16.6	0.5	3.7
SUPERCROST 5440(SX)	74.4	0.9	6.6	0.4	3.7
HAPPEL 3361(3X)	68.7	1.0	24.9	1.6	3.7
HAPPEL MS-72(SX)	75.0	1.0	29.6	0.0	3.6
HAPPEL H-37(SPX)	61.5	0.3	6.0	0.0	3.8
LEWIS X78B(SX)	71.9	0.4	28.1	0.3	3.7
LEWIS X34B(SX)	76.8	1.7	23.3	0.0	3.6
LEWIS X62B(SX)	85.8	1.6	12.5	0.5	4.0
LEWIS X28B(SX)	73.8	2.9	4.7	0.0	4.1
LEWIS 708B(3X)	70.9	1.4	12.1	0.2	3.8
MFA V-12(SX)	66.3	1.4	12.3	0.6	3.7
MFA V-16(SX)	80.4	2.8	14.6	0.2	3.8
MFA 3030(DX)	73.5	2.9	15.6	0.4	3.7
MFA 6041(SPX)	80.0	1.8	23.5	0.4	3.4
MFA 6061(3X)	68.8	0.3	5.7	0.5	3.8
MFA EXP54434(SX)	72.6	1.0	10.8	0.6	3.9
MCALLSTR SX7207(SX)	71.6	2.3	31.5	0.0	3.7
MCALLSTR SX7300(SX)	79.5	1.0	8.2	0.0	4.0
N-K PX74(SX)	79.0	1.6	6.8	0.3	4.0
N-K PX76(SX)	79.3	2.8	24.5	0.0	3.7
N-K PX675(3X)	72.9	8.0	7.2	0.5	3.9
O'S GOLD SX5500(SX)	72.4	0.3	14.7	0.3	3.5
O'S GOLD SX5500A(SX)	80.1	2.8	6.5	0.0	3.8
PAG SX98(SX)	77.9	0.0	16.0	0.2	3.6
PAG 494(SX)	76.6	5.6	13.0	0.0	3.5
PIONEER 3219(DX)	74.8	0.8	11.8	0.0	3.7
PIONEER 3325(SX)	75.4	1.0	7.4	0.2	4.2
PIONEER 3184(SX)	75.5	3.0	3.2	0.3	4.2
PIONEER 3315(3X)	67.7	1.4	16.0	0.0	3.8
TROJAN TXS119(SX)	69.8	0.4	21.3	0.2	3.7
TROJAN TXS111(SX)	70.8	2.3	5.5	0.6	3.9
TROJAN TXS113(SPX)	79.7	2.9	17.4	0.0	3.4
TROJAN TXS115A(SX)	76.2	1.4	7.7	0.7	4.1
MC (MO17XB73)(SX)	79.1	3.0	11.7	0.2	3.9
(FR37 X H84)H98(3X)	72.4	1.7	31.2	0.0	3.5
MO (MO17XN28)(SX)	80.3	0.8	11.0	0.2	3.8
B73 X VA26 H7(SX)	75.7	1.2	11.6	0.9	4.0
B73 X H98(SX)	64.8	1.0	18.5	0.2	3.8
(H93 X H84)VA26(3X)	78.1	5.9	16.3	0.0	3.6
US-13(DX)	51.6	3.6	26.8	0.6	3.9
	GROUP 3 MATURITY (3-LOCATION AVERAGE)				
LEWIS X80B(SX)	81.1	1.8	17.3	0.0	3.9
MCCURDY MSX88(SX)	73.3	0.3	23.9	0.2	3.7
PIONEER 3177(3X)	65.0	4.9	23.0	0.0	4.4
MEAN	74.2	1.8	16.1	0.3	3.8

*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---1.18, 1.11, 3.47, and 0.55 inches during May, June, July, and August respectively. However, the effect was alleviated to a degree by temperatures which averaged from 0.4 to 1.3 degrees below normal.

The average yield from a harvest stand of 16,500 plants was 88 bushels per acre, up 13 bushels over the 1974 average yield. However, it was still 58 bushels below the average acre yield of 1973. The average stand loss was 21% or 6% greater than was allowed for at planting time. Individual hybrid stands ranged from 11,800 to 19,500 plants per acre (44% and 7% losses, respectively). This extensive loss by some hybrids indicates considerable differences existed in seed quality among hybrids evaluated in 1975.

Stalk lodging ranged from 0% to 91% for individual hybrids, with all hybrids averaging 48%. Root lodging also showed a wide range---0% to 32%, with an average of 4.8%. This data emphasizes the wide differences that exist among today's corn hybrids.

Weeds were not a significant factor in determining 1975 yields, despite a surge of crabgrass in late summer and early fall.

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 MAY 1, 1975. HARVESTED OCTOBER 29, 1975.

BRAND--HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	PLANTS PER ACRE (#)	LODGED PLANTS ROOT (%)	LODGED PLANTS STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
	GROUP I MATURITY						
ACCO UC4601(SX)	85.0	23.6	17700	0.5	66.9	0.0	3.5
ACCO UC6601(SX)	82.3	20.5	16500	1.1	77.4	0.6	3.3
BURRUS BX20(SX)	89.1	21.8	17400	28.3	24.8	0.0	3.7
BC-JAC X56(SX)	107.3	21.2	17300	14.4	34.3	0.0	3.3
CARGILL 880(SX) **	85.4	20.8	19000	0.5	90.7	0.0	3.3
USS 0535(3X)	95.0	19.8	16800	3.4	58.7	0.0	3.7
USS 0555A(3X)	88.3	19.8	15300	2.5	49.4	0.0	3.5
GLDNHRVST H2500(SX)	102.0	20.9	16800	20.8	32.0	0.0	3.7
FUNKS G-4507(SX)	88.4	20.9	18000	16.1	21.7	0.0	3.8
FUNKS G-4503(SX)	87.2	19.5	16100	5.1	37.1	0.0	3.7
SUPERCROST 4242(SPX)	74.4	18.4	17200	1.0	66.2	0.0	3.3
MFA 5001(SX)	99.9	19.3	17700	19.9	31.8	0.0	3.8
N-K PX50A(SX)**	82.7	19.1	15300	0.0	72.7	0.0	3.0
PAG SX7(SX)**	96.9	20.1	16300	0.0	75.4	0.0	3.0
PAG 424(SX)	80.3	19.8	16600	1.7	73.0	0.0	3.3
PIONEER 3390(SPX) **	64.2	20.9	15200	0.0	57.6	0.0	3.7
PIONEER 3388(SPX) **	95.7	20.2	17600	9.8	39.3	0.0	3.5
PIONEER 3517(SPX)	93.6	19.3	17700	0.0	40.6	0.0	3.5
PIONEER 3424(DX)	89.8	19.9	18500	0.0	54.6	0.0	3.7
PIONEER X2226(SPX)	79.6	19.4	14200	0.0	22.6	0.0	3.3
	GROUP II MATURITY						
ACCO UC9451(SX)	69.2	22.6	17700	1.0	81.2	0.5	3.5
ACCO EXP48951(SX)	92.7	23.5	19500	7.8	53.5	0.0	4.0
ACCO U395(3X)	95.9	23.3	16500	5.2	74.8	1.1	3.8
ASGROW RX100(SX) **	91.6	21.7	17300	3.0	43.3	0.0	3.7
BURRUS BX25(SX)	77.6	21.8	15500	1.0	61.8	0.0	3.2
BURRUS EX30(SX)	88.6	20.7	14700	5.6	22.7	0.0	3.5
BC-JAC X7L(SX)	85.7	22.1	19100	0.5	67.8	0.0	3.5
BC-JAC X83(SPX)	104.8	22.0	17100	0.0	12.4	0.0	3.7
BC-JAC X69(SX)	101.9	20.7	18100	0.0	29.9	0.0	3.8
BC-JAC X52A(SX)	87.5	21.1	15800	0.5	50.3	0.0	3.7
CARGILL 949	107.8	20.8	16500	14.4	26.9	0.0	3.8
CARGILL 920	94.5	20.0	15800	1.9	32.4	0.0	4.0
COOP 2318(SX)	89.5	22.8	16000	0.6	49.8	0.0	3.2
COOP 3300(3X)	66.3	20.5	11800	3.7	51.0	0.9	3.0
COOP 2300(SX)	82.8	21.3	15500	13.6	15.9	0.0	4.0
DEKALB XL81(SX) **	81.6	22.5	16100	1.1	53.8	0.0	3.2
DEKALB XL72A(SX) **	82.3	22.7	16600	0.0	56.5	0.6	3.7
USS 1010(SX)	103.6	20.7	16300	32.4	17.1	0.0	3.8
USS 1515(SX)	91.1	22.3	16400	2.4	41.1	0.0	3.3
GLDNHRVST H2655(SX)	81.8	22.1	16000	1.2	50.0	0.0	3.3
GLDNHRVST H2650(SX)	87.6	22.2	16700	1.1	48.9	0.0	3.2
GLDNHRVST H2615(SPX)	74.1	22.1	15500	4.3	42.6	0.0	3.5
FUNKS G-4697(SPX) **	86.1	22.1	17500	4.4	52.8	0.0	3.3
FUNKS G-4646(SPX) **	79.5	20.5	18500	4.0	77.6	0.0	3.7
FUNKS G-4622(SX)	77.9	22.2	17900	0.0	53.0	0.5	3.5
FUNKS G-4737(SX)	85.0	21.1	16000	0.0	68.1	0.0	3.2
FUNKS G-5666(DX)	78.2	21.4	16700	1.1	71.0	0.0	3.7
SUPERCROST S-85(SX)	83.1	22.0	16000	0.0	47.3	0.0	3.5
SUPERCROST 5440(SX)	101.9	20.7	16400	22.3	12.3	0.0	3.7
HAPPEL 3361(3X)	81.1	21.6	14600	1.4	62.0	0.0	3.8
HAPPEL MS-72(SX)	88.5	22.5	17900	0.5	59.1	0.0	3.3
HAPPEL H-37(SPX)	79.3	20.0	13700	3.3	21.4	1.3	3.5
LEWIS X768(SX)	73.6	22.2	15200	0.0	63.2	0.0	3.7
LEWIS X628(SX)	108.7	21.2	17700	25.1	20.7	0.0	3.5
LEWIS X848(SX)	88.7	22.4	16300	0.0	86.1	0.0	3.8
LEWIS 7088(3X)	82.5	21.6	16600	1.6	42.9	0.0	3.7
MFA V-12(SX)**	69.1	20.1	14200	0.6	60.5	0.6	3.2
MFA V-16(SX)**	85.6	22.7	17700	0.4	52.9	0.0	3.5
MFA 3030(DX)	86.4	22.4	17000	0.0	54.8	0.0	3.2
MFA 6041(SPX)	96.5	19.5	16600	0.5	75.8	0.0	3.3
MFA 6061(3X)	84.3	21.2	16900	2.1	50.1	0.0	3.7
MFA EXP54434(SX)	113.6	20.3	17600	26.2	20.4	0.0	3.7
MORTON 6700(SX)	74.7	23.2	16500	1.7	47.6	0.0	3.7
MORTON 4400(SPX)	92.4	20.0	16200	0.6	47.2	0.0	3.7
MUNCYCHIEF H764(DX)	71.5	21.1	17100	5.5	55.9	0.5	3.3
MUNCYCHIEF SX878(SX)	77.1	22.7	13400	4.6	55.0	0.0	3.3
MUNCYCHIEF SX777(SX)	82.7	21.5	13400	0.7	33.6	0.0	3.3
MUNCYCHIEF SX662(SX)	68.5	20.6	14400	1.3	75.2	0.0	3.0
MCCURDY MSX85(SX)	94.9	21.4	15800	8.6	42.4	0.0	3.7
MCCURDY MSP888(3X)	85.2	21.9	16500	0.5	42.1	0.0	3.5

TABLE 12. (CONTINUED).

BRAND--HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	PLANTS PER ACRE (#)	LODGED PLANTS ROOT (%)	LODGED PLANTS STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
GROUP II MATURITY							
MCCURDY MSX70(SX)	86.1	20.1	17400	8.3	28.5	0.0	3.7
MCCURDY MSX84(SX)	111.2	20.6	17300	5.8	24.7	0.0	4.0
MCCURDY 73-101(3X)	88.4	21.4	16500	3.2	51.1	0.0	3.8
NC+ 77(SX)	95.5	20.3	16400	3.0	39.7	0.0	3.5
NC+ 85(SX)	81.3	21.6	16700	0.0	56.2	0.0	3.7
NC+ 59(SX)	101.0	20.8	16100	12.8	32.5	0.0	3.8
N-K PX74(SX)	91.5	20.5	16600	11.2	21.6	0.0	4.0
N-K PX76(SX)	86.3	19.6	16600	1.1	75.7	0.0	3.2
O'S GOLD SX5500(SX)**	75.3	21.4	16800	0.0	58.4	0.0	3.5
O'S GOLD TX105B(3X)	95.4	21.5	16400	6.9	29.8	0.0	3.7
PAG SX98(SX)**	87.8	23.6	16900	0.6	52.0	0.6	3.5
PAG 494(SX)	91.8	19.9	16400	3.9	58.3	0.0	3.2
PIONEER 3219(DX)	91.7	21.8	16400	1.1	61.1	0.0	3.3
PIONEER 3325(SX)	96.6	20.6	16000	5.4	17.0	0.0	3.5
PIONEER 3184(SX)	109.6	22.0	16900	5.8	4.4	0.0	3.5
PIONEER 3315(3X)	84.4	20.7	17300	0.0	39.3	0.0	3.3
TROJAN TXS119(SX) **	82.6	23.1	17800	0.5	61.2	0.0	3.5
TROJAN TXS113(SPX)	94.6	20.4	16600	1.5	69.0	0.0	3.3
TROJAN TXS114(SX)	114.5	21.9	18200	0.0	49.1	0.0	4.0
TROJAN TXS115A(SX)	83.2	21.2	17500	16.1	36.9	0.0	4.2
TROJAN TXS117A(SPX)	88.6	21.6	16700	14.5	39.5	0.5	3.8
MC (MO17XB73)(SX)	112.8	21.0	16400	16.9	33.4	0.0	3.7
(FR37 X H84)H98(3X)	76.7	20.1	15900	3.6	57.4	0.0	3.2
(FRN28XB73)MO17(3X)	76.1	22.4	15500	2.5	24.2	0.0	3.5
MC (MC17XN28)(SX)	87.8	21.7	16300	1.1	53.4	0.6	3.5
B73 X VA26 H7(SX)	90.6	21.3	15800	5.2	34.9	0.0	3.7
B73 X H98(SX)	77.7	20.7	13400	1.9	44.6	0.0	3.3
B73 X FR177(SX)	85.8	22.3	15100	1.7	31.4	0.7	3.7
(H93 X H84)VA26(3X)	86.4	21.4	16700	2.3	70.2	0.0	3.2
(FR37 X B73)MO17(3X)	98.4	20.2	15900	20.2	29.8	0.0	3.5
US-13(DX)	65.6	21.3	16600	1.2	61.3	0.6	3.8
WALTHER W271(DX)	89.4	19.4	17400	2.1	57.5	0.0	3.0
WALTHER W80(DX)	76.6	21.4	17700	0.5	57.9	0.0	3.3
WALTHER W239(DX)	89.3	21.2	15500	0.0	75.8	0.0	3.8
GROUP III MATURITY							
FUNKS G-5757(DX) **	104.4	23.4	16200	4.3	44.4	0.0	3.8
FUNKS G-4747W(SPX)*	85.5	24.5	17600	4.7	33.8	0.0	4.3
FUNKS EXP27466(SX)	61.5	24.9	15400	9.3	13.5	0.6	4.2
LEWIS X80H(SX)	84.4	22.1	17300	3.3	55.5	0.0	3.7
MCCURDY MSX88(SX)	82.2	21.9	19000	0.4	54.9	0.4	3.2
PIONEER 3177(3X)	81.3	22.2	17400	4.3	57.9	0.0	4.5
AVERAGE	87.6	21.3	16520	4.8	47.8	0.1	3.6

LSD AT 5% LEVEL IS 13.4 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 8.6 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 (LAFAYETTE COUNTY) DURING THE 2-YEAR PERIOD 1973 & 1975 AND THE 3-YEAR PERIOD 1972, 1973, & 1975. NOTE: THE TEST WAS ABANDONED IN 1974 BECAUSE OF POOR STAND.

BRAND--HYBRID	2-YEAR AVERAGE					3-YEAR AVERAGE				
	ACRE YIELD (BU)	LODGING ROOT (%)	LODGING STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)	ACRE YIELD (BU)	LODGING ROOT (%)	LODGING STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
					GROUP 1 MATURITY					
CARGILL 880(SX)	92.6	0.3	61.2	1.0	3.3	97.4	0.2	43.1	0.7	3.3
PAG SX7(SX)	106.3	0.8	46.4	0.8	3.2	-	-	-	-	-
PIONEER 3390(SPX)	88.6	0.8	35.1	1.1	3.8	96.6	0.5	27.1	0.7	3.7
PIONEER 3390(SPX)	88.6	0.8	35.1	1.1	3.8	96.6	0.5	27.1	0.7	3.7
PIONEER 3388(SPX)	96.1	8.7	24.0	0.3	3.7	-	-	-	-	-
PIONEER 3517(SPX)	109.4	0.9	22.1	0.0	3.5	-	-	-	-	-
					GROUP 2 MATURITY					
ASGROW RX100(SX)	106.5	1.5	28.8	0.3	3.7	112.4	1.0	25.4	0.2	3.5
BO-JAC X7L(SX)	113.4	0.3	38.4	0.3	3.5	117.6	0.2	25.6	0.2	3.6
BC-JAC X83(SPX)	118.6	3.6	12.7	3.0	3.8	-	-	-	-	-
COOP 2318(SX)	112.0	1.1	28.0	0.5	3.4	-	-	-	-	-
DEKALB XL81(SX)	96.4	1.1	34.2	0.8	3.4	100.3	0.7	25.6	1.0	3.4
FUNKS G-4697(SPX)	99.4	3.5	40.1	0.8	3.5	100.5	2.3	27.8	0.5	3.7
FUNKS G-4646(SPX)	99.9	5.2	47.5	0.5	3.6	-	-	-	-	-
FUNKS G-4628(SX)	105.6	1.0	29.9	1.3	3.8	-	-	-	-	-
FUNKS G-4737(SX)	104.2	0.9	41.8	0.8	3.3	-	-	-	-	-
SUPERCROST S-85(SX)	97.4	2.4	27.2	1.4	3.6	-	-	-	-	-
HAPPEL 3361(3X)	99.9	3.7	39.7	0.8	3.5	-	-	-	-	-
HAPPEL MS-72(SX)	110.1	3.4	34.2	1.3	3.6	-	-	-	-	-
HAPPEL H-37(SPX)	102.1	2.5	15.7	1.5	3.7	-	-	-	-	-
LEWIS X788(SX)	106.6	1.0	35.4	1.2	3.7	108.6	0.7	23.6	0.8	3.6
LEWIS X628(SX)	126.2	13.0	14.6	0.3	3.8	-	-	-	-	-
MFA V-12(SX)	89.4	1.2	36.9	0.3	3.4	92.3	0.8	29.0	0.2	3.5
MFA V-16(SX)	112.4	1.8	31.1	1.8	3.8	116.4	1.2	21.2	1.7	3.6
MFA 3030(DX)	105.9	1.8	35.4	2.2	3.4	-	-	-	-	-
MCCURDY MSX85(SX)	113.0	12.0	24.2	0.3	3.8	119.3	8.0	17.9	0.6	3.7
MCCURDY MSP888(3X)	111.2	2.6	25.2	0.8	3.5	114.0	1.7	20.3	1.1	3.6
MCCURDY MSX70(SX)	101.8	7.7	18.3	1.4	3.8	-	-	-	-	-
O'S GOLD SX5500(SX)	106.8	0.5	31.7	0.3	3.6	111.3	0.4	23.0	0.2	3.6
PAG SX98(SX)	115.3	1.6	29.6	1.9	3.8	116.1	1.1	20.2	1.7	3.7
PIONEER 3219(DX)	113.9	1.5	39.8	0.5	2.9	114.5	1.0	32.1	0.4	3.1
TROJAN TXS119(SX)	109.2	4.0	34.9	0.5	3.6	114.7	2.6	23.2	0.4	3.5
TROJAN TXS113(SPX)	108.9	2.7	42.9	0.3	3.4	111.9	1.8	32.2	0.6	3.5
US-13(DX)	87.7	3.4	55.2	1.2	3.9	93.3	2.3	50.0	0.8	3.9
					GROUP 3 MATURITY					
FUNKS G-5757(DX)	102.7	7.3	32.7	1.8	3.9	107.8	4.9	24.4	1.7	3.9
MCCURDY MSX88(SX)	104.7	2.5	30.2	0.7	3.5	105.6	1.7	20.1	0.5	3.5
AVERAGE	104.8	3.1	33.2	0.9	3.6	107.4	1.7	26.9	0.7	3.6

*WHITE HYBRID.

DISTRICT 5

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

The average acre yield of the hybrids evaluated was 81 bushels, up 19 bushels from the 1974 yield. The range was from 52 to 108 bushels. However, this was 55 bushels below the 1973 acre yield. Again, as in 1974, the reduced yield was largely due to an extended period with insufficient rainfall. The deficit totaled 8.33 inches for July and August.

Stalk lodging averaged 32.2% over all hybrids, and ranged from 1.2 to 87.9%. Root lodging ranged from 0.0 to 48.7%. These values indicate significant differences in the standing ability of hybrids evaluated.

Weeds were not a problem in these plots during 1975.

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 data in Tables 12 and 14, and are as reliable as the 2-year averages presented in Tables 13 and 15.

TABLE 14. PERFORMANCE RECORD OF HYBRIDS EVALUATED AT THE AGRONOMY RESEARCH CENTER (ARC-BRADFORD FARM) NEAR COLUMBIA, MISSOURI (BOONE COUNTY). PLANTED APRIL 21, 1975. HARVESTED SEPTEMBER 24, 1975.

BRAND--HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	PLANTS PER ACRE (#)	LODGED PLANTS ROOT (%)	LODGED PLANTS STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
	GROUP I MATURITY						
ACCO UC6601(SX)	72.1	20.1	14800	2.6	76.2	0.0	3.2
BU-JAC X56(SX)	92.0	23.0	15200	36.6	15.5	1.3	3.7
CARGILL 880(SX) **	88.1	20.8	15300	9.8	66.8	1.8	3.5
USS 0555(3X)	100.6	19.5	16000	0.0	12.2	4.9	3.7
USS 0555A(3X)	66.8	21.4	11100	2.6	10.4	0.0	3.8
FUNKS G-4507(SX)	105.4	21.3	15900	22.6	12.9	0.6	3.5
FUNKS G-4503(SX)	94.1	21.5	16500	8.4	37.3	0.5	3.3
SUPERCROST 4242(SPX)	82.2	20.1	16500	1.8	58.9	1.8	3.2
MFA 5001(SX)	81.0	20.5	14700	47.5	15.5	3.3	3.5
MCCURDY MSX60(SX)	90.6	20.4	12900	37.9	14.6	0.6	3.7
PIONEER 3390(SPX) **	53.5	22.4	12700	3.2	36.4	3.9	3.7
PIONEER 3388(SPX) **	85.9	20.0	13700	5.1	9.6	0.0	3.0
PIONEER 3517(SPX)	73.4	21.0	14400	0.6	52.0	0.0	3.3
PIONEER 3424(DX)	88.9	21.0	14900	1.3	30.9	0.6	3.5
PIONEER X2226(SPX)	66.3	19.7	13000	1.4	25.4	1.6	3.0
	GROUP II MATURITY						
ACCO UC8801(SX)	75.6	22.0	16000	6.4	42.3	1.2	3.8
ACCO UC9701(SX)	87.0	22.5	16500	0.6	71.3	0.0	3.5
ACCO UC9451(SX)	71.5	23.2	16200	2.6	87.9	1.7	3.8
ACCO U395(3X)	83.2	24.6	15600	10.9	36.9	3.0	3.5
ASGROW RX100(SX)	86.2	22.4	13600	1.4	24.3	0.0	4.2
ASGROW RX90(SX)	84.4	21.9	13900	26.0	8.1	1.2	4.0
BC-JAC X7L(SX)	79.2	23.9	16000	12.9	30.8	1.1	3.5
BC-JAC X83(SPX)	97.7	23.3	15300	1.2	13.6	0.0	3.7
BC-JAC X69(SX)	93.2	21.7	15500	24.9	9.5	0.0	3.8
BU-JAC X52A(SX)	81.7	22.1	14000	4.6	23.8	0.0	3.7
CARGILL 979(SX)	83.9	23.2	15200	7.3	33.2	1.9	3.7
CARGILL 949	90.4	22.9	14600	26.9	9.7	0.6	3.8
CARGILL 920	84.4	20.0	14800	2.0	32.3	0.6	3.5
CCOP 2318(SX)	82.1	24.2	14100	7.6	23.4	0.6	3.5
COOP 3300(3X)	52.4	21.1	8500	4.6	29.1	0.9	3.3
CCOP 2300(SX)	68.1	22.6	11000	21.4	18.9	0.0	3.8
DEKALB XL81(SX) **	83.2	23.5	16100	1.2	69.3	0.0	3.7
DEKALB XL72A(SX) **	89.0	23.4	15900	8.1	24.7	0.0	4.0
USS 1010(SX)	95.9	22.4	12900	15.2	6.2	0.7	3.8
USS 1515(SX)	83.7	23.0	14700	10.3	23.4	1.8	3.8
FEDERAL FX59(SX)	82.4	22.5	14200	13.4	36.6	1.8	3.5
FEDERAL 32(DX)	52.8	22.5	9000	5.2	13.4	0.0	3.3
FUNKS G-4697(SPX) **	70.7	22.2	14900	3.6	54.6	2.3	3.8
FUNKS G-4646(SPX) **	77.7	21.2	14600	5.2	72.4	0.6	3.5
FUNKS G-4628(SX)	99.1	24.0	13900	1.2	23.1	0.0	3.7
FUNKS G-4737(SX)	79.0	23.0	15800	1.9	63.7	2.6	3.5
FUNKS G-5666(DX)	93.5	22.5	14000	1.1	50.2	1.3	3.3
SUPERCROST S-85(SX)	72.3	22.2	14400	2.6	44.4	2.0	3.3
SUPERCROST 7772(SPX)	77.5	22.3	13100	1.5	26.3	0.0	3.3
SUPERCROST 5440(SX)	92.7	22.4	14600	17.3	11.4	0.7	3.7
HAPPEL 3361(3X)	71.0	21.8	13800	3.3	58.8	2.7	3.7
HAPPEL MS-72(SX)	86.2	23.7	15700	7.6	27.1	0.6	3.7
HAPPEL H-37(SPX)	65.1	23.0	11500	11.3	17.7	0.0	4.0
LEWIS X78B(SX)	84.0	23.1	14700	5.1	19.5	0.0	3.3
LEWIS X62B(SX)	102.6	22.1	16300	34.3	21.3	0.0	3.7
LEWIS X84B(SX)	84.9	24.2	14400	5.0	49.5	2.0	4.0
LEWIS 708B(3X)	75.7	23.0	14600	5.5	29.1	0.7	3.7
MFA V-12(SX) **	71.6	21.5	14900	2.6	28.4	1.2	3.3
MFA V-16(SX) **	79.4	24.7	15000	15.4	29.9	1.1	3.7
MFA 3030(DX)	76.9	23.9	12900	10.2	18.0	2.2	3.7
MFA 6041(SPX)	79.8	21.0	13900	0.0	33.3	2.1	3.5
MFA 6061(3X)	78.9	21.3	14400	1.8	23.5	0.0	3.7
MFA EXP54434(SX)	97.5	24.6	16400	38.4	13.8	0.5	4.0
MORTON 6700(SX)	66.2	22.4	12400	1.5	29.7	0.0	3.7
MORTON 5700(SX)	90.9	21.4	15200	6.8	37.3	1.2	3.3
MORTON 9300(3X)	82.6	22.1	14100	7.1	33.0	0.7	3.5
MUNCYCHIEF H764(DX)	64.2	21.8	11600	3.3	42.0	0.0	3.8
MUNCYCHIEF SX878(SX)	67.9	23.5	11200	4.6	47.3	0.7	3.6
MUNCYCHIEF SX777(SX)	66.1	22.1	10200	6.2	10.2	1.2	3.6
MUNCYCHIEF 3X898(3X)	61.8	22.2	11400	5.9	30.7	1.5	3.7
MUNCYCHIEF SX662(SX)	63.9	20.0	14100	2.3	57.8	0.0	3.3
MCALLSTR SX6837(SX)	95.7	22.6	15000	8.1	20.5	0.6	3.3
MCCURDY MSX70(SX)	86.9	21.8	14700	14.6	38.6	0.0	3.7
MCCURDY MSX84(SX)	91.9	21.8	15700	48.7	10.4	1.1	3.7
MCCURDY MSX68(SX)	80.9	22.1	15300	7.7	45.7	0.6	3.5

TABLE 14. (CONTINUED).

BRAND--HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	PLANTS PER ACRE (#)	LODGED PLANTS ROOT (%)	LODGED PLANTS STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
GROUP II MATURITY							
N-K PX74(SX)	89.1	22.2	14100	24.0	10.9	0.7	3.7
N-K PX76(SX)	83.4	21.7	15200	7.5	40.7	0.6	3.5
N-K PX675(3X)	93.3	21.7	14700	15.6	13.6	1.2	3.5
O'S GOLD SX5500(SX)**	78.3	23.0	13200	1.3	32.6	1.4	3.7
PAG SX98(SX)	87.3	23.9	14600	6.5	33.1	1.3	3.7
PAG 494(SX)	79.1	21.4	13700	11.6	22.1	1.9	3.3
PIONEER 3369A(SX)**	108.6	21.0	15300	6.4	33.6	0.0	3.7
PIONEER 3219(DX)	84.6	21.9	13200	3.4	26.9	0.8	3.5
PIONEER 3325(SX)	88.7	21.6	14900	1.9	15.7	0.0	3.7
PIONEER 3184(SX)	90.5	22.2	15700	2.4	2.3	0.0	3.8
PIONEER 3315(3X)	76.6	22.3	16000	2.8	42.2	0.0	3.7
TE 6968(SX)	77.0	20.8	14700	8.1	66.8	0.6	3.3
TE 6980(SX)	82.0	23.7	16400	1.7	39.6	0.0	3.8
TE 6965(SX)	77.3	23.7	13800	9.4	24.9	0.7	3.5
TROJAN TXS119(SX)**	81.4	23.4	15800	4.5	37.2	0.6	3.7
TROJAN TXS111(SX)	79.0	20.5	13900	5.2	17.9	0.0	4.0
TROJAN TXS114(SX)	84.7	23.8	14700	5.4	58.9	5.3	3.8
TROJAN TXS115A(SX)	95.3	21.6	14000	24.1	7.5	0.0	3.8
TROJAN TXS117A(SPX)	84.3	22.7	15800	11.0	35.3	1.2	3.8
MC (MO17XB73)(SX)	99.4	22.0	15000	19.4	12.0	1.2	3.7
(FRN28XB73)MO17(3X)	82.4	22.5	13600	18.6	16.4	0.6	3.3
MO (MO17XN28)(SX)	91.6	23.0	14000	2.5	29.7	0.0	3.7
B73 X VA26 H7(SX)	73.3	21.8	13300	12.4	21.4	1.5	3.7
B73 X H98(SX)	64.0	22.6	12300	3.8	34.9	1.5	3.5
B73 X FR177(SX)	71.3	24.0	12600	5.9	29.1	0.0	4.0
(H93 X H84)VA26(3X)	77.1	20.7	13900	11.5	30.9	2.0	3.5
US-13(DX)	57.5	22.4	14200	2.6	74.7	1.9	3.7
WALTHER W271(DX)	89.8	21.4	15300	8.4	38.4	1.8	3.8
WALTHER W80(DX)	72.0	20.8	15500	1.1	66.3	0.6	3.3
WALTHER W45(SX)	90.7	22.1	15300	12.4	41.0	0.6	3.7
WALTHER W239(DX)	68.5	21.3	15000	3.1	69.8	0.6	3.3
HULTING X9880(3X)	72.6	22.8	14700	10.9	38.2	0.7	3.3
HULTING X980(SX)	69.4	22.8	15200	5.8	43.4	0.0	3.5
HULTING X880(SX)	106.6	22.1	15700	20.3	22.6	0.6	3.7
HULTING X8800(3X)	80.3	23.0	14900	21.3	32.7	1.4	3.5
GROUP III MATURITY							
FUNKS EXP27466(SX)	66.2	27.5	13400	8.1	1.4	0.7	4.2
LEWIS X808(SX)	83.3	22.9	14800	6.2	23.2	0.0	3.5
MCCURDY MSX88(SX)	81.2	23.5	14900	13.8	32.7	1.9	3.7
PIONEER 3177(3X)	73.0	23.3	15600	10.1	29.5	0.6	4.0
TE 6969(SX)	84.8	25.0	14700	11.8	32.3	1.3	4.2
AVERAGE	81.3	22.3	14360	9.6	32.2	0.9	3.6

LSD AT 5% LEVEL IS 18.9 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 12.1 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-BRADFORD FARM, ECCHE COUNTY) DURING THE TWO-YEAR PERIOD 1974-75 AND THE THREE-YEAR PERIOD 1973-75.

BRAND--HYBRID	2-YEAR AVERAGE					3-YEAR AVERAGE				
	ACRE YIELD (BU)	LODGING ROOT (%)	LODGING STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)	ACRE YIELD (BU)	LODGING ROOT (%)	LODGING STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
					GROUP 1 MATURITY					
ACCO UC6601(SX)	66.6	1.5	35.3	0.3	3.1	-	-	-	-	-
BO-JAC X56(SX)	76.0	18.8	10.4	0.7	3.7	-	-	-	-	-
CARGILL 880(SX)	68.6	6.4	36.3	1.2	3.2	86.4	4.2	26.4	0.9	3.2
FUNKS G-4507(SX)	80.7	11.3	8.1	0.5	3.5	-	-	-	-	-
MFA 5001(SX)	79.0	24.5	11.8	1.6	3.3	-	-	-	-	-
MCCURDY MSX60(SX)	80.8	20.4	10.3	0.3	3.6	-	-	-	-	-
PIONEER 3390(SPX)	65.8	1.6	18.7	2.2	3.4	85.0	1.1	16.5	1.4	3.6
PIONEER 3388(SPX)	78.9	2.5	5.5	0.2	3.0	97.6	1.7	4.1	0.2	3.1
PIONEER 3517(SPX)	73.7	1.3	26.2	0.0	3.1	93.5	0.9	18.2	0.2	3.2
PIONEER 3424(DX)	71.9	0.7	16.8	0.5	3.3	-	-	-	-	-
					GROUP 2 MATURITY					
ACCO UC6801(SX)	65.3	3.2	21.6	0.8	3.6	86.2	2.8	17.8	0.6	3.8
ASGROW RX100(SX)	67.6	0.7	13.0	0.0	3.8	89.8	0.5	10.9	0.6	3.8
BO-JAC X7L(SX)	85.6	7.0	17.9	0.6	3.3	108.6	4.7	13.0	0.8	3.6
BO-JAC X83(SPX)	76.3	1.3	7.8	0.0	3.5	100.3	0.9	14.0	0.7	3.8
CARGILL 979(SX)	78.4	3.9	18.2	1.2	3.5	94.1	2.6	13.8	1.0	3.5
COOP 2318(SX)	81.6	3.8	13.2	0.3	3.3	102.6	2.5	10.1	0.7	3.6
DEKALB XL81(SX)	70.1	0.8	34.9	0.0	3.3	87.1	0.7	24.9	1.1	3.4
DEKALB XL72A(SX)	86.0	4.1	12.8	0.2	3.6	-	-	-	-	-
FEDERAL FX59(SX)	82.7	7.1	18.3	0.9	3.3	102.9	4.7	14.5	1.0	3.5
FUNKS G-4697(SPX)	59.3	2.0	30.4	1.4	3.5	74.8	1.4	22.8	1.4	3.7
FUNKS G-4646(SPX)	62.8	4.3	36.4	0.3	3.1	84.6	2.8	25.3	0.2	3.3
FUNKS G-4628(SX)	85.6	1.2	13.1	0.3	3.3	99.8	0.8	10.4	0.4	3.6
FUNKS G-4737(SX)	66.0	0.9	32.8	1.6	3.2	88.7	0.6	24.0	1.2	3.2
FUNKS G-5666(DX)	75.8	0.8	26.5	0.6	3.2	-	-	-	-	-
HAPPEL 3361(3X)	69.5	3.3	30.6	1.4	3.3	88.7	2.2	22.1	1.3	3.6
HAPPEL MS-72(SX)	85.1	3.8	17.3	0.3	3.4	105.5	2.5	12.6	0.7	3.4
HAPPEL H-37(SPX)	67.6	5.7	9.7	0.3	3.8	86.7	4.0	8.0	0.4	3.9
LEWIS X78B(SX)	77.5	2.8	11.1	0.0	3.3	101.7	1.9	8.0	0.8	3.6
LEWIS X84B(SX)	76.9	3.2	25.9	1.2	3.6	-	-	-	-	-
MFA V-12(SX)	63.8	1.3	14.2	1.1	3.2	82.9	0.9	12.0	0.9	3.4
MFA V-16(SX)	84.2	7.7	16.8	0.6	3.4	104.2	5.1	12.4	0.7	3.6
MFA 3030(DX)	70.9	5.4	11.4	1.1	3.3	92.3	4.5	8.6	1.3	3.5
MFA 6041(SPX)	76.4	0.5	17.8	1.1	3.3	-	-	-	-	-
MFA 6061(3X)	69.9	0.9	13.2	0.0	3.3	-	-	-	-	-
MFA EXP54434(SX)	77.8	19.4	8.5	0.3	3.6	-	-	-	-	-
MORTON 6700(SX)	68.1	0.7	15.1	0.0	3.5	-	-	-	-	-
MUNCYCHIEF SX878(SX)	56.4	3.1	25.3	0.4	3.5	78.6	3.2	17.2	0.4	3.6
MUNCYCHIEF SX777(SX)	61.1	4.9	8.5	0.6	3.4	85.6	4.2	6.6	1.1	3.6
MUNCYCHIEF 3X898(3X)	61.4	4.4	16.6	0.8	3.4	86.0	2.9	12.5	0.5	3.7
MUNCYCHIEF SX662(SX)	64.4	1.4	32.4	0.5	2.8	-	-	-	-	-
MCALLSTR SX6837(SX)	86.8	4.0	11.5	0.5	3.3	104.8	2.7	8.0	0.5	3.5
MCCURDY MSX70(SX)	87.4	8.7	22.8	0.0	3.5	108.4	5.8	16.7	0.2	3.7
MCCURDY MSX84(SX)	79.4	24.8	9.5	0.6	3.5	-	-	-	-	-
N-K PX74(SX)	72.6	12.8	8.4	0.6	3.6	-	-	-	-	-
N-K PX76(SX)	70.2	6.5	22.3	0.3	3.3	-	-	-	-	-
N-K PX675(3X)	74.6	8.5	5.5	0.9	3.5	-	-	-	-	-
O'S GOLD SX5500(SX)	77.1	0.7	19.7	1.1	3.3	100.6	0.4	14.3	1.1	3.6
PAG SX98(SX)	84.1	3.5	18.7	0.6	3.4	100.1	2.3	13.6	0.7	3.6
PIONEER 3369A(SX)	77.8	3.9	17.5	0.2	3.6	97.3	2.6	12.5	0.8	3.7
PIONEER 3219(DX)	64.8	1.7	14.6	0.4	3.3	82.1	1.1	11.0	1.0	3.5
PIONEER 3325(SX)	81.8	0.9	8.4	0.0	3.4	-	-	-	-	-
TE 6968(SX)	71.0	5.0	34.6	0.3	3.2	-	-	-	-	-
TE 6980(SX)	79.5	1.3	20.6	0.0	3.7	-	-	-	-	-
TROJAN TXS119(SX)	79.2	2.2	15.1	0.3	3.5	98.9	1.5	13.6	0.5	3.7
TROJAN TXS115A(SX)	81.1	12.3	5.7	0.0	3.7	-	-	-	-	-
TROJAN TXS117A(SPX)	69.1	5.5	20.6	0.6	3.8	-	-	-	-	-
(FRN28XB73)MC17(3X)	72.7	9.6	12.6	0.3	3.3	-	-	-	-	-
US-13(CX)	51.3	3.8	42.8	1.0	3.8	74.3	2.5	33.4	1.8	3.9
WALTHER W271(DX)	75.9	7.0	20.5	0.9	3.4	-	-	-	-	-
WALTHER W80(DX)	61.0	2.3	35.0	0.8	3.2	-	-	-	-	-
WALTHER W45(SX)	87.3	6.2	23.3	0.6	3.3	-	-	-	-	-
WALTHER W239(DX)	64.3	3.0	36.4	0.5	3.3	-	-	-	-	-
HULTING X9880(3X)	66.3	5.5	20.9	0.4	3.3	-	-	-	-	-
HULTING X980(SX)	77.2	2.9	24.4	0.0	3.3	-	-	-	-	-
					GROUP 3 MATURITY					
LEWIS X80B(SX)	70.1	3.1	12.1	0.0	3.3	97.8	2.7	9.8	0.2	3.4
MCCURDY MSX88(SX)	85.6	7.2	18.6	0.9	3.5	106.1	4.8	13.4	1.1	3.7
TE 6969(SX)	68.4	6.7	16.6	0.7	3.7	-	-	-	-	-
AVERAGE	73.8	5.3	19.1	0.6	3.4	93.5	2.5	14.8	0.8	3.5

*WHITE HYBRID.

TABLE 16. SUMMARY PERFORMANCE RECORD FOR CORN HYBRIDS EVALUATED AT TWO CENTRAL MISSOURI LOCATIONS (LAFAYETTE AND BOONE COUNTIES) IN 1975.

BRAND--HYBRID	ACRE YIELD (BU)	LODGED PLANTS ROOT (%)	LODGED PLANTS STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
	GROUP 1 MATURITY (2-LOCATION AVERAGE)				
ACCO UC6601(SX)	77.2	1.9	76.8	0.3	3.3
BC-JAC X56(SX)	99.6	25.5	24.9	0.7	3.5
CARGILL 880(SX)	86.8	5.2	78.8	0.9	3.4
USS 0555(3X)	97.8	1.7	35.4	2.5	3.7
USS 0555A(3X)	77.6	2.6	29.9	0.0	3.7
FUNKS G-4507(SX)	96.9	19.4	17.3	0.3	3.7
FUNKS G-4503(SX)	90.6	6.8	37.2	0.3	3.5
SUPERCROST 4242(SPX)	78.3	1.4	62.5	0.9	3.3
MFA 5001(SX)	90.4	33.7	23.6	1.6	3.7
PIONEER 3390(SPX)	58.8	1.6	47.0	1.9	3.7
PIONEER 3388(SPX)	90.8	7.4	24.4	0.0	3.3
PIONEER 3517(SPX)	83.5	0.3	46.3	0.0	3.4
PIONEER 3424(DX)	89.3	0.7	42.7	0.3	3.6
PIONEER X2226(SPX)	72.9	0.7	24.0	0.8	3.2
	GROUP 2 MATURITY (2-LOCATION AVERAGE)				
ACCO UC9451(SX)	70.3	1.8	84.6	1.1	3.7
ACCO U395(3X)	89.5	8.1	55.9	2.0	3.7
ASGROW RX100(SX)	89.0	2.2	33.8	0.0	3.9
BC-JAC X7L(SX)	82.4	6.7	49.3	0.6	3.5
BC-JAC X83(SPX)	101.3	0.6	13.0	0.0	3.7
BC-JAC X69(SX)	97.5	12.4	19.7	0.0	3.8
BO-JAC X52A(SX)	84.6	2.5	37.0	0.0	3.7
CARGILL 949	99.1	20.6	18.3	0.3	3.8
CARGILL 920	89.4	1.9	32.3	0.3	3.8
COOP 2318(SX)	85.8	4.1	36.6	0.3	3.3
COOP 3300(3X)	59.3	4.1	40.0	0.9	3.2
COOP 2300(SX)	75.4	17.5	17.4	0.0	3.9
DEKALB XL81(SX)	82.4	1.1	61.6	0.0	3.4
DEKALB XL72A(SX)	85.6	4.1	40.6	0.3	3.8
USS 1010(SX)	99.8	23.8	11.7	0.4	3.8
USS 1515(SX)	87.4	6.3	32.2	0.9	3.6
FUNKS G-4697(SPX)	78.4	4.0	53.7	1.2	3.6
FUNKS G-4646(SPX)	76.6	4.6	75.0	0.3	3.6
FUNKS G-4628(SX)	88.5	0.6	38.0	0.3	3.6
FUNKS G-4737(SX)	82.0	0.9	65.9	1.3	3.3
FUNKS G-5666(DX)	85.8	1.1	60.6	0.6	3.5
SUPERCROST S-85(SX)	77.7	1.3	45.8	1.0	3.4
SUPERCROST 5440(SX)	97.3	19.8	11.8	0.3	3.7
HAPPEL 3361(3X)	76.1	2.4	60.4	1.4	3.8
HAPPEL MS-72(SX)	87.3	4.1	43.1	0.3	3.5
HAPPEL H-37(SPX)	72.2	7.3	19.5	0.6	3.8
LEWIS X78B(SX)	78.8	2.6	41.4	0.0	3.5
LEWIS X62B(SX)	105.6	29.7	21.0	0.0	3.6
LEWIS X84B(SX)	86.8	2.5	67.8	1.0	3.9
LEWIS 708B(3X)	79.1	3.5	36.0	0.3	3.7
MFA V-12(SX)	70.4	1.6	44.5	0.9	3.3
MFA V-16(SX)	82.5	7.9	41.4	0.6	3.6
MFA 3030(DX)	81.6	5.1	36.4	1.1	3.4
MFA 6041(SPX)	88.1	0.3	54.5	1.1	3.4
MFA 6061(3X)	81.6	2.0	36.8	0.0	3.7
MFA EXP54434(SX)	105.6	32.3	17.1	0.3	3.8
MORTON 6700(SX)	69.9	1.6	38.7	0.0	3.7
MUNCYCHIEF H764(DX)	67.8	4.4	48.9	0.3	3.6
MUNCYCHIEF SX878(SX)	72.5	4.6	51.2	0.4	3.6
MUNCYCHIEF SX777(SX)	74.4	3.5	21.9	0.6	3.6
MUNCYCHIEF SX662(SX)	66.2	1.8	66.5	0.0	3.2

TABLE 16. (CONTINUED).

BRAND--HYBRID	ACRE YIELD (BU)	LODGED PLANTS ROOT (%)	LODGED PLANTS STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
GROUP 2 MATURITY (2-LOCATION AVERAGE)					
MCCURDY MSX70(SX)	86.5	11.5	33.5	0.0	3.7
MCCURDY MSX84(SX)	101.5	27.2	17.6	0.6	3.8
N-K PX74(SX)	90.3	17.6	16.3	0.3	3.8
N-K PX76(SX)	84.8	4.3	58.2	0.3	3.3
O'S GOLD SX5500(SX)	76.8	0.7	45.5	0.7	3.6
PAG SX98(SX)	87.6	3.5	42.5	0.9	3.6
PAG 494(SX)	85.4	7.8	40.2	1.0	3.3
PIONEER 3219(DX)	88.1	2.2	44.0	0.4	3.4
PIONEER 3325(SX)	92.6	3.6	16.4	0.0	3.6
PIONEER 3184(SX)	100.1	4.1	3.4	0.0	3.7
PIONEER 3315(3X)	80.5	1.4	40.7	0.0	3.5
TROJAN TXS119(SX)	82.0	2.5	49.2	0.3	3.6
TROJAN TXS114(SX)	99.6	2.7	54.0	2.7	3.9
TROJAN TXS115A(SX)	89.3	20.1	22.2	0.0	4.0
TROJAN TXS117A(SPX)	86.4	12.8	37.4	0.9	3.8
MO (MO17XB73)(SX)	106.1	18.1	22.7	0.6	3.7
(FRN28XB73)MO17(3X)	79.3	10.5	20.3	0.3	3.4
MO (MO17XN28)(SX)	89.7	1.8	41.5	0.3	3.6
B73 X VA26 H7(SX)	81.9	8.8	28.2	0.7	3.7
B73 X H98(SX)	70.8	2.8	39.7	0.7	3.4
B73 X FR177(SX)	78.6	3.8	30.3	0.4	3.8
(H93 X H84)VA26(3X)	81.8	6.9	50.5	1.0	3.3
LS-13(DX)	61.6	1.9	68.0	1.3	3.8
WALTHER W271(DX)	89.6	5.3	48.0	0.9	3.4
WALTHER W80(DX)	74.3	0.8	62.1	0.3	3.3
WALTHER W239(DX)	78.9	1.5	72.8	0.3	3.6
GROUP 3 MATURITY (2-LOCATION AVERAGE)					
FUNKS EXP27466(SX)	64.0	8.7	7.5	0.6	4.2
LEWIS X808(SX)	83.3	4.8	39.3	0.0	3.6
MCCURDY MSX88(SX)	81.7	7.1	43.8	1.1	3.4
PIONEER 3177(3X)	77.1	7.2	43.7	0.3	4.3
MEAN	83.9	6.9	39.9	0.6	3.6

*WHITE HYBRID.

DISTRICT 6

No evaluation plots were located in this district during 1975.

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 hybrids evaluated are presented in Tables 21 and 22 (see irrigation section).

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

Data from District 9 are presented in Tables 17 and 18.

The average yield from a stand of 14,900 plants per acre was 90 bushels. The yield of the individual hybrids ranged from a low of 56 to a high of 136 bushels per acre. The stand loss was approximately 25%, or 10% higher than the 15% provided for at planting time.

Stalk lodging ranged from 2.1 to 26.0%, with an average of 7.1%, for the hybrids evaluated. Root lodging was as high as 11.9%, but the average was only 0.6% over all hybrids, indicating generally that root lodging among the hybrids was low. Dropped ears were also low, averaging 1.1% over all hybrids and ranging as high as 4.3%.

Weeds were a problem during the late part of the season and may have contributed some to lowering of the yields.

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 RESEARCH CENTER (DRC) NEAR PORTAGEVILLE, MISSOURI (PEMISCOT COUNTY). PLANTED APRIL 5, 1975. HARVESTED SEPTEMBER 17, 1975.

BRAND--HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	PLANTS PER ACRE (#)	LODGED PLANTS ROOT (%)	LODGED PLANTS STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
GROUP I MATURITY							
EC-JAC X56(SX)	93.5	20.5	15600	0.0	5.8	0.6	3.2
USS 0555(3X)	97.8	19.6	16000	1.7	5.8	0.0	3.2
USS 0555A(3X)	79.3	21.2	13700	0.0	6.1	0.7	3.2
FUNKS G-4507(SX)	99.7	20.3	17000	1.8	10.0	0.5	3.2
FUNKS G-4503(SX)	113.7	20.3	17700	0.0	5.6	1.1	2.8
PAG SX7(SX)**	65.1	20.2	16700	0.0	7.2	0.0	2.5
PIONEER 3390(SPX)**	71.7	20.0	11800	0.0	2.5	0.7	2.8
GROUP II MATURITY							
ASGROW RX100(SX)**	82.1	21.7	16400	0.0	8.6	4.3	3.0
EC-JAC X83(SPX)	112.7	20.0	13800	0.7	4.0	1.3	3.0
COOP 2318(SX)	67.0	20.4	13300	0.0	4.9	0.7	3.0
COOP 2300(SX)	61.6	21.0	12100	0.0	5.4	1.7	3.3
DEKALB XL81(SX)**	103.0	21.6	16800	0.0	7.5	1.1	3.2
DEKALB XL72A(SX)**	87.1	20.8	15500	0.0	7.1	0.0	3.0
USS 1010(SX)	86.8	19.8	14100	2.2	5.3	1.3	3.2
USS 1515(SX)	100.6	20.6	13500	0.0	4.7	0.6	3.2
GLDNHRVST H2655(SX)	67.4	21.2	14200	0.0	5.4	1.8	3.0
GLDNHRVST H2650(SX)	92.2	21.4	15500	0.0	7.2	0.6	3.0
GLDNHRVST H2666(SX)	97.9	20.5	15600	0.0	9.1	1.3	3.3
FUNKS G-4697(SPX)**	75.0	20.0	12900	3.0	7.8	1.5	2.7
FUNKS G-4646(SPX)**	85.2	22.0	14400	0.0	9.6	0.7	3.0
FUNKS G-4628(SX)	102.7	20.3	16300	0.0	5.2	1.6	3.2
FUNKS G-4737(SX)	87.3	21.2	15200	0.0	5.2	2.5	2.8
FUNKS G-5666(DX)	98.3	20.6	16100	0.0	5.6	0.6	3.3
MFA V-16(SX)	82.9	20.6	15300	1.1	7.9	0.6	2.8
MFA 3030(DX)	68.0	21.2	14000	0.0	5.4	0.6	3.0
MFA 6041(SPX)	102.4	20.5	15800	0.6	7.0	1.2	3.2
MFA 6061(3X)	63.7	20.2	13700	0.0	5.5	0.0	3.3
MFA EXP54434(SX)	79.5	20.6	14400	0.6	8.2	1.3	3.0
MUNCYCHIEF SX878(SX)	78.7	20.7	12000	0.0	9.8	1.7	2.8
MUNCYCHIEF SX777(SX)	59.2	20.3	9400	0.0	9.6	2.9	3.0
MUNCYCHIEF SX662(SX)	73.9	20.6	13700	0.0	9.4	1.3	2.5
MCCURDY MSP888(3X)	98.3	20.3	16800	0.0	7.1	0.6	3.0
MCNAIR X-210(SX)	95.5	21.1	14400	0.0	26.0	3.3	3.0
N-K PX670(3X)**	79.0	20.1	14600	0.0	5.7	0.6	3.0
PAG SX39(SX)**	91.3	21.9	16200	0.6	7.5	1.1	3.0
PAG SX98(SX)**	89.6	21.0	16000	0.0	3.4	0.6	3.0
PAG 494(SX)	82.9	21.9	15000	0.0	6.7	1.2	3.0
PIONEER 3369A(SX)**	101.6	20.6	15900	0.6	6.4	1.7	3.0
PIONEER 3368(SPX)**	107.7	20.4	15400	0.6	2.4	1.2	3.0
PIONEER 3368A(SPX)	104.4	20.9	16400	0.6	6.7	0.6	3.2
PIONEER 3321(SX)	109.6	20.7	16100	0.0	4.1	0.6	3.3
PREMIER 655(SX)	96.9	20.0	14800	0.0	6.3	1.3	3.3
PREMIER 688(SX)	102.2	21.2	15300	0.0	8.8	0.0	3.5
PRINCETON SX850(SX)	105.1	20.0	13600	0.0	3.6	2.2	3.0
PRINCETON SX910(SX)*	136.0	21.8	17100	0.6	7.8	1.7	3.8
PRINCETON SX805(SX)	96.3	21.3	15100	0.0	8.4	2.6	3.0
TE 6968(SX)	94.4	21.5	14100	0.0	5.9	0.0	3.0
TE 6980(SX)	87.7	20.8	15600	0.0	3.7	1.2	3.2
TE 6965(SX)	75.9	20.7	13700	0.0	7.8	0.6	3.3
TROJAN TXS119(SX)**	79.6	20.7	16500	0.0	6.6	0.0	3.3
TROJAN TXS113(SPX)	95.8	21.4	15400	0.0	4.1	1.2	3.0
TROJAN TXS114(SX)	108.9	19.5	15400	0.6	9.8	3.0	3.5
TROJAN TXS115A(SX)	80.7	20.1	15600	0.0	8.3	1.8	3.5
TROJAN TXS117A(SPX)	96.8	21.2	15300	0.0	2.1	0.0	3.5
MC (MO17XB73)(SX)	84.3	19.9	15400	0.0	4.0	0.6	3.2
MC (MO17XN28)(SX)	72.5	19.9	13500	0.0	4.6	1.9	3.0
US-13(DX)	55.6	20.2	12400	11.9	15.8	1.6	3.2
WALTHER W80(DX)	66.6	19.6	13800	0.7	16.4	4.0	2.7
GROUP III MATURITY							
ASGROW RX114(3X)	102.6	20.9	15400	0.0	7.1	0.0	3.2
EC-JAC X91(SPX)	92.6	21.9	16100	1.2	6.8	0.6	3.0
EC-JAC X7L-24(SPX)	93.5	20.3	15000	0.0	6.6	1.1	3.0
GLDNHRVST H2750(SPX)	93.1	21.2	13900	0.0	8.0	0.7	3.2
FUNKS G-5757(DX)**	105.4	21.1	16000	1.1	4.7	0.5	3.5
FUNKS G-4747W(SPX)*	114.6	21.6	16000	5.7	8.0	0.5	3.5
FUNKS EXP27466(SX)	103.1	22.1	13800	0.0	5.3	2.6	3.3
LEWIS X808(SX)	75.3	20.7	15200	3.6	4.9	0.6	3.0
MCNAIR X-233(SX)*	126.9	21.2	15700	1.8	8.8	2.9	3.5

BRAND--HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	PLANTS PER ACRE (#)	LODGED PLANTS ROOT (%)	LODGED PLANTS STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
	GROUP III MATURITY						
N-K PX91(SX)	78.5	20.9	14100	0.0	7.9	0.0	3.2
N-K PX95(SX)	115.0	22.0	14200	0.0	5.3	0.0	3.8
PREMIER 695-I(SPX)	85.4	19.4	15300	0.0	4.2	1.2	3.0
TE 6969(SX)	69.9	21.4	14100	2.6	11.8	2.0	3.0
	GROUP IV MATURITY						
MCCURDY 67-14(SX)	127.1	23.7	16100	0.0	5.7	0.0	3.0
AVERAGE	90.5	20.8	14911	0.6	7.1	1.1	3.1

LSD AT 5% LEVEL IS 17.7 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 11.4 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 18. AVERAGE PERFORMANCE RECORD OF HYBRIDS EVALUATED AT THE DELTA RESEARCH CENTER (DRC, PEMISCOT COUNTY) DURING THE TWO YEARS 1974 AND 1975 AND THE THREE YEARS 1973, 1974, AND 1975. NOTE: BIRD DAMAGE FORCED ABANDONMENT OF PLOTS IN 1973.

	2-YEAR AVERAGE					3-YEAR AVERAGE				
BRAND--HYBRID	ACRE YIELD (BU)	LODGING ROOT (%)	LODGING STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)	ACRE YIELD (BU)	LODGING ROOT (%)	LODGING STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
					GROUP 1 MATURITY					
FUNKS G-4507(SX)	106.3	1.6	6.0	0.5	3.2	-	-	-	-	-
PAG SX7(SX)	81.6	0.7	3.9	0.0	2.5	-	-	-	-	-
PIONEER 3390(SPX)	85.8	1.3	2.7	0.3	2.8	91.4	2.0	2.7	0.2	2.9
					GROUP 2 MATURITY					
ASGROW RX100(SX)	89.6	0.0	6.4	2.4	2.8	-	-	-	-	-
BC-JAC X83(SPX)	113.3	0.3	2.8	0.7	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
DEKALB XL72A(SX)	86.1	0.0	5.1	0.0	2.8	-	-	-	-	-
FUNKS G-4697(SPX)	81.0	2.0	4.1	0.7	2.7	86.0	2.7	3.6	0.7	2.9
FUNKS G-4646(SPX)	100.6	0.0	5.2	0.3	2.9	-	-	-	-	-
FUNKS G-4628(SX)	84.3	0.6	4.7	0.8	2.8	-	-	-	-	-
FUNKS G-4737(SX)	94.6	1.0	5.7	1.3	2.7	-	-	-	-	-
FUNKS G-5666(DX)	102.1	0.2	3.5	0.3	3.1	-	-	-	-	-
MFA V-10(SX)	84.4	1.1	4.7	0.3	2.8	90.8	0.7	4.9	0.2	2.9
MFA 3030(DX)	85.0	0.3	4.0	0.3	2.9	93.0	0.6	3.8	0.2	3.1
MFA 6041(SPX)	106.7	0.6	4.0	0.8	3.0	-	-	-	-	-
MFA 6061(3X)	86.8	0.0	4.5	0.0	3.2	-	-	-	-	-
MFA EXP54434(SX)	94.3	1.0	5.1	0.7	3.0	-	-	-	-	-
MUNCYCHIEF SX878(SX)	91.3	0.5	5.9	1.1	2.9	97.4	0.3	4.7	0.7	3.1
MUNCYCHIEF SX777(SX)	86.6	0.5	5.0	1.5	2.9	-	-	-	-	-
MUNCYCHIEF SX662(SX)	82.4	0.3	6.7	0.9	2.7	-	-	-	-	-
MCCURDY MSP888(3X)	109.6	0.2	3.6	0.3	3.0	109.1	0.6	2.9	0.2	3.2
MCNAIR X-210(SX)	100.8	0.0	13.5	1.6	2.9	-	-	-	-	-
PAG SX39(SX)	98.6	0.5	3.7	0.5	3.0	-	-	-	-	-
PAG SX98(SX)	96.3	0.0	1.7	0.3	2.8	98.1	0.2	1.7	0.2	3.0
PIONEER 3369A(SX)	108.8	0.3	3.6	1.1	2.8	116.2	0.2	3.4	0.7	3.1
PIONEER 3366(SPX)	112.3	0.5	3.3	0.6	3.1	118.6	0.3	3.0	0.4	3.2
PRINCETON SX850(SX)	106.1	0.0	2.0	1.1	2.8	111.0	0.2	2.8	0.7	2.9
PRINCETON SX910(SX)*	118.5	1.1	6.5	0.8	3.7	-	-	-	-	-
PRINCETON SX805(SX)	88.6	0.7	4.9	1.3	2.8	-	-	-	-	-
TE 6568(SX)	97.2	0.5	4.0	0.0	2.8	-	-	-	-	-
TE 6980(SX)	91.8	0.0	3.1	0.9	2.8	-	-	-	-	-
TROJAN TX5119(SX)	87.3	0.0	4.4	0.0	3.1	96.9	0.0	4.2	0.0	3.1
TROJAN TX5115A(SX)	92.8	0.8	5.2	1.1	3.3	-	-	-	-	-
TROJAN TX5117A(SPX)	97.4	0.0	1.9	0.3	3.1	-	-	-	-	-
LS-13(DX)	64.3	7.2	11.7	0.8	3.2	72.2	5.9	12.6	0.5	3.3
					GROUP 3 MATURITY					
BC-JAC X91(SPX)	100.3	0.8	4.4	0.8	2.9	105.1	1.3	4.5	0.5	3.0
BC-JAC X7L-24(SPX)	99.3	0.5	3.6	0.0	2.9	-	-	-	-	-
FUNKS G-5757(DX)	93.2	1.8	2.3	0.3	3.3	96.2	6.3	2.8	0.2	3.3
LEWIS X808(SX)	74.6	1.8	3.5	0.5	2.8	-	-	-	-	-
MCNAIR X-233(SX)*	121.9	1.4	6.4	1.5	3.5	-	-	-	-	-
N-K PX91(SX)	79.8	0.5	5.2	0.0	3.1	-	-	-	-	-
TE 6969(SX)	73.9	2.9	7.6	1.2	2.9	-	-	-	-	-
					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.

IRRIGATION EXPERIMENTS

Irrigation experiments were conducted at two locations in order to assess hybrid performance independent of stress due to irregular precipitation patterns during the growing season. 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 cultural practices applied to the 1975 irrigation experiments are listed in Table 4.

Figures 2 and 3 present the inches of accumulated precipitation (includes rainfall and water applied in several irrigations). The cross-hatched area represents optimum soil moisture. Accumulated precipitation above this area represents excess moisture and run-off, and below this area represents soil moisture stress and the need for supplemental irrigation.

The acre yield ranged from a high of 192 bushels to a low of 99 bushels per acre at McCredie and a high of 182 bushels to a low of 118 bushels per acre at the Southwest Center. Average yields (over all hybrids at each location) were 150 and 153 bushels per acre, respectively.

Average stalk lodging for all hybrids at McCredie was 8.4% with a range from 0.9 to 21.4%. At the Southwest Center stalk lodging averaged 11.9% and ranged from 4.5 to 42.4%. Root lodging averaged 3.8% at McCredie and 3.2% at the Southwest Center.

These experiments were planted at approximately 28,300 plants per acre. With the normal stand loss of 10 to 15% the intended harvest population was 24,000 ± 500 plants at each location. However, the harvest stands were 19,600 and 22,800 plants per acre, respectively.

Data for 1975 and for the period 1973-75 are presented in Tables 19 through 23.

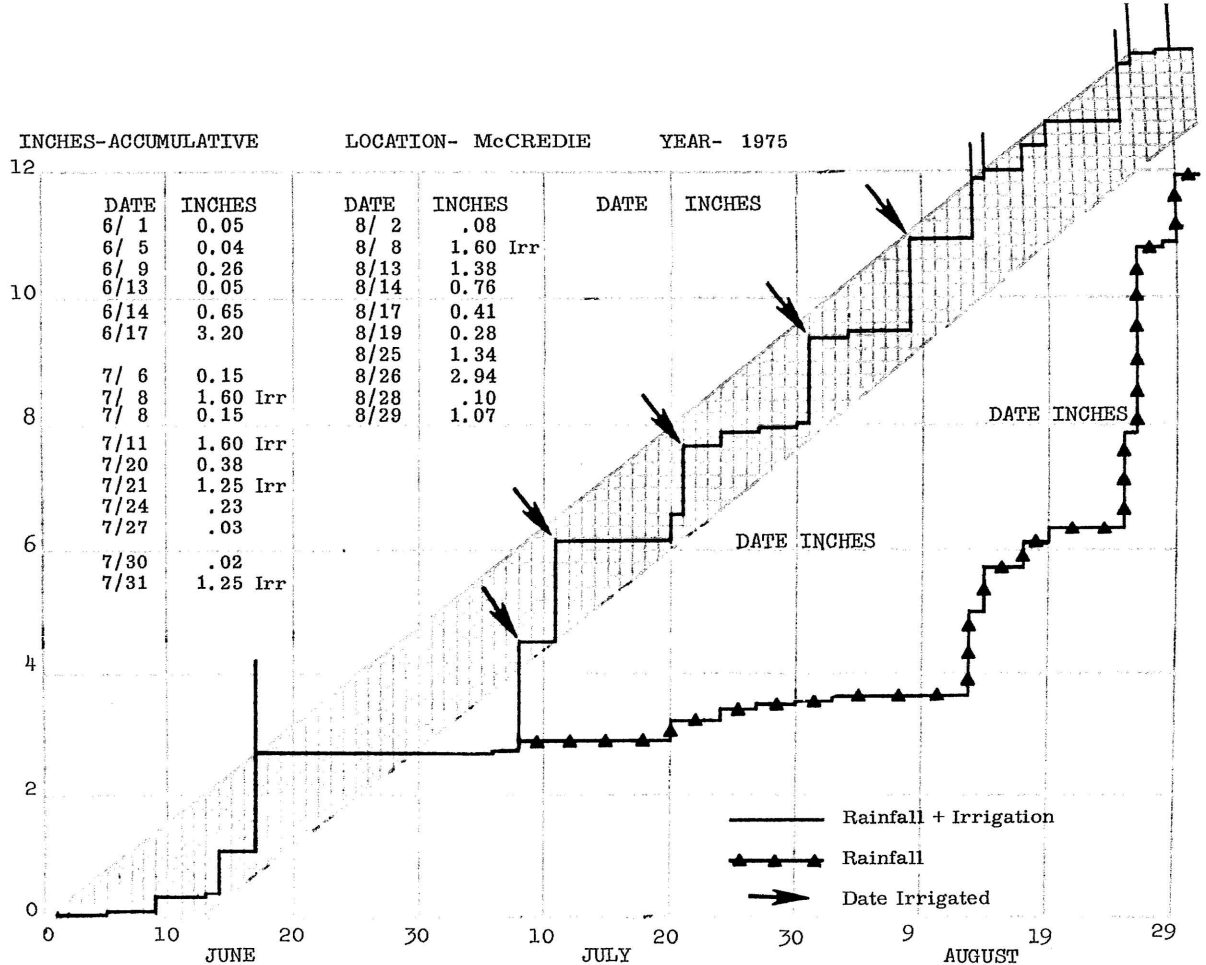

Figure 2. Record of Precipitation Pattern and Irrigation Schedule for 1975.

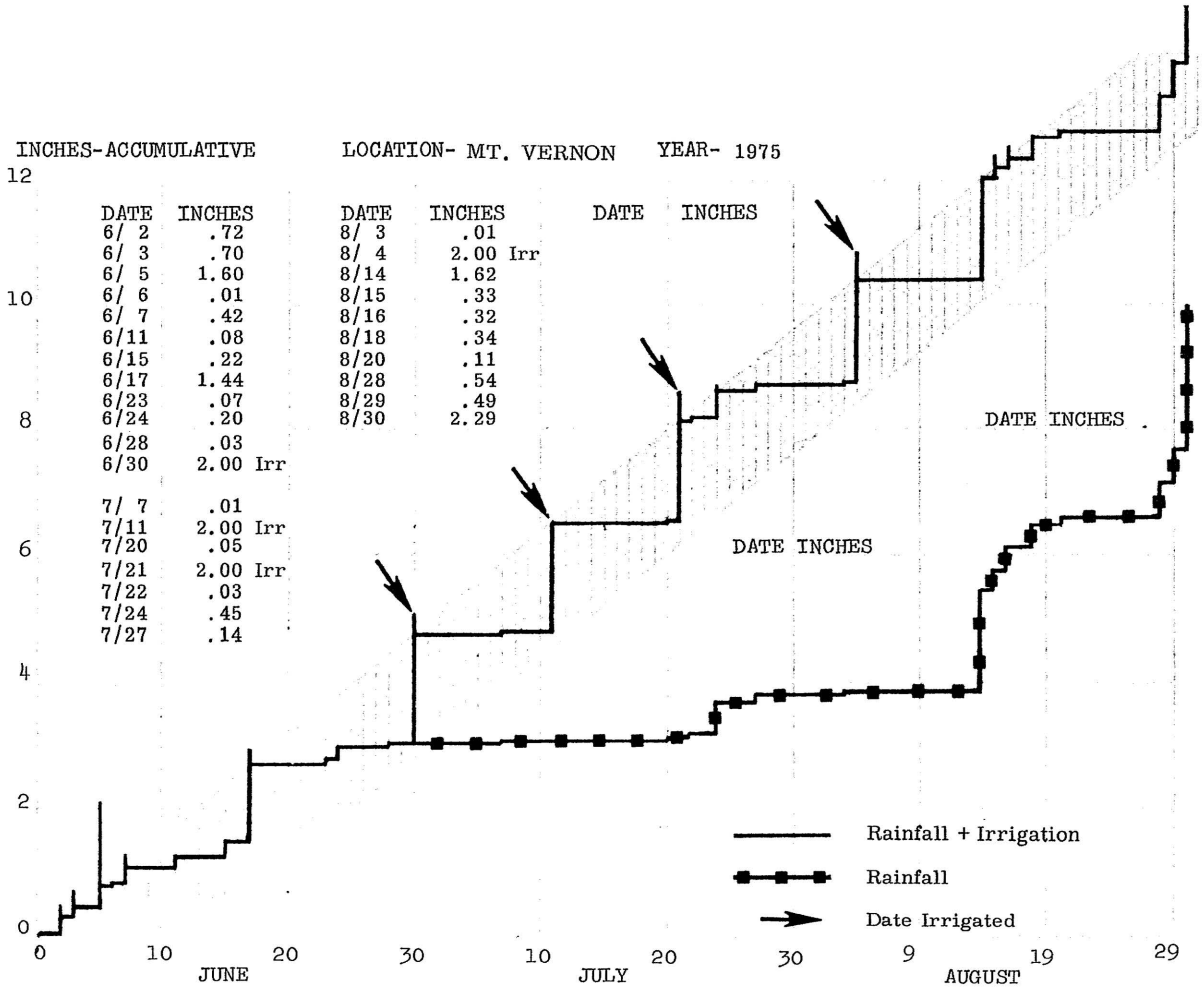

Figure 3. Record of Precipitation Pattern and Irrigation Schedule for 1975.

TABLE 19. PERFORMANCE RECORD OF HYBRIDS EVALUATED UNDER IRRIGATION AT THE CLAYPAN RESEARCH STATION (CRS) NEAR MCCREDIE, MISSOURI (CALLAWAY COUNTY). PLANTED APRIL 17, 1975. HARVESTED SEPTEMBER 23, 1975.

BRAND--HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	PLANTS PER ACRE (#)	LODGED PLANTS ROOT (%)	LODGED PLANTS STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
	GROUP I MATURITY						
ACCO UC6601(SX)	121.7	23.0	20100	9.1	8.6	0.0	3.5
BURRUS EX20(SX)	178.4	23.6	21700	2.9	11.0	0.4	4.0
FEDERAL FX34(SPX)	118.8	23.2	18800	9.9	7.7	0.8	4.0
FUNKS G-4507(SX)	192.3	23.5	23000	13.5	8.1	0.9	4.2
MCALLSTR SX7408(SX)	169.7	23.7	21500	2.4	7.4	0.4	4.2
	GROUP II MATURITY						
ACCO UC9451(SX)	146.1	24.1	19800	7.3	17.2	1.4	4.5
ASGROW RX100(SX)	154.0	25.9	21800	2.9	5.0	0.0	4.3
ASGROW RX90(SX)	152.8	23.5	19200	0.0	7.9	1.9	4.3
BURRUS BX25(SX)	170.1	24.8	22200	6.7	6.7	1.6	4.5
BC-JAC X83(SPX)	160.9	24.6	20000	0.0	7.1	0.7	4.5
CARGILL 949	155.4	23.4	20000	3.4	11.5	0.3	4.2
CARGILL 920	142.3	22.5	20100	1.8	6.8	0.0	4.2
CCOP 2318(SX)	135.0	24.6	16400	0.0	2.3	0.5	4.2
USS 1515(SX)	142.9	24.6	19100	0.0	6.6	1.5	4.3
GLDNHRVST H2655(SX)	122.9	24.1	17800	2.8	5.3	0.9	3.7
GLDNHRVST H2650(SX)	174.7	25.7	21900	2.9	4.7	0.7	4.3
FUNKS G-4737(SX)	153.2	25.3	19900	0.8	5.2	0.0	3.7
SUPERCROST S-85(SX)	150.5	24.6	20100	0.3	10.1	0.7	4.3
SUPERCROST 5440(SX)	147.4	23.0	16600	3.0	5.7	0.0	4.0
ICWA-MO SX19(SX)	167.3	23.3	21000	3.8	10.1	0.6	4.2
ICWA-MO SX119(SX)	151.1	22.9	21200	3.8	21.4	0.0	4.0
MFA V-16(SX)	160.2	25.7	19600	0.0	4.6	0.4	3.5
MFA 6041(SPX)	140.5	24.0	19000	5.8	9.6	0.8	3.7
MORTON 6700(SX)	159.5	24.6	18000	0.8	3.9	0.8	4.0
MORTON 4343(SPX)	140.3	24.7	19600	3.7	7.1	0.3	4.2
MUNCYCHIEF SX878(SX)	144.4	25.8	17900	17.9	9.4	0.0	4.0
MUNCYCHIEF SX662(SX)	116.5	23.6	16400	7.1	7.4	0.0	3.5
MCALLSTR SX6837(SX)	159.3	23.5	19600	0.0	11.1	0.0	4.3
MCCURDY MSX84(SX)	156.7	23.0	19400	2.6	10.7	0.7	4.2
MCNAIR X-170(SX)	150.8	24.8	20400	5.2	6.5	1.0	4.0
MCNAIR X-194(SX)	137.9	24.9	18700	1.9	7.1	0.8	4.0
N-K PX675(3X)	151.8	23.5	22200	4.2	8.2	0.6	4.2
O'S GOLD SX5500(SX)	150.1	24.4	20600	1.7	7.0	0.4	4.3
O'S GOLD SX55C0A(SX)	154.4	23.5	19600	4.1	6.6	0.0	3.7
PAG SX98(SX)	157.7	25.9	19500	0.0	6.6	0.0	3.8
PAG 494(SX)	142.8	24.2	19800	2.6	7.5	0.0	3.7
PIONEER 3325(SX)	149.3	24.6	18000	0.0	3.8	0.4	4.5
PIONEER 3184(SX)	177.0	27.1	21500	7.5	0.9	1.3	4.5
PRINCETON SX910(SX)*	156.9	27.2	19300	11.8	8.7	1.1	5.2
PRINCETON SX8C5(SX)	156.9	27.9	19300	1.5	6.5	0.0	4.2
TE 6968(SX)	143.5	23.3	18000	3.8	13.8	0.8	3.7
TROJAN TXS113(SPX)	131.1	23.7	17900	1.6	10.1	0.9	3.8
TROJAN TXS115A(SX)	151.7	23.3	21100	6.5	8.2	0.7	4.2
MC (MC17XB73)(SX)	170.1	22.8	20100	1.9	9.1	1.4	4.2
MC (MC17XN28)(SX)	139.3	24.3	19500	0.4	8.2	0.3	3.8
US-13(DX)	98.5	23.5	15600	6.3	30.8	0.4	4.3
WALTHER W271(DX)	137.3	23.0	19800	4.0	4.7	0.0	3.3
HULTING X9880(3X)	133.7	25.2	19200	1.5	18.3	0.4	4.2
HULTING X980(SX)	156.7	25.6	21200	0.0	9.1	1.0	4.2
WILSON 1800(SX)	117.1	24.0	14800	2.1	2.6	0.0	4.0
WILSON 1790(3X)	135.9	23.8	21400	12.0	8.8	0.4	4.0
	GROUP III MATURITY						
BC-JAC X7L-24(SPX)	174.3	25.8	21100	1.1	10.3	0.0	4.3
LEWIS X80B(SX)	151.6	25.6	21300	3.1	8.5	0.0	3.8
MCCURDY MSX88(SX)	181.0	25.4	21400	0.0	6.0	1.1	4.2
N-K PX95(SX)	169.1	26.9	17900	7.1	5.0	0.0	5.2
TE 6969(SX)	124.6	25.9	19000	4.9	5.9	0.0	3.7
AVERAGE	145.7	24.5	19641	3.8	8.4	0.5	4.1

LSD AT 5% LEVEL IS 22.9 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 14.7 BU. HYBRIDS DIFFERING BY MORE THAN THIS VALUE MAY BE EXPECTED TO DIFFER SIGNIFICANTLY IN YIELD 16 OF 20 TIMES GROWN.
*WHITE HYBRID

TABLE 20. PERFORMANCE RECORD OF HYBRIDS EVALUATED UNDER IRRIGATION AT THE CLAYPAN RESEARCH STATION (CSR), NEAR MCCREDIE, MISSOURI (CALLAWAY COUNTY) DURING THE TWO-YEAR PERIOD 1974-75 AND THE THREE-YEAR PERIOD 1973-75.

BRAND--HYBRID	2-YEAR AVERAGE					3-YEAR AVERAGE				
	ACRE YIELD (BU)	LODGING ROOT (%)	LODGING STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)	ACRE YIELD (BU)	LODGING ROOT (%)	LODGING STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
					GROUP 1 MATURITY					
ACCU UC6601(SX)	123.3	6.0	5.2	0.0	3.1	-	-	-	-	-
FEDERAL FX34(SPX)	117.4	5.3	5.7	0.4	3.3	-	-	-	-	-
FUNKS G-4507(SX)	162.1	7.3	6.9	0.8	3.6	-	-	-	-	-
MCALLSTR SX7408(SX)	158.3	2.4	6.6	0.3	3.6	-	-	-	-	-
					GROUP 2 MATURITY					
ASGROW RX100(SX)	151.0	1.7	5.6	0.0	3.7	157.4	3.6	6.9	0.8	3.8
ASGROW RX90(SX)	139.9	0.4	8.3	1.1	3.7	-	-	-	-	-
FUNKS G-4737(SX)	139.6	0.8	3.8	0.0	3.2	-	-	-	-	-
SUPERCROST S-85(SX)	143.2	0.2	7.3	0.4	3.6	150.5	0.9	6.4	0.8	3.7
IOWA-MC SX19(SX)	149.6	2.1	10.9	0.3	3.6	-	-	-	-	-
MFA V-16(SX)	145.6	0.2	6.1	0.6	3.2	155.3	1.3	6.1	1.5	3.4
NORTON 6700(SX)	140.2	0.4	6.5	0.8	3.5	151.4	0.9	6.5	1.0	3.7
MUNCYCHIEF SX878(SX)	134.2	11.3	8.6	0.0	3.3	139.5	22.1	9.1	0.7	3.4
MUNCYCHIEF SX662(SX)	113.2	4.6	6.5	0.0	3.0	-	-	-	-	-
MCALLSTR SX6837(SX)	148.6	0.8	8.2	0.6	3.5	-	-	-	-	-
MCNAIR X-170(SX)	138.9	3.4	6.2	0.5	3.4	-	-	-	-	-
O'S GOLD SX5500(SX)	149.5	1.2	8.2	0.3	3.7	158.0	1.3	8.6	0.7	3.7
O'S GOLD SX5500A(SX)	147.7	2.6	8.0	0.0	3.3	-	-	-	-	-
PAG SX98(SX)	152.8	0.0	6.0	0.0	3.4	160.5	0.0	5.3	0.4	3.6
PIONEER 3325(SX)	143.1	0.0	2.3	0.2	3.7	-	-	-	-	-
PRINCETON SX805(SX)	150.9	0.9	5.1	0.3	3.4	-	-	-	-	-
TROJAN TXS113(SPX)	128.5	1.5	6.7	0.6	3.1	146.2	3.7	6.5	1.0	3.3
TROJAN TXS115A(SX)	143.3	3.2	7.9	0.3	3.6	-	-	-	-	-
FULTING X9380(3X)	133.3	1.8	12.4	1.1	3.4	-	-	-	-	-
FULTING X980(SX)	148.3	0.2	7.5	0.9	3.6	-	-	-	-	-
WILSON 1800(SX)	123.6	1.9	3.6	0.0	3.5	-	-	-	-	-
					GROUP 3 MATURITY					
BO-JAC X7L-24(SPX)	160.6	0.5	7.8	0.0	3.6	-	-	-	-	-
LEWIS X808(SX)	145.3	1.5	7.0	0.0	3.1	-	-	-	-	-
MCCURDY MSX88(SX)	158.5	0.4	7.9	0.7	3.4	160.7	2.1	7.4	1.0	3.7
AVERAGE	142.5	2.2	6.9	0.4	3.4	153.3	4.0	7.0	0.9	3.6

*WHITE HYBRID.

TABLE 21. PERFORMANCE RECORD OF HYBRIDS EVALUATED UNDER IRRIGATION AT THE SOUTHWEST RESEARCH CENTER NEAR MT. VERNON, MISSOURI (LAWRENCE COUNTY). PLANTED APRIL 10, 1975. HARVESTED SEPTEMBER 5, 1975.

BRAND--HYBRID	ACRE YIELD (BU)	MOISTURE IN GRAIN (%)	PLANTS PER ACRE (#)	LODGED PLANTS ROOT (%)	LODGED PLANTS STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
	GROUP I MATURITY						
ACCO UC6601(SX)	142.9	22.4	24700	1.9	14.1	0.4	3.3
BURRUS BX20(SX)	159.8	23.0	22800	5.5	12.5	0.4	3.7
FEDERAL FX34(SPX)	144.7	22.6	23700	2.7	12.8	0.8	3.5
FUNKS G-4507(SX)	167.4	22.6	24100	3.9	12.1	1.1	3.5
MCALLSTR SX74C8(SX)	159.7	22.6	23400	3.1	14.6	0.4	4.2
	GROUP II MATURITY						
ACCO UC9451(SX)	126.6	22.9	25400	1.5	42.4	2.5	3.8
ASGROW RX100(SX)	165.3	24.3	25400	2.5	6.3	0.7	3.8
ASGROW RX90(SX)	158.8	22.4	23200	4.4	8.7	2.4	3.7
BURRUS BX25(SX)	156.5	24.6	23500	0.0	6.4	0.9	4.0
BO-JAC X83(SPX)	145.1	23.0	23600	0.0	12.9	0.0	4.0
CARGILL 949	153.7	23.2	21600	1.7	10.4	0.0	4.0
CARGILL 920	140.0	21.3	21300	2.1	6.0	0.5	3.8
CCOP 2318(SX)	158.8	24.7	21700	1.7	6.3	0.0	3.5
DSS 1515(SX)	153.6	23.9	22400	0.4	9.4	0.9	4.0
GLDNHRVST H2655(SX)	150.5	23.4	21500	3.1	9.1	3.0	3.7
GLDNHRVST H2650(SX)	167.2	24.8	23600	1.5	6.4	0.0	3.7
FUNKS G-4737(SX)	171.9	24.7	24200	1.2	14.1	0.4	3.7
SUPERCROST S-65(SX)	150.9	24.9	20300	2.2	9.1	0.4	3.7
SUPERCROST 5440(SX)	143.6	22.6	18800	3.0	10.3	0.0	3.7
IOWA-MO SX19(SX)	153.6	22.1	22400	5.0	6.5	0.0	3.5
IOWA-MO SX119(SX)	141.4	22.5	24100	4.1	15.0	1.9	3.5
MFA V-16(SX)	175.7	24.1	23300	0.4	5.6	0.0	3.8
MFA 6041(SPX)	151.6	23.4	25200	3.3	11.3	0.4	3.5
MORTON 6700(SX)	151.3	24.4	21000	0.4	7.3	0.4	3.8
MORTON 4343(SPX)	141.0	24.7	23900	3.1	11.6	0.8	3.8
MUNCYCHIEF SX878(SX)	149.1	25.0	19800	6.4	16.5	0.5	3.8
MUNCYCHIEF SX662(SX)	147.8	22.5	22300	5.8	13.9	0.0	3.2
MCALLSTR SX6837(SX)	148.7	24.7	21500	0.8	18.4	0.4	3.5
MCCURDY MSX84(SX)	164.9	22.8	21000	3.7	8.8	0.0	3.8
MCNAIR X-170(SX)	159.1	23.6	24600	2.5	8.9	1.1	3.5
MCNAIR X-194(SX)	158.6	23.1	22500	4.6	15.5	0.8	3.8
N-K PX675(3X)	155.7	21.5	23400	2.3	5.6	0.4	3.8
O'S GOLD SX5500(SX)	146.9	25.5	21200	1.2	8.9	0.4	3.8
O'S GOLD SX5500A(SX)	154.8	22.9	23600	0.0	8.2	0.4	3.7
PAG SX98(SX)	148.3	24.5	23200	1.6	15.4	0.7	3.8
PAG 494(SX)	155.4	23.4	23800	2.0	5.1	0.0	3.7
PIONEER 3325(SX)	144.8	23.6	21300	0.9	5.7	0.4	4.0
PIONEER 3184(SX)	157.1	24.7	24300	3.4	9.8	3.4	4.0
PRINCETON SX910(SX)*	146.5	26.0	25100	12.1	21.2	1.1	4.0
PRINCETON SX805(SX)	158.6	25.2	24700	1.1	7.4	0.0	3.8
TE 6968(SX)	169.1	24.0	24200	6.8	9.3	0.4	3.5
TROJAN TXS113(SPX)	168.9	23.0	23500	5.8	8.0	0.3	3.5
TROJAN TXS115A(SX)	148.4	23.4	23300	6.8	10.3	1.7	4.0
WC (MC17XB73)(SX)	149.8	23.5	22000	2.4	11.6	0.0	4.0
WC (MO17XN28)(SX)	147.0	24.3	23700	2.4	20.7	0.0	4.0
US-13(DX)	118.1	23.6	20900	6.8	23.1	1.4	3.8
WALTHER W271(DX)	126.6	22.0	22700	2.1	12.9	0.0	3.5
HULTING X9880(3X)	121.1	22.4	22000	1.8	18.8	1.1	3.7
HULTING X980(SX)	179.2	24.6	22500	0.4	6.6	0.0	3.7
WILSON 1800(SX)	120.2	22.5	18000	4.5	10.2	1.0	3.8
WILSON 1790(3X)	140.0	22.2	22800	2.3	17.6	2.5	3.7
	GROUP III MATURITY						
BO-JAC X7L-24(SPX)	181.9	24.6	24400	0.8	4.5	0.0	3.8
LEWIS X808(SX)	166.3	23.8	21900	10.7	8.1	0.0	3.8
MCCURDY MSX88(SX)	174.3	25.2	21600	3.1	9.8	0.4	3.7
N-K PX95(SX)	179.1	27.0	21700	8.9	4.6	0.4	4.7
TE 6969(SX)	149.3	25.3	23100	5.3	41.5	0.8	3.8
AVERAGE	153.1	23.7	22778	3.2	11.9	0.7	3.8

LSD AT 5% LEVEL IS 23.2 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 14.8 BU. HYBRIDS DIFFERING BY MORE THAN THIS VALUE MAY BE EXPECTED TO DIFFER SIGNIFICANTLY IN YIELD 16 OF 20 TIMES GROWN.
*WHITE HYBRID

TABLE 22. PERFORMANCE RECORD OF HYBRIDS EVALUATED UNDER IRRIGATION AT THE SOUTHWEST RESEARCH CENTER (SWC, LAWRENCE COUNTY) DURING THE TWO-YEAR PERIOD 1974-75 AND THE THREE-YEAR PERIOD 1973-75.

	2-YEAR AVERAGE					3-YEAR AVERAGE				
		LODGING					LODGING			
BRAND--HYBRID	ACRE YIELD (BU)	ROOT (%)	STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)	ACRE YIELD (BU)	ROOT (%)	STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
					GROUP 1 MATURITY					
ACCO UC6601(SX)	148.4	1.6	13.8	0.2	3.3	-	-	-	-	-
FEDERAL FX34(SPX)	163.8	1.3	11.9	0.4	3.3	-	-	-	-	-
FUNKS G-4507(SX)	170.7	2.8	12.9	1.0	3.6	-	-	-	-	-
MCALLSTR SX7408(SX)	160.3	2.4	12.4	0.7	4.1	-	-	-	-	-
					GROUP 2 MATURITY					
ASGROW RX100(SX)	157.6	1.6	8.1	0.4	3.8	158.0	1.1	7.5	0.2	3.9
ASGROW RX90(SX)	158.9	2.2	9.6	1.2	3.8	-	-	-	-	-
FUNKS G-4737(SX)	168.9	1.0	10.3	0.2	3.3	-	-	-	-	-
SUPERCROST S-85(SX)	147.4	1.5	7.3	0.2	3.6	142.8	1.0	6.0	0.1	3.7
IOWA-MC SX19(SX)	162.8	2.5	5.4	0.0	3.5	-	-	-	-	-
MFA V-16(SX)	171.8	0.6	7.0	0.4	3.5	167.3	0.4	9.2	0.3	3.7
NORTON 6700(SX)	143.1	0.6	9.6	0.8	3.6	146.2	0.4	9.8	0.5	3.7
NUNCYCHIEF SX878(SX)	152.5	8.2	17.3	0.3	3.7	142.7	5.8	15.2	0.5	3.7
NUNCYCHIEF SX662(SX)	141.4	4.1	10.9	0.0	3.0	-	-	-	-	-
MCALLSTR SX6837(SX)	163.8	0.8	11.8	0.2	3.5	-	-	-	-	-
MCNAIR X-170(SX)	161.0	1.3	11.6	1.0	3.5	-	-	-	-	-
C*S GOLD SX5500(SX)	158.4	0.6	8.4	0.2	3.7	157.8	0.4	9.4	0.6	3.8
C*S GOLD SX550CA(SX)	161.9	1.2	10.2	0.6	3.7	-	-	-	-	-
PAG SX98(SX)	154.6	1.2	10.5	0.4	3.5	152.7	0.8	10.6	0.5	3.7
PIONEER 3325(SX)	168.9	0.8	3.9	0.2	3.9	-	-	-	-	-
PRINCETON SX805(SX)	151.8	0.9	5.3	0.4	3.7	-	-	-	-	-
TROJAN TXS113(SPX)	165.4	3.2	13.7	0.2	3.4	158.5	2.2	11.7	0.1	3.6
TROJAN TXS115A(SX)	156.2	4.2	9.4	0.8	3.9	-	-	-	-	-
HULTING X9880(3X)	131.0	1.7	16.7	1.0	3.5	-	-	-	-	-
HULTING X980(SX)	180.6	0.6	6.2	0.4	3.6	-	-	-	-	-
WILSON 1800(SX)	141.1	3.5	9.2	0.5	3.9	-	-	-	-	-
					GROUP 3 MATURITY					
BO-JAC X7L-24(SPX)	164.9	0.8	10.9	0.0	3.7	-	-	-	-	-
LEWIS X808(SX)	168.1	6.1	7.6	0.0	3.7	-	-	-	-	-
MCCURDY MSX88(SX)	170.6	1.6	9.1	0.2	3.6	162.7	1.0	7.8	0.7	3.7
AVERAGE	158.8	2.1	10.0	0.4	3.6	154.3	1.5	9.7	0.4	3.7

*WHITE HYBRID.

TABLE 23. SUMMARY PERFORMANCE RECORD FOR CORN HYBRIDS EVALUATED UNDER IRRIGATION AT TWO MISSOURI LOCATIONS (CALLAWAY AND LAWRENCE COUNTIES) IN 1975.

BRAND--HYBRID	ACRE YIELD (BU)	LODGED PLANTS ROOT (%)	LODGED PLANTS STALK (%)	DROPPED EARS (%)	EAR HEIGHT (FT)
	GROUP 1 MATURITY (2-LOCATION AVERAGE)				
ACCO UC6801(SX)	132.3	5.5	11.3	0.2	3.4
BURRUS BX20(SX)	169.1	4.2	11.7	0.4	3.8
FEDERAL FX34(SPX)	131.7	6.3	10.3	0.8	3.8
FUNKS G-4507(SX)	179.8	8.7	10.1	1.0	3.8
MCALLSTR SX7408(SX)	164.7	2.8	11.0	0.4	4.2
	GROUP 2 MATURITY (2-LOCATION AVERAGE)				
ACCO UC9451(SX)	136.3	4.4	29.8	2.0	4.2
ASGROW RX100(SX)	159.6	2.7	5.6	0.4	4.1
ASGROW RX30(SX)	155.8	2.2	8.3	2.1	4.0
BURRUS BX25(SX)	164.3	3.3	6.6	1.2	4.3
BC-JAC X83(SPX)	155.0	0.0	10.0	0.4	4.3
CARGILL 949	154.5	2.6	11.0	0.2	4.1
CARGILL 920	141.1	2.0	6.4	0.2	4.0
CCOP 2318(SX)	146.9	0.8	4.3	0.3	3.8
USS 1515(SX)	148.2	0.2	8.0	1.2	4.2
GLDNHRVST H2655(SX)	136.7	2.5	7.2	2.0	3.7
GLDNHRVST H2650(SX)	170.9	2.2	5.5	0.3	4.0
FUNKS G-4737(SX)	162.5	1.0	9.7	0.2	3.7
SUPERCROST S-85(SX)	150.7	1.3	9.6	0.6	4.0
SUPERCROST 5440(SX)	145.5	3.0	8.0	0.0	3.8
IOWA-MO SX19(SX)	160.4	4.4	8.3	0.3	3.8
IOWA-MO SX119(SX)	146.2	4.0	18.2	1.0	3.8
MFA V-16(SX)	167.9	0.2	5.1	0.2	3.7
MFA 6041(SPX)	146.0	4.5	10.5	0.6	3.6
MORTON 6700(SX)	155.4	0.6	5.6	0.6	3.9
MORTON 4343(SPX)	140.6	3.4	9.3	0.6	4.0
MUNCYCHIEF SX878(SX)	146.7	12.1	13.0	0.3	3.9
MUNCYCHIEF SX662(SX)	132.1	6.4	10.7	0.0	3.3
MCALLSTR SX6837(SX)	154.0	0.4	14.7	0.2	3.9
MCCURDY MSX84(SX)	160.8	3.2	9.7	0.4	4.0
MCNAIR X-170(SX)	154.9	3.9	7.7	1.1	3.8
MCNAIR X-194(SX)	148.2	3.2	11.3	0.8	3.9
N-K PX675(3X)	153.7	3.3	6.9	0.5	4.0
O'S GOLD SX5500(SX)	148.5	1.5	7.5	0.4	4.1
O'S GOLD SX5500A(SX)	154.6	2.0	7.4	0.2	3.7
PAG SX98(SX)	153.0	0.8	11.0	0.4	3.8
PAG 494(SX)	149.1	2.3	6.3	0.0	3.7
PIONEER 3325(SX)	147.0	0.4	4.8	0.4	4.3
PIONEER 3184(SX)	167.0	5.5	6.4	2.3	4.3
PRINCETON SX910(SX)*	151.7	11.9	15.0	1.1	4.6
PRINCETON SX805(SX)	157.7	1.3	6.5	0.0	4.0
TE 6968(SX)	156.3	5.3	11.5	0.6	3.6
TROJAN TXS113(SPX)	150.0	3.7	9.0	0.6	3.7
TROJAN TXS115A(SX)	150.0	6.6	9.2	1.2	4.1
MC (MO17XB73)(SX)	159.9	2.1	10.3	0.7	4.1
MC (MO17XN28)(SX)	143.1	1.4	14.4	0.2	3.9
US-13(DX)	108.3	6.5	27.0	0.9	4.1
WALTHER W271(DX)	131.9	3.1	8.8	0.0	3.4
HULTING X9880(3X)	127.4	1.7	18.6	0.8	3.9
HULTING X980(SX)	167.9	0.2	7.8	0.5	3.9
WILSON 1800(SX)	118.6	3.3	6.4	0.5	3.9
WILSON 1790(3X)	137.9	7.2	13.2	1.4	3.8
	GROUP 3 MATURITY (2-LOCATION AVERAGE)				
BC-JAC X7L-24(SPX)	178.1	0.9	7.4	0.0	4.1
LEWIS X808(SX)	158.9	6.5	8.3	0.0	3.8
MCCURDY MSX88(SX)	177.6	1.6	7.9	0.7	3.9
N-K PX95(SX)	174.1	8.0	4.6	0.2	4.9
TE 6969(SX)	136.9	5.1	23.7	0.4	3.8
MEAN	151.4	3.5	10.2	0.6	3.9

*WHITE HYBRID.

Table 24. Pedigree of open-pedigree hybrids tested in 1975.

Hybrid	Pedigree	Endosperm Color
Medium Maturity (110-120 days)		
US 13	(Wf9 x 38-11) (L317 x Hy)	yellow
	B73 x Mo17	yellow
	Mo17 x N28	yellow
	B73 x Va26^{H7}	yellow
	B73 x Fr177	yellow
	(H93 x H84) Va26	yellow
	(Fr37 x B73) Mo17	yellow
	(Frn28 x B73) Mo17	yellow
	(Fr37 x H84) H98 ^{H7}	yellow
	(Fr37 x B73) Va26^{H7}	yellow
	B73 x H98	yellow

Table 25. Location by district of open-pedigree hybrids in 1975 yield trials.

Hybrid/Pedigree	Districts							
	Regular Planting Rate						Irrigation Test	
	1	2	3	4	5	9	5	7
	Group II Maturity							
US 13	X	X	X	X	X	X	X	X
B73 x Mo17	X	X	X	X	X	X	X	X
Mo17 x N28	X	X	X	X	X	X	X	X
B73 x Va26^{H7}	X	X	X	X	X			
B73 x Fr177	X		X	X	X			
(H93 x H84) Va26	X	X	X	X	X			
(Fr37 x B73) Mo17			X	X				
(Frn28 x B73) Mo17	X		X	X	X			
(Fr37 x H84) H98	X	X	X	X				
(Fr37 x B73) Va26^{H7}	X		X					
B73 x H98	X	X	X	X	X			

TABLE 26. COMMERCIAL ENTRIES IN THE 1975 MISSOURI HYBRID CORN EVALUATION TRIALS. X INDICATES THE LOCATION AT WHICH EACH HYBRID WAS GROWN.

	DISTRICTS							
	REGULAR PLANTING RATE						IRRIGATION TESTS	
HYBRID	1	2	3	4	5	9	5	7
				GROUP I MATURITY				
ACCO UC6601(SX)	X	X	X	X	X		X	X
ACCO UC4601(SX)	X			X				
BC-JAC X56(SX)	X	X	X	X	X	X		
BC-JAC X37(SX)	X	X						
BC-JAC X35(SPX)	X	X						
BURRUS BX20(SX)		X	X	X			X	X
CARGILL 880(SX)			X	X	X			
FEDERAL FX34(SPX)			X				X	X
FUNKS G-4507(SX)	X	X	X	X	X	X	X	X
FUNKS G-4503(SX)	X	X	X	X	X	X		
GLDNHRVST H2500(SX)	X		X	X				
GLDNHRVST H2580(SPX)	X		X					
HULTING X770(SX)	X	X						
MCALLSTR SX7408(SX)	X	X	X				X	X
MCCURDY MSX60(SX)			X		X			
MFA 5001(SX)	X	X	X	X	X			
N-K PX65(SX)	X							
N-K PX606(3X)	X							
N-K PX50A(SX)			X	X				
PAG 424(SX)		X		X				
PAG SX7(SX)		X		X		X		
PIONEER 3517(SPX)	X	X	X	X	X			
PIONEER X2226(SPX)	X	X	X	X	X			
PIONEER 3424(DX)	X	X	X	X	X			
PIONEER 3390(SPX)	X	X	X	X	X	X		
PIONEER 3388(SPX)	X	X	X	X	X			
SUPERCROST 2890(SX)		X	X					
SUPERCROST 4242(SPX)	X	X	X	X	X			
TROJAN TXS108A(SPX)	X	X						
USS 0555A(3X)	X	X		X	X	X		
USS 0555(3X)	X	X		X	X	X		
				GROUP II MATURITY				
ACCO UC8801(SX)			X		X			
ACCO UC9351(SX)		X						
ACCO UC9451(SX)	X	X	X	X	X		X	X
ACCO UC9301(SX)	X							
ACCO UC9701(SX)					X			
ACCO U395(3X)			X	X	X			

TABLE 26. CONTINUED.

HYBRID	DISTRICTS: REGULAR PLANTING RATE 1	2	3	4	5	6	IRRIGATION TESTS 5	7
				GROUP II MATURITY				
ACCO EXP48951(SX)	X			X				
ASGROW RX100(SX)	X	X	X	X	X	X	X	X
ASGROW RX90(SX)		X	X		X		X	X
BO-JAC X52B(SX)		X						
BC-JAC X52C(SX)	X							
BO-JAC X7L(SX)	X	X	X	X	X			
EC-JAC X69(SX)	X	X		X	X			
BC-JAC X52A(SX)	X	X	X	X	X			
BO-JAC X83(SPX)	X	X		X	X	X	X	X
BC-JAC X1A(SX)	X							
BURRUS BX30(SX)		X	X	X				
BURRUS BX25(SX)		X	X	X			X	X
CARGILL 920		X	X	X	X		X	X
CARGILL 949	X	X	X	X	X		X	X
CARGILL 979(SX)			X		X			
CCOP 2318(SX)	X			X	X	X	X	X
CCOP 2300(SX)	X			X	X	X		
CCOP 3300(3X)	X			X	X			
DEKALB XL72A(SX)	X	X	X	X	X	X		
DEKALB XL81(SX)	X	X	X	X	X	X		
FEDERAL FX59(SX)	X		X		X			
FEDERAL 47(DX)	X							
FEDERAL 32(DX)					X			
FONTANELLE 660(SX)	X							
FONTANELLE 590(SX)	X							
FUNKS G-4628(SX)	X	X	X	X	X	X		
FUNKS G-4737(SX)	X	X	X	X	X	X	X	X
FUNKS G-5666(DX)	X	X	X	X	X	X		
FUNKS G-4697(SPX)		X	X	X	X	X		
FUNKS G-4646(SPX)				X	X	X		
GLDNHRVST H2666(SX)						X		
GLDNHRVST H2650(SX)	X		X	X		X	X	X
GLDNHRVST H2615(SPX)	X		X	X				
GLDNHRVST H2655(SX)	X		X	X		X	X	X
HAPPEL 3361(3X)	X	X	X	X	X			
HAPPEL H-37(SPX)	X	X	X	X	X			
HAPPEL MS-72(SX)	X	X	X	X	X			
HORIZON KR870A(SX)	X							
HORIZON KR871(SX)	X							
HORIZON KR861(SX)	X							
HORIZON KR870(SX)	X							
HULTING X980(SX)		X			X		X	X
HULTING X880(SX)					X			

TABLE 26. CONTINUED.

HYBRID	DISTRICTS							
	REGULAR PLANTING RATE						IRRIGATION TESTS	
	1	2	3	4	5	9	5	7
	GROUP II MATURITY							
HULTING X8800(3X)					X			
HULTING X9880(3X)		X			X		X	X
ICWA-MC SX19(SX)			X				X	X
IOWA-MO SX37(SX)			X					
ICWA-MO SX22(SX)			X					
ICWA-MO SPX-425(SPX)			X					
ICWA-MO SX119(SX)			X				X	X
ICWA-MC SX118(SX)			X					
LEWIS X84B(SX)				X	X			
LEWIS X28B(SX)	X	X	X					
LEWIS 708B(3X)	X	X	X	X	X			
LEWIS X78B(SX)	X	X	X	X	X			
LEWIS X34B(SX)	X	X	X					
LEWIS X62B(SX)	X	X	X	X	X			
MCALLSTR SX7411(SX)			X					
MCALLSTR SX6837(SX)	X		X		X		X	X
MCALLSTR SX7300(SX)	X	X	X					
MCALLSTR SX7207(SX)	X	X	X					
MCCURDY 73-101(3X)	X			X				
MCCURDY MSP736(3X)			X					
MCCURDY MSX68(SX)			X		X			
MCCURDY MSX70(SX)	X		X	X	X			
MCCURDY MSX85(SX)	X			X				
MCCURDY MSX84(SX)		X	X	X	X		X	X
MCCURDY MSP888(3X)	X			X		X		
MCNAIR X-170(SX)			X				X	X
MCNAIR X-194(SX)			X				X	X
MCNAIR X-210(SX)						X		
MFA 3030(DX)	X	X	X	X	X	X		
MFA 6041(SPX)	X	X	X	X	X	X	X	X
MFA 6061(3X)	X	X	X	X	X	X		
MFA EXP5434(SX)	X	X	X	X	X	X		
MFA V-12(SX)	X	X	X	X	X			
MFA V-16(SX)	X	X	X	X	X	X	X	X
MORTON 6700(SX)		X	X	X	X		X	X
MORTON 5700(SX)					X			
MORTON 4400(SPX)			X	X				
MORTON 9300(3X)		X			X			
MORTON 3200(SX)		X	X					
MORTON 4343(SPX)							X	X
MUNCYCHIEF SX878(SX)				X	X	X	X	X
MUNCYCHIEF SX777(SX)				X	X	X		
MUNCYCHIEF SX662(SX)				X	X	X	X	X

TABLE 26. CONTINUED.

HYBRID	DISTRICTS							
	REGULAR PLANTING RATE						IRRIGATION TESTS	
	1	2	3	4	5	6	5	7
	GROUP II MATURITY							
MUNCYCHIEF H764(DX)				X	X			
MUNCYCHIEF 3X898(3X)					X			
N-K PX74(SX)	X	X	X	X	X			
N-K PX76(SX)	X	X	X	X	X			
N-K PX675(3X)	X	X	X		X		X	X
N-K PX616(3X)	X	X						
N-K PX77(SX)		X						
N-K PX670(3X)						X		
NC+ 85(SX)	X			X				
NC+ 59(SX)	X			X				
NC+ 77(SX)	X			X				
O'S GOLD TX105B(3X)	X			X				
O'S GOLD TX104B(3X)		X	X					
O'S GOLD SX5500(SX)	X	X	X	X	X		X	X
O'S GOLD SX5500A(SX)	X	X	X				X	X
PAG SX39(SX)						X		
PAG 494(SX)	X	X	X	X	X	X	X	X
PAG SX98(SX)	X	X	X	X	X	X	X	X
PIONEER 3368(SPX)						X		
PIONEER 3219(DX)	X	X	X	X	X			
PIONEER 3184(SX)	X	X	X	X	X		X	X
PIONEER 3325(SX)	X	X	X	X	X		X	X
PIONEER 3321(SX)						X		
PIONEER 3368A(SPX)						X		
PIONEER 3315(3X)	X	X	X	X	X			
PIONEER 3369A(SX)	X	X			X	X		
PREMIER 688(SX)						X		
PREMIER 655(SX)						X		
PRINCETON SX850(SX)						X		
PRINCETON SX910(SX)*						X	X	X
PRINCETON SX805(SX)						X	X	X
SUPERCROST S-85(SX)	X	X	X	X	X		X	X
SUPERCROST 7772(SPX)		X	X		X			
SUPERCROST 5440(SX)	X	X	X	X	X		X	X
TE 6965(SX)					X	X		
TE 6968(SX)					X	X	X	X
TE 6980(SX)					X	X		
TROJAN TXS113(SPX)	X	X	X	X		X	X	X
TROJAN TXS118A(SX)	X							
TROJAN TXS111(SX)	X	X	X		X			
TROJAN TXS114(SX)	X	X		X	X	X		
TROJAN TXS115A(SX)	X	X	X	X	X	X	X	X
TROJAN TXS117A(SPX)	X	X		X	X	X		

TABLE 26. CONTINUED.

HYBRID	DISTRICTS: REGULAR PLANTING RATE 1	2	3	4	5	9	IRRIGATION TESTS 5	7
				GROUP II MATURITY				
TROJAN TXS119(SX)	X	X	X	X	X	X		
USS 1010(SX)	X	X		X	X	X		
USS 1515(SX)	X	X		X	X	X	X	X
WALTHER W239(DX)			X	X	X			
WALTHER W271(DX)	X			X	X		X	X
WALTHER W80(DX)				X	X	X		
WALTHER W45(SX)					X			
WILSON 1790(3X)	X						X	X
WILSON 1040(SX)	X							
WILSON 1800(SX)	X						X	X
				GROUP III MATURITY				
ASGROW RX114(3X)						X		
BC-JAC X7L-24(SPX)						X	X	X
BC-JAC X91(SPX)						X		
FUNKS EXP27466(SX)				X	X	X		
FUNKS G-4747W(SPX)*	X			X		X		
FUNKS G-4538W(SX)*	X							
FUNKS G-5757(DX)		X	X	X		X		
GLDNHRVST H2750(SPX)						X		
LEWIS X80B(SX)	X	X	X	X	X	X	X	X
MCCURDY MSX88(SX)	X	X	X	X	X		X	X
MCNAIR X-233(SX)*						X		
N-K PX95(SX)						X	X	X
N-K PX91(SX)						X		
PIONEER 3177(3X)	X	X	X	X	X			
PREMIER 695-I(SPX)						X		
TE 6969(SX)					X	X	X	X
				GROUP IV MATURITY				
MCCURDY 67-14(SX)						X		

*WHITE HYBRID

Table 27. Sources of commercial seed corn for hybrids entered in the 1975 Missouri yield trials.

Brand	Firm	Address
ACCO	ACCO Seed	P. O. Box 9, Belmond, IA 50421
Asgrow	Asgrow Seed Company	P. O. Box 2010, Des Moines, IA 50310
Bo-Jac	Bo-Jac Hybrid Corn Company	R. R. #2, Mt. Pulaski, IL 62548
Burrus	Burrus Bros. & Assoc. Growers	R. R. #1, Box 22, Arenzville, IL 62611
Cargill	Cargill, Inc.	1433 Cargill Bldg., Minneapolis, MN 55402
Coop	Farmland Industries, Inc.	P. O. Box 7305, Kansas City, MO 64116
DeKalb	DeKalb Ag Research, Inc.	DeKalb, IL 60115
Federal	Federal Hybrids	R. R. #2, Marion, IA 52302
Fontanelle	Fontanelle Hybrids	Nickerson, NE 68044
Funk	Funk Seeds International, Inc.	1300 W. Washington, Bloomington, IL 61701
Golden Harvest	Columbiana Seed Company	Eldred, IL 62027
Happel	Happel's Hybrids	Route #1, Palmyra, MO 63461
Horizon	Miller Seed Company	P. O. Box 81823, Lincoln, NE 68501
Hulting	Hulting Hybrids, Div. of Ferry Morse	P. O. Box 24, Genesco, IL 61254
Ia-Mo	Iowa-Missouri Hybrid Corn Company	P. O. Box 481, Keosauqua, IA 52565
Lewis	Lewis Hybrids	P. O. Box 36, Ursa, IL 62376
McAllister	McAllister Seed Company	P. O. Box 28, Mt. Pleasant, IA 52641
McCurdy	McCurdy Seed Company	Fremont, IA 52561
McNair	McNair Seed Company	P. O. Box 706, Laurinburg, NC 28352
MFA	M.F.A. Seed Operations	P. O. Box 550, Marshall, MO 65340
Morton	Morton Americana Seed Company	Bowen, IL 62316
Muncy Chief	Muncy Chief Hybrids	Market & High Streets, Muncy, PA 17756
NC+	NC+ Hybrids	P. O. Box 4408, Lincoln, NE 68504
NK	Northrup-King & Company	P. O. Box 370, Richardson, TX 75080
O's Gold	O's Gold Seed Company	P. O. Box 460, Parkersburg, IA 50665
PAG	P-A-G Seeds	1200 Northstar Center, Minneapolis, MN 55402
Pioneer	Garst & Thomas Hybrid Corn Company	Coon Rapids, IA 50058
Premier	Premier Hybrids	R. R. #15, Box 223X, Acton, IN 46259
Princeton	Princeton Farms	P. O. Box 319, Princeton, IN 47670
Super Crost	Edw. J. Funk & Sons, Inc.	P. O. Box 67, Kentland, IN 47951
Taylor-Evans	Taylor-Evans Seed Company	Box 68, Tulia, TX 79088
Trojan	Trojan Seed Company	Olivia, MN 56277
U. S. Steel	U.S.S. Agri Chemicals	P. O. Box 312, East St. Louis, IL 62202
Walther	C.H.E. Walther & Son	R. R. #3, Boonville, MO 65233
Wilson	Wilson Hybrids, Inc.	P. O. Box 391, Harlan, IA 51537

PART II. GRAIN SORGHUM

INTRODUCTION

Locations. Grain sorghum performance trials were planted at five locations in 1975 (North Missouri Center near Spickard in Grundy County, Earl Page farm near Palmyra in Marion County, Agronomy Research Center-Bradford Farm near Columbia in Boone County, Southwest Center near Mt. Vernon in Lawrence County, and Delta Center near Portageville in Pemiscot County). The trial at the Delta Center was destroyed by birds, thus no results are reported.

Selection of a Hybrid. Small differences in yield should not be overemphasized since there was considerable inherent variability in the soil at each test site. Special planting arrangements and use of the statistical procedure called analysis of variance, from which the L.S.D. (least significant difference) value is computed, help make valid yield comparisons. The L.S.D. value, found at the bottom of the 1975 tables, simply states how much one hybrid must differ from another in yield to be reasonably confident of superior or inferior performance. Since we are presenting L.S.D. values at two levels of probability, 5 and 20%, additional explanation on the use of this statistic is hereby presented. The L.S.D. value at the 5% probability level indicates how much two hybrids must differ from each other to be sure that 19 out of 20 times grown these two hybrids would follow the same relative order. For the 20% level, two hybrids differing by more than the given L.S.D. value can be expected to perform in like manner 16 out of 20 times grown.

Also presented as an aid in identifying superior hybrid performance are the period-of-years tables and the table showing the average over all locations. Hybrids selected on the basis of more than one year's or one location's performance are much more likely to perform as expected than those not selected on this basis.

ENVIRONMENTAL CONDITIONS

The rainfall and temperature records for May 1 through August 31 at each location are presented in Tables 2 and 3 (corn section). Temperatures for 1975 were generally above normal for the northern part of the state and below normal for the central and southern parts.

Precipitation at each location was generally below the normal or long-term average.

EXPERIMENTAL METHODS

Seed Source. All producers and distributors of grain sorghum seed were eligible to enter the tests in 1975. No limit was placed on the number of hybrids any one company could enter. Also widely grown hybrids were identified by a mail survey of Missouri farmers and tested on a no-fee basis. Table 37 lists the seed sources and identifies widely grown hybrids.

Field Plot Design. Forty-nine entries were tested at each of the sites (North Missouri Center, Marion County, Bradford Farm, Southwest Center, and the Delta Center). Individual entries were planted in one-row plots with three replications. The triple lattice field plot design was used to minimize soil and cultural differences. The length of individual plots was 20 feet with a harvested length of 15 feet. The distance between rows was 30 inches at the above five locations.

Yield. The acre yield (pounds) was determined in the following manner: The grain was harvested with a research plot combine, weighed and sampled for moisture, and proper calculations were then made. All yields are expressed on an acre basis with 12.5% moisture in the grain.

Plant height. The average height of the plants, in inches, was determined for each entry. These data are included in the tables for each location.

Head compactness. Compactness was graded from 1 to 5; 1 for most compact or tight head, and 5 for the most lax or loose head.

Exsertion. Exsertion is the relative distance that the head base protrudes above the top leaf blade. Grade 1 indicates the least exsertion and grade 5 the greatest.

Off-type heads, tall plants and lodged plants. Off-type heads, tall plants, and lodged plants were counted prior to harvest. These data are intended mainly to indicate seed purity and ability of each entry to resist lodging under conditions encountered in each test.

Planting rate. The planting rate at the northern and central Missouri locations was 145 seeds per 20 feet of row or approximately 7.9 pounds per acre (126,000 plants per acre). At the Southwest Center (Lawrence County) and the Delta Center (Pemiscot County) 135 seeds were planted per 20 feet of row or about 7.3 pounds per acre (117,000 plants per acre).

Table 28. Cultural practices of 1975 grain sorghum evaluation plots.

Location	Soil Test O.M.	Soil Test P_2O_5	Soil Test K	Fertilizer Added	Insecticide	Herbicide	Row Width (in.)	Planting Rate Seeds/ft.	Date Planted	Date Harvested	Cooperator - (Town)
District 1 (Grundy Co.)	4.1	104	280	218-153-200	none	Herban 21A	30	7	5-29	10-17	North Mo. Center (Spickard)
District 2 (Marion Co.)	2.1	448	310	100-80-100	none	Herban 21A	30	7	5-22	10-28	Earl Page (Palmyra)
District 3 (Boone Co.)	1.9	182	340	145-70-70	none	Herban 21A	30	7	5-13	10-10	Agronomy Research Center (Columbia)
District 4 (Lawrence Co.)	2.3	364	280	150-100-100	none	Herban 21A	30	6	5-12	10-16	Southwest Center (Mt. Vernon)
District 5 (Pemiscot Co.)	2.2	396	420	100-75-75	none	Herban	30	6	5-16	9-15	Delta Center (Portageville)

TABLE 29. PERFORMANCE OF GRAIN SORGHUM HYBRIDS AT THE NORTH MISSOURI CENTER NEAR SPICKARD, MO. (GRUNDY CO.). PLANTED MAY 29, 1975. HARVESTED OCTOBER 17, 1975.

BRAND / HYBRID	ACRE YIELD (LB)	GRAIN MOIS-TURE (%)	LODGED PLANTS (%)	IN 15 FEET (#)	HEADS CMPT-NESS (1-5)	EXSER-TION (1-5)	OFF-TYPE HEADS (%)	TALL PLANTS (%)	PLANT HEIGHT (")	50% BLOOM DATE
DEKALB BR54**	4290	18.0	0.0	51	5.0	2.3	0.0	0.6	37	8- 7
TE BIRD-A-800 II**	3917	19.0	0.0	57	5.0	2.0	0.0	0.0	31	8- 8
NK SAVANNA 3** +	3597	17.9	0.0	55	5.0	2.0	0.0	0.0	32	8-10
FUNKS G-459BR**	3569	17.4	0.0	54	4.3	2.3	0.0	0.0	33	8- 7
FUNKS G-516BR**	3558	16.7	0.0	64	4.7	1.7	0.0	0.0	30	8-10
NK 180**	3522	16.4	0.0	51	2.7	2.7	0.0	0.0	34	8- 8
ACCO X9418**	3488	18.1	0.0	50	4.3	1.7	0.0	0.0	32	8- 8
NK 278	3450	19.4	0.0	50	3.0	2.0	0.0	0.0	30	8- 8
PIONEER 8386	3352	17.0	0.0	52	3.7	1.7	0.0	0.0	28	8- 8
PIONEER 8442 +	3345	16.7	0.0	60	3.0	1.3	0.0	0.0	32	8- 7
FUNKS HW3070	3324	18.1	0.0	47	3.3	1.3	0.0	0.0	31	8- 8
TE TOTAL	3217	19.6	0.0	45	4.3	2.0	0.0	0.0	32	8- 8
WARNER W-869	3214	17.7	0.0	85	3.3	1.0	0.0	0.0	32	8- 8
PIONEER 8877	3209	16.1	0.0	46	4.3	1.7	0.0	0.0	29	8-10
DEKALB BR64** +	3186	19.7	0.0	47	4.7	2.0	0.0	0.0	35	8- 7
TE GRAINMASTER-R	3145	16.6	0.0	65	2.0	1.7	0.0	0.0	32	8-31
MCNAIR 654	3129	17.3	0.0	46	3.7	1.7	0.0	0.0	30	8- 9
TE Y101 +	3107	18.7	0.0	47	3.3	1.3	0.0	0.0	29	8- 7
WARNER W-866	3104	17.1	0.0	50	4.0	2.7	0.0	1.6	33	8- 7
FUNKS G-490	2983	15.9	0.0	40	3.0	1.7	0.0	0.0	29	8-10
FUNKS G-522	2980	18.0	0.0	42	3.7	1.3	0.0	0.0	29	8- 8
TE 88A	2946	18.0	0.0	56	2.3	2.3	0.0	0.0	34	8- 8
WARNER W-901	2906	16.2	0.0	61	2.0	1.3	0.0	0.5	29	8- 7
MFA GS10	2867	17.5	0.0	46	3.0	1.3	0.0	0.0	31	8- 9
PAG-525	2817	15.9	0.0	72	2.3	1.0	0.0	0.0	29	8- 8
FUNKS HW3170	2779	16.2	0.0	53	3.0	1.7	0.0	0.0	32	8- 7
DEKALB E-59	2769	16.7	0.0	41	3.0	2.0	0.0	0.0	32	8- 7
DEKALB E-57 +	2754	17.6	0.0	42	4.3	2.3	0.0	0.0	33	8- 8
FUNKS HW3550	2750	19.7	0.0	53	2.0	1.3	0.0	0.0	29	8- 9
ASGROW DORADO +	2725	16.1	0.0	47	3.3	1.7	0.0	0.0	28	8- 7
ACCO R1029A	2672	17.4	0.0	48	3.7	1.3	0.0	0.0	29	8- 7
GLDN HRVST H265	2623	18.7	0.0	50	2.7	1.3	0.0	0.0	30	8- 8
DEKALB C42Y +	2614	16.3	0.0	41	4.3	3.0	0.0	0.0	32	8- 7
ACCO R109A +	2576	19.1	0.0	44	3.0	1.0	0.0	0.0	28	8- 7
WARNER W-832	2516	17.5	0.0	38	2.0	2.0	0.0	0.0	32	8- 8
HULTING ADVANCE 80	2455	18.0	0.0	47	3.7	1.3	0.0	0.0	29	8- 8
ACCO R1019	2444	16.6	0.0	42	3.7	2.0	0.0	0.0	30	8- 8
NK SAVANNA 4**	2423	19.7	0.0	31	4.0	2.0	0.0	0.0	28	8- 7
PIONEER 8501	2379	17.6	0.0	56	2.3	1.7	0.0	0.0	32	8- 7
NK 222G +	2326	18.0	0.0	56	3.3	1.0	0.0	0.0	28	8- 7
ACCO R1090	2280	16.9	0.0	43	4.0	1.0	0.0	0.0	31	8- 7
NK 279	2242	16.8	0.0	55	3.7	2.0	0.0	0.0	31	8-10
PIONEER 8311	2232	25.6	0.0	41	3.0	1.0	0.0	0.9	33	8- 9
NK 222A +	2208	16.7	0.0	54	3.3	1.3	0.0	0.0	28	8- 8
FUNKS G-393	2165	19.6	0.0	49	2.7	2.0	0.0	0.0	32	8- 7
FUNKS G-577	1978	17.4	0.0	35	1.7	2.3	0.0	1.3	32	8- 9
FUNKS G-766W	1189	23.0	0.0	39	1.7	1.3	0.0	0.0	30	8- 7
MARTIN	794	19.7	0.0	30	3.3	2.7	0.0	0.0	27	8- 7
PIONEER 878 +	703	15.6	0.0	40	2.3	2.3	0.0	0.0	31	8- 9
AVERAGE	2792	17.9	0.0	49	3.3	1.7	0.0	0.1	30	

LSD VALUE AT THE 5% LEVEL IS 943. HYBRIDS DIFFERING BY MORE THAN THIS VALUE WILL DIFFER SIGNIFICANTLY 19 OF 20 TIMES GROWN.
LSD VALUE AT THE 20% LEVEL IS 604. HYBRIDS DIFFERING BY MORE THAN THIS VALUE WILL DIFFER SIGNIFICANTLY 16 OF 20 TIMES GROWN.

+WIDELY GROWN
**BIRD-RESISTANT HYBRID.

TABLE 30. SUMMARY PERFORMANCE OF GRAIN SORGHUM HYBRIDS EVALUATED AT THE NORTH MISSOURI CENTER (NMC) NEAR SPICKARD, MO. (GRUNDY COUNTY) DURING THE 2-YEAR PERIOD 1974-75.

BRAND / HYBRID	ACRE YIELD (LB)	GRAIN MOIS-TURE (%)	LODGED PLANTS (%)	HEADS CMPT-NESS (1-5)	EXSER-TION (1-5)	OFF-TYPE HEADS (%)	TALL PLANTS (%)	PLANT HEIGHT (")
NK 180**	3747	18.3	4.8	3.0	3.3	0.0	0.0	40
T.E. GRAINMASTER R	3515	17.8	2.8	2.8	2.2	0.0	0.3	36
ACCO X9418**	3485	19.1	4.1	4.6	3.2	0.0	0.0	39
NK SAVANNA 3**	3413	19.4	0.0	5.0	3.0	0.0	0.3	39
FUNK G-522	3387	17.9	6.7	4.2	2.1	0.0	0.1	37
FUNKS G-516BR**	3367	17.6	0.3	4.8	2.8	0.0	0.1	34
DEKALB BR54**	3327	18.4	0.3	4.6	3.3	0.0	0.6	44
MCNAIR 654	3187	18.7	0.0	4.3	3.0	0.0	0.1	38
ACCO R1019	3131	17.6	0.5	4.2	3.1	0.0	0.1	37
HULTING ADVANCE 80	3106	18.4	8.4	4.2	2.0	0.0	0.3	36
TE Y101	3086	18.5	0.3	4.1	2.3	0.0	0.4	37
ASGROW DORADO	3062	17.1	0.2	3.8	2.3	0.0	0.0	35
PIONEER 8442	2997	17.8	0.0	3.1	1.8	0.0	0.0	38
DEKALB E-59	2982	17.4	0.3	3.5	2.3	0.0	0.3	39
TE 88A	2927	18.6	1.1	3.1	3.3	0.0	0.0	42
ACCO R109A	2905	18.9	2.6	3.5	1.6	0.0	0.3	35
DEKALB E-57	2845	18.3	3.1	4.5	3.1	0.0	0.0	39
NK SAVANNA 4**	2803	19.6	7.0	3.5	2.8	0.0	0.0	35
DEKALB C42Y	2767	17.1	1.3	4.3	3.6	0.0	0.0	39
MFA GS10	2760	18.1	0.0	3.8	1.8	0.0	0.0	37
FUNKS G-459BR**	2754	18.7	0.3	4.6	3.6	0.0	0.3	40
ACCO R1090	2657	17.3	0.3	4.5	2.8	0.0	0.1	38
NK 278	2651	18.9	1.2	3.3	2.3	0.0	0.0	37
TE TOTAL	2589	18.6	0.0	4.6	3.3	0.0	0.0	40
NK 279	2566	17.6	1.1	3.8	3.5	0.0	0.0	40
NK 222A	2471	17.6	0.0	4.1	2.6	0.0	0.1	34
FUNK G-577	2379	19.1	1.4	2.3	3.0	0.0	0.7	37
PIONEER 8311	2376	22.4	0.0	3.3	1.5	0.0	0.6	39
DEKALB BR64**	2368	18.9	0.0	4.8	3.5	0.1	0.0	43
NK 222G	2320	18.4	0.0	3.8	2.5	0.0	0.0	37
MARTIN	1824	19.3	3.6	4.1	3.7	0.0	0.1	34
PIONEER 878	1649	18.0	17.3	3.1	3.3	0.1	0.3	37
FUNKS G-766W	1261	20.3	0.0	2.3	2.6	0.0	0.0	42
AVERAGE	2808	18.5	2.1	3.9	2.8	0.0	0.2	38

**BIRD-RESISTANT HYBRID.

TABLE 31. PERFORMANCE OF GRAIN SORGHUM HYBRIDS AT THE EARL PAGE FARM NEAR PALMYRA, MO. (MARION CO.). PLANTED MAY 22, 1975. HARVESTED OCTOBER 17, 1975.

BRAND / HYBRID	ACRE YIELD (LB)	GRAIN MOIS-TURE (%)	LODGED PLANTS (%)	IN 15 FEET (#)	HEADS CMPT-NESS (1-5)	EXSER-TION (1-5)	OFF-TYPE HEADS (%)	TALL PLANTS (%)	PLANT HEIGHT (")	50% BLOOM DATE
FUNKS G-516BR**	6506	17.4	0.0	53	5.0	3.3	0.0	0.0	46	8- 6
FUNKS G-522	6283	17.0	0.0	49	4.0	2.3	0.6	1.2	44	8-11
GLDN HRVST H265	6273	16.5	0.0	39	4.3	2.7	0.8	0.8	46	8-17
PIONEER 8442 +	6237	16.7	0.0	32	3.7	2.7	0.0	0.0	45	8- 1
HULTING ADVANCE 80	6217	17.0	0.0	31	3.7	2.7	0.7	1.6	43	8-12
WARNER W-832	6133	16.4	0.0	46	2.0	2.7	0.0	0.0	48	8-12
NK 278	6009	16.6	0.0	44	4.0	2.7	0.0	0.0	45	8- 9
WARNER W-869	5963	17.2	0.0	73	3.7	3.7	0.4	0.4	49	8- 5
ASGROW DORADO +	5867	16.5	0.0	39	3.3	2.3	2.9	2.9	46	7-31
WARNER W-901	5808	16.3	0.0	44	2.7	2.3	0.0	0.8	41	8- 9
NK 279	5756	17.0	0.0	38	4.3	4.3	0.0	0.7	50	8-12
WARNER W-866	5749	17.2	0.0	52	3.3	3.3	0.0	0.0	49	7-31
TE BIRD-A-800 II**	5728	18.1	0.0	42	5.0	3.0	0.0	0.0	48	8-17
MCNAIR 654	5668	16.5	0.0	41	4.0	3.3	0.0	0.0	46	8-14
DEKALB E-59	5602	18.9	0.0	41	4.0	2.7	0.6	2.7	44	8-10
FUNKS G-766W	5482	15.9	0.0	35	2.7	3.7	0.0	0.0	50	8-10
FUNKS HW3170	5453	16.6	0.0	51	4.0	3.3	0.0	1.2	48	8-14
DEKALB BR54**	5433	17.4	0.0	45	4.7	5.0	0.7	0.7	56	8-10
TE 88A	5172	17.2	0.0	41	2.7	3.7	0.0	0.8	46	8-10
NK 180**	5167	17.1	0.0	46	2.7	4.0	0.0	0.0	49	8-10
MFA GS10	5147	17.4	0.0	42	4.3	3.0	0.0	0.0	45	8- 2
FUNKS HW3070	5068	18.2	0.0	36	3.3	3.0	0.0	0.0	46	8-10
NK SAVANNA 3** +	5065	17.7	0.0	38	5.0	4.3	0.0	0.0	45	8- 9
ACCO X9418**	5030	17.0	0.0	48	4.3	4.0	0.0	2.1	47	8- 1
FUNKS G-393	4997	16.8	0.0	38	4.0	3.3	0.0	0.0	45	8-13
ACCO R1090	4952	17.0	0.0	31	5.0	3.3	0.0	0.0	45	8-17
PAG-525	4950	20.0	0.0	51	3.3	3.0	0.0	0.0	46	8- 9
TE TOTAL	4899	18.7	0.0	35	3.3	3.7	1.0	2.0	48	8- 3
FUNKS G-577	4856	16.9	0.0	44	2.7	3.7	0.0	0.0	48	8- 9
PIONEER 8501	4835	17.1	0.0	30	2.7	3.0	1.1	1.1	44	7-29
ACCO R109A +	4789	17.4	0.0	37	3.3	2.3	0.0	0.0	43	8-12
ACCO R1029A	4731	17.1	2.2	37	3.7	2.7	0.7	2.2	43	7-30
FUNKS G-490	4730	15.8	0.0	28	3.3	2.7	1.8	1.8	39	8- 4
DEKALB BR64** +	4634	17.6	0.0	35	5.0	3.7	0.0	0.9	49	8- 8
ACCO R1019	4617	17.8	0.0	29	3.7	2.7	0.0	1.3	45	7-27
PIONEER 8311	4596	18.3	0.0	33	2.3	2.3	0.0	0.0	44	8- 7
FUNKS HW3550	4512	18.3	0.0	39	2.0	2.3	0.0	0.0	42	8-10
PIONEER 8386	4508	17.8	0.0	44	3.7	2.7	0.0	0.0	45	8- 7
NK SAVANNA 4**	4375	18.5	0.0	32	3.3	3.3	1.1	0.0	44	8- 9
NK 222G +	4345	16.9	0.0	38	5.0	3.3	0.0	0.7	45	8-10
DEKALB C42Y +	4330	17.0	0.0	33	3.7	4.0	0.0	0.0	48	8-10
TE GRAINMASTER-R	4303	16.2	0.0	45	2.3	3.3	0.6	0.6	42	8- 3
FUNKS G-459BR**	4257	20.0	0.0	43	3.7	5.0	0.0	0.6	48	8- 9
NK 222A +	4247	16.3	0.0	41	4.7	3.3	0.0	0.0	45	8-10
PIONEER 878 +	3948	16.7	0.0	28	2.3	3.3	1.8	1.8	39	8-12
PIONEER 8877	3894	17.0	0.0	38	4.7	2.7	0.0	0.8	42	8-11
TE Y101 +	3853	22.9	0.0	39	2.7	2.7	0.0	1.1	42	8-13
MARTIN	3800	16.5	0.0	37	4.7	3.3	0.0	0.0	40	8-10
DEKALB E-57 +	3543	17.5	0.0	25	4.3	2.7	3.8	0.0	45	8- 9
AVERAGE	5068	17.4	0.0	39	3.7	3.2	0.4	0.6	45	

LSD VALUE AT THE 5% LEVEL IS 1212. HYBRIDS DIFFERING BY MORE THAN THIS VALUE WILL DIFFER SIGNIFICANTLY 19 OF 20 TIMES GROWN.
LSD VALUE AT THE 20% LEVEL IS 776. HYBRIDS DIFFERING BY MORE THAN THIS VALUE WILL DIFFER SIGNIFICANTLY 16 OF 20 TIMES GROWN.
+WIDELY GROWN
**BIRD-RESISTANT HYBRID.

TABLE 32. SUMMARY PERFORMANCE OF GRAIN SORGHUM HYBRIDS EVALUATED AT THE EARL PAGE FARM NEAR PALMYRA, MO. (MARION COUNTY) DURING THE 2-YEAR PERIOD 1974-75.

BRAND / HYBRID	ACRE YIELD (LB)	GRAIN MOIS-TURE (%)	LODGED PLANTS (%)	HEADS CMPT-NESS (1-5)	EXSER-TION (1-5)	OFF-TYPE HEADS (%)	TALL PLANTS (%)	PLANT HEIGHT (")
FUNK G-516BR**	6524	29.1	1.3	6.8	4.6	0.0	0.2	64
ACCO X9418**	6150	28.8	0.0	7.0	5.0	0.0	1.2	69
NK 180**	5928	28.4	0.0	4.4	4.9	0.0	0.0	68
NK SAVANNA 3**	5834	28.2	0.7	7.1	5.3	0.0	0.0	65
ASGROW DORADO	5826	28.2	0.1	5.6	3.6	1.4	1.7	63
FUNKS G-522	5784	30.5	0.0	5.2	3.1	0.3	0.6	63
NK 279	5704	29.0	0.6	5.7	5.7	0.0	0.5	70
NK SAVANNA 4**	5577	29.4	0.0	5.3	4.8	0.6	0.1	66
DEKALB BR54**	5539	29.6	0.2	6.9	6.0	0.3	0.9	75
ACCO R1019	5476	27.3	2.4	5.3	4.4	0.5	1.0	68
ACCO R1C9A	5425	28.3	2.0	5.6	3.9	0.0	0.3	64
DEKALB E-59	5365	29.6	4.2	6.1	3.3	0.3	1.7	63
N.K. 278	5321	28.3	0.1	5.4	4.4	0.0	0.1	65
FUNKS G-766W	5192	29.8	0.1	4.3	5.2	0.3	0.7	71
TE GRAINMASTER-R	4820	28.6	0.0	4.2	3.8	0.4	0.9	63
HULTING ADVANCE 80	4809	19.9	0.0	3.7	2.3	0.3	1.1	45
DEKALB C42Y	4693	29.6	0.0	6.2	5.8	0.0	0.1	67
NK 222A	4579	27.8	0.1	7.0	4.8	0.1	0.3	66
FUNKS G-459BR**	4541	32.5	0.5	4.4	6.5	0.0	0.6	70
MCNAIR 654	4489	30.9	0.0	5.2	4.3	0.0	0.1	68
T.E. 88A	4453	30.0	1.8	4.4	5.0	0.0	0.5	64
DEKALB BR64**	4321	28.3	0.3	6.9	5.3	0.1	0.7	68
PIONEER 8442	4057	20.4	0.0	3.0	2.3	0.0	0.0	46
MFA GS10	3961	20.6	0.0	4.0	2.6	0.0	0.0	46
ACCO R1090	3776	18.3	0.0	5.0	3.3	0.0	0.0	47
TE TOTAL	3586	21.1	0.0	3.8	3.7	0.5	1.0	50
TE Y101	3579	26.9	0.0	4.9	3.4	0.1	0.6	59
PIONEER 8311	3506	20.4	0.0	2.6	2.1	0.0	0.0	45
NK 222G	3346	19.1	0.0	3.6	3.1	0.3	0.3	47
FUNKS G-577	3161	18.6	0.0	2.3	3.8	0.0	0.0	49
PIONEER 878	2941	23.3	0.0	3.0	2.8	0.9	1.4	41
MARTIN	2865	19.0	0.0	3.8	3.0	0.0	0.3	43
DEKALB E-57	2557	19.1	0.0	4.6	3.0	2.0	0.0	47
AVERAGE	4742	26.6	0.5	5.1	4.2	0.3	0.5	61

**BIRD-RESISTANT HYBRID.

TABLE 33. PERFORMANCE OF GRAIN SORGHUM HYBRIDS AT THE AGRONOMY RESEARCH CENTER (ARC) NEAR COLUMBIA, MO. (BOONE CO.). PLANTED MAY 13, 1975. HARVESTED OCT. 10, 1975.

BRAND / HYBRID	ACRE YIELD (LB)	GRAIN MOIS-TURE (%)	LODGED PLANTS (%)	IN 15 FEET (#)	HEADS CMPT-NESS (1-5)	EXSER-TION (1-5)	OFF-TYPE HEADS (%)	TALL PLANTS (%)	PLANT HEIGHT (")	50% BLOOM DATE
DEKALB BR54**	6065	15.3	2.6	66	3.0	1.0	0.0	0.0	53	8-18
FUNKS HW3070	5889	13.3	1.1	54	3.3	2.0	0.8	1.3	43	8-20
DEKALB E-57 +	5550	13.4	0.0	63	5.0	3.7	0.0	0.0	46	8-18
NK 180**	5518	13.9	3.6	66	3.3	3.0	0.0	0.6	45	8-16
ASGROW DORADO +	5500	12.9	1.0	69	4.3	1.7	0.0	0.0	42	8-18
DEKALB BR64** +	5346	14.1	2.9	60	3.3	1.3	0.0	1.3	51	8-17
TE 88A	5297	13.7	0.0	66	3.7	2.3	0.0	0.0	46	8-15
NK 279	5293	12.7	1.3	73	3.3	1.0	0.0	0.5	49	8-18
FUNKS G-522	5203	12.7	0.5	67	3.7	1.7	0.0	0.0	44	8-13
DEKALB E-59	5126	13.7	0.0	67	3.3	1.0	0.0	0.0	43	8-17
FUNKS G-766W	5000	12.9	0.0	65	2.3	1.3	0.0	0.0	50	8-14
PIONEER 8501	4989	18.4	0.0	52	3.7	2.0	0.0	0.0	44	8-19
WARNER W-866	4988	14.7	5.6	61	3.3	2.3	0.0	1.0	46	8-20
NK 278	4977	14.1	0.0	69	4.3	2.0	1.0	1.5	43	8-16
NK SAVANNA 3** +	4900	14.2	7.6	70	5.0	3.0	0.0	0.0	41	8-22
DEKALB C42Y +	4879	12.5	0.0	56	4.3	3.7	0.0	0.0	50	8-22
ACCO R109A +	4849	12.5	0.0	50	4.0	2.0	0.0	0.0	43	8-20
TE Y101 +	4829	12.6	0.0	67	4.3	2.0	0.0	0.0	41	8-19
WARNER W-832	4799	14.2	0.5	57	3.3	1.3	0.0	0.0	43	8-22
ACCO R1019	4747	12.6	16.5	53	5.0	2.0	0.0	0.0	42	8-17
TE BIRD-A-BOO II**	4737	13.4	2.3	56	5.0	2.0	0.0	0.6	44	8-17
WARNER W-869	4722	13.1	20.9	76	3.7	2.0	0.0	0.0	46	8-16
FUNKS G-516BR**	4694	13.0	0.6	62	4.7	1.7	0.0	0.0	43	8-17
TE GRAINMASTER-R	4620	12.8	8.6	71	3.7	3.3	0.0	0.4	43	8-16
ACCO R1090	4546	12.0	0.9	60	5.0	2.0	0.0	0.5	44	8-16
GLDN HRVST H265	4520	12.8	11.2	63	3.7	2.0	2.0	2.7	44	8-16
NK 222A +	4465	13.8	0.0	62	5.0	2.7	0.0	0.0	42	8-16
TE TOTAL	4455	14.4	22.8	56	3.7	2.0	0.0	0.6	49	8-18
PIONEER 8877	4440	11.9	1.1	60	4.7	2.0	0.5	6.3	39	8-22
PIONEER 8386	4420	12.9	1.6	65	4.7	2.7	0.0	0.0	42	8-17
MFA GS10	4313	13.0	1.2	59	4.3	1.7	0.0	0.0	40	8-15
FUNKS G-490	4288	12.6	2.5	52	4.7	1.7	0.0	1.3	42	8-17
PIONEER 8442 +	4287	13.5	2.3	61	5.0	2.3	0.0	0.0	41	8-18
PAG-525	4208	12.6	0.0	72	4.3	1.7	0.0	0.0	41	8-17
ACCO X9418**	4112	13.6	9.0	58	3.7	2.7	0.0	0.0	44	8-12
PIONEER 8311	4089	13.9	0.0	52	3.7	1.7	0.0	0.6	41	8-19
WARNER W-901	4068	12.1	0.6	56	3.7	1.3	0.0	0.6	42	8-17
FUNKS G-577	4027	12.7	0.0	61	4.0	3.0	0.5	0.0	46	8-18
NK SAVANNA 4**	4002	13.8	14.5	62	4.0	3.3	0.0	0.0	42	8-20
ACCO R1029A	3889	13.1	12.1	53	4.3	2.7	0.0	0.6	44	8-22
FUNKS HW3170	3878	13.5	6.7	55	4.0	2.3	2.0	3.3	46	8-17
FUNKS G-459BR**	3754	14.0	0.0	57	3.7	1.7	0.6	0.6	45	8-15
MCNAIR 654	3716	13.1	38.4	55	4.3	2.3	0.0	0.6	43	8-18
PIONEER 878 +	3605	13.2	0.5	53	3.7	3.0	0.5	1.4	42	8-17
FUNKS HW3550	3527	12.8	0.0	68	2.0	1.3	0.0	0.0	41	8-20
FUNKS G-393	3498	15.5	1.5	66	4.7	2.7	2.4	3.0	44	8-16
NK 222G +	3409	12.8	0.0	57	4.3	2.0	0.0	0.9	42	8-19
MARTIN	2721	13.7	5.5	67	4.3	1.7	1.0	1.0	41	8-17
AVERAGE	4557	13.4	4.3	61	4.0	2.1	0.2	0.6	43	

LSD VALUE AT THE 5% LEVEL IS 840. HYBRIDS DIFFERING BY MORE THAN THIS VALUE WILL DIFFER SIGNIFICANTLY 19 OF 20 TIMES GROWN.
LSD VALUE AT THE 20% LEVEL IS 537. HYBRIDS DIFFERING BY MORE THAN THIS VALUE WILL DIFFER SIGNIFICANTLY 16 OF 20 TIMES GROWN.
+WIDELY GROWN
**BIRD-RESISTANT HYBRID.

TABLE 34. SUMMARY PERFORMANCE OF GRAIN SORGHUM HYBRIDS EVALUATED AT THE AGRONOMY RESEARCH CENTER-BRADFORD FARM NEAR COLUMBIA, MO. (BOONE COUNTY) DURING THE 2-YEAR PERIOD 1974-75.

BRAND / HYBRID	ACRE YIELD (LB)	GRAIN MOIS-TURE (%)	LODGED PLANTS (%)	IN 20 FEET (#)	HEADS CMPT-NESS (1-5)	EXSER-TION (1-5)	OFF-TYPE HEADS (%)	TALL PLANTS (%)	PLANT HEIGHT (")
ACCO R1019	7986	31.6	8.9	45	7.5	4.7	0.0	0.1	75
FUNKS G-522	7761	31.1	0.6	49	6.5	4.4	0.0	0.0	76
ACCO R109A	7673	31.2	0.0	42	5.9	4.8	0.0	0.1	76
ASGROW DORADO	7652	32.6	0.5	54	6.6	3.7	0.1	0.4	73
ACCO X9418**	7602	32.6	4.8	43	7.6	6.0	0.0	0.0	76
DEKALB BR54**	7481	39.0	2.4	48	6.5	4.9	0.1	0.2	85
FUNK G-516BR**	7361	28.1	0.3	38	6.7	3.5	0.2	0.9	66
DEKALB BR64**	7306	35.3	1.5	45	7.1	5.5	0.2	1.1	88
NK SAVANNA 3**	7277	34.8	4.1	52	7.2	6.8	0.0	0.5	78
N.K. 279	7207	28.9	0.7	44	4.6	3.7	0.0	0.4	71
DEKALB E-59	7166	35.3	1.2	47	6.2	4.0	0.3	0.5	77
NK 180**	7102	34.4	1.8	48	5.6	5.2	0.0	0.4	79
DEKALB C42Y	6949	31.7	0.0	41	7.0	6.6	0.3	0.1	82
N.K. 278	6818	32.7	0.1	48	7.1	5.1	0.6	1.2	77
N.K. SAVANNA 4**	6660	30.7	7.3	41	5.5	4.5	0.0	0.0	66
FUNKS G-766W	6655	32.1	2.1	48	5.5	4.5	0.1	1.0	82
N.K. 222A	6560	33.2	0.9	45	6.7	5.2	0.0	0.7	75
FUNK G-459BR**	6175	33.3	0.0	46	5.9	5.1	0.7	1.4	77
T.E. 88A	6165	30.4	0.0	40	4.7	4.2	0.5	0.7	67
T.E. GRAINMASTER R	6048	27.0	4.3	46	4.2	4.6	0.3	0.3	67
T.E. Y101	5672	27.0	0.0	28	4.8	3.4	0.2	0.3	57
MCNAIR 654	5441	27.1	19.2	33	6.3	4.1	1.2	0.4	68
TE TOTAL	4772	20.2	11.4	28	3.7	2.8	0.0	0.3	48
ACCO R1090	4684	16.4	0.4	30	4.6	3.0	0.0	0.3	44
DEKALB E-57	4500	19.8	0.0	31	4.6	3.5	0.0	0.1	45
PIONEER 8311	4446	20.3	0.0	26	3.3	2.0	0.0	0.3	42
MFA GS10	4280	17.3	0.6	29	3.8	2.0	0.0	0.0	41
PIONEER 8442	4261	17.6	1.1	30	3.5	2.3	0.3	0.7	42
ADVANCE 80	4214	17.3	0.4	28	3.8	1.8	0.0	0.6	42
NK 222G	3991	19.1	0.0	28	4.1	3.0	0.0	0.4	43
FUNK G-577	3631	19.9	0.0	30	3.0	3.6	0.3	0.0	46
MARTIN	3256	17.5	2.8	33	4.0	2.3	0.5	0.5	41
PIONEER 878	3109	20.9	0.3	26	3.3	3.1	0.4	0.8	42
AVERAGE	6139	28.3	2.4	40	5.5	4.2	0.2	0.5	66

**BIRD-RESISTANT HYBRID.

TABLE 35. PERFORMANCE OF GRAIN SORGHUM HYBRIDS AT THE SOUTHWEST CENTER (SWC) NEAR MT. VERNON, MO. (LAWRENCE CO.). PLANTED MAY 12, 1975. HARVESTED OCT. 16, 1975.

BRAND / HYBRID	ACRE YIELD (LB)	GRAIN MOIS-TURE (%)	LODGED PLANTS (%)	IN 15 FEET (#)	HEADS CMPT-NESS (1-5)	EXSER-TION (1-5)	OFF-TYPE HEADS (%)	TALL PLANTS (%)	PLANT HEIGHT (")
DEKALB BR54**	6400	5.0	2.1	64	4.7	3.0	0.0	0.0	48
PIONEER 8501	6019	5.0	9.0	56	4.0	2.3	0.0	0.0	41
FUNKS G-516BR**	5976	5.0	6.7	70	5.0	2.3	0.0	0.0	40
ACCO X9418**	5732	5.0	6.0	61	4.0	2.0	0.0	0.0	39
WARNER W-869	5643	5.0	12.0	74	4.0	2.0	0.0	0.0	46
FUNKS G-522	5536	5.0	3.4	62	4.0	1.3	0.0	0.6	37
NK 279	5531	5.0	8.6	62	3.3	1.3	0.0	0.5	37
FUNKS HW3070	5513	5.0	7.6	56	3.7	1.3	0.0	0.7	39
NK 180**	5394	5.0	6.6	70	3.7	2.7	0.0	0.0	43
WARNER W-832	5335	5.0	2.0	52	3.0	2.0	0.0	0.6	41
HULTING ADVANCE 80	5323	5.0	4.9	54	4.3	1.3	0.0	0.0	38
TE TOTAL	5256	5.0	6.8	56	4.0	2.3	0.0	0.0	41
FUNKS HW3170	5165	5.0	12.8	59	4.0	1.7	0.0	1.0	42
DEKALB E-59	5165	5.0	4.3	59	3.3	1.3	0.0	0.0	37
ACCO R1090	5116	5.0	20.4	57	5.0	2.0	0.0	0.0	40
ASGROW DORADO+	5089	5.0	6.3	57	3.7	2.0	0.0	0.0	35
GLDN HRVST H265	5073	5.0	4.2	56	3.7	1.3	0.0	0.0	38
ACCO R1019	5044	5.0	5.2	52	4.0	1.7	0.0	0.0	37
FUNKS G-766W	5044	5.0	3.5	56	3.3	3.0	0.0	0.0	44
DEKALB BR64** +	5025	5.0	5.2	51	5.0	4.3	0.0	0.0	48
NK SAVANNA 4**	5023	5.0	6.8	51	4.3	2.3	0.0	0.7	35
WARNER W-866	5010	5.0	1.8	53	4.3	1.7	0.0	0.0	41
NK 278	4941	5.0	4.6	55	3.0	1.7	0.0	0.0	35
PIONEER 8442 +	4928	5.0	6.5	59	4.0	2.0	0.0	0.0	36
DEKALB C42Y +	4925	5.0	4.3	50	4.0	2.3	0.0	0.0	39
ACCO R109A +	4891	5.0	9.7	51	4.0	1.7	0.0	0.0	36
PIONEER 8386	4882	5.0	10.2	57	4.0	2.0	0.0	0.0	36
TE Y101 +	4856	5.0	4.4	51	4.0	1.3	0.0	0.6	37
MFA GS10	4718	5.0	3.7	55	3.7	1.3	0.0	0.0	35
ACCO R1029A	4710	5.0	3.8	52	4.3	1.3	0.0	0.0	37
MCNAIR 654	4703	5.0	9.6	49	4.7	2.0	0.0	0.0	40
PAG-525	4615	5.0	3.3	68	4.3	2.0	0.0	0.0	36
NK 222G +	4594	5.0	7.2	54	4.3	1.7	0.0	0.0	37
PIONEER 8311	4586	5.0	4.2	49	3.0	1.0	0.0	0.0	34
TE BIRD-A-800 II**	4492	5.0	10.6	53	4.7	1.7	0.0	0.8	38
PIONEER 8877	4461	5.0	18.6	63	5.0	1.7	0.0	2.1	35
NK SAVANNA 3**+	4386	5.0	12.2	58	5.0	2.0	0.0	0.0	36
HULTING ADVANCE 80	4314	11.8	0.0	56	4.3	2.0	0.0	0.5	42
TE GRAINMASTER-R	4258	5.0	9.2	60	3.7	2.7	0.5	0.0	40
NK 222A +	4178	5.0	6.6	60	4.3	2.0	0.0	0.5	36
FUNKS G-577	4160	5.0	3.8	62	3.3	2.0	0.0	1.2	41
FUNKS HW3550	4118	5.0	5.7	52	2.0	1.0	0.5	0.0	34
FUNKS G-459BR**	4096	5.0	6.6	51	3.3	3.3	0.0	0.0	41
DEKALB E-57 +	4084	5.0	5.4	43	4.7	3.3	0.0	0.0	41
TE 88A	3906	5.0	2.9	57	3.3	2.0	1.2	0.0	37
WARNER W-901	3765	5.0	2.6	63	3.7	1.7	0.0	0.0	34
FUNKS G-490	3644	5.0	4.7	42	4.0	1.3	0.0	0.0	35
FUNKS G-393	3626	5.0	3.7	65	5.0	3.7	0.0	0.5	42
PIONEER 878 +	2983	5.0	22.7	54	3.7	2.3	0.0	0.6	32
MARTIN	2277	5.0	8.1	42	4.0	1.3	0.0	0.0	32
AVERAGE	4768	5.1	6.8	56	4.0	2.0	0.0	0.2	38

LSD VALUE AT THE 5% LEVEL IS 569. HYBRIDS DIFFERING BY MORE THAN THIS VALUE WILL DIFFER SIGNIFICANTLY 19 OF 20 TIMES GROWN.
LSD VALUE AT THE 20% LEVEL IS 620. HYBRIDS DIFFERING BY MORE THAN THIS VALUE WILL DIFFER SIGNIFICANTLY 16 OF 20 TIMES GROWN.
+WIDELY GROWN
**BIRD-RESISTANT HYBRID.

TABLE 36. AVERAGE PERFORMANCE RECORD OF GRAIN SORGHUM HYBRIDS EVALUATED AT FOUR MISSOURI LOCATIONS (GRUNDY, MARION, BOONE, AND LAWRENCE COUNTIES) DURING 1975.

BRAND / HYBRID	ACRE YIELD (LB)	GRAIN MOIS-TURE (%)	LODGED PLANTS (%)	IN 15 FEET (#)	HEADS CMPT-NESS (1-5)	EXSER-TION (1-5)	OFF-TYPE HEADS (%)	TALL PLANTS (%)	PLANT HEIGHT (")
DEKALB BR54**	5547	13.9	1.2	56	4.3	2.8	0.2	0.3	48
FUNKS G-516BR**	5183	13.0	1.8	62	4.8	2.3	0.0	0.0	39
FUNKS G-522	5000	13.2	1.0	55	3.8	1.6	0.1	0.4	38
FUNKS HW3070	4948	13.6	2.2	48	3.4	1.9	0.2	0.5	39
NK 180**	4900	13.1	2.6	58	3.1	3.1	0.0	0.1	42
WARNER W-869	4860	13.2	8.2	77	3.7	2.2	0.1	0.1	43
NK 278	4844	13.8	1.2	54	3.6	2.1	0.3	0.4	38
ASGROW DORADO	4795	12.6	1.8	53	3.6	1.9	0.7	0.7	37
TE BIRD-A-800 II**	4718	13.9	3.3	52	4.9	2.2	0.0	0.3	40
NK 279	4715	12.9	2.5	57	3.6	2.1	0.0	0.4	41
WARNER W-866	4712	13.5	1.8	54	3.7	2.5	0.0	0.7	42
PIONEER 8442	4699	13.0	2.2	53	3.9	2.1	0.0	0.0	38
WARNER W-832	4696	13.3	0.6	48	2.6	2.0	0.0	0.1	41
DEKALB E-59	4665	13.6	1.1	52	3.4	1.8	0.1	0.7	39
GLDN HRVST H265	4622	13.2	3.8	52	3.6	1.8	0.7	0.9	39
ACCO X9418**	4590	13.4	3.8	54	4.1	2.6	0.0	0.5	40
HULTING ADVANCE 80	4577	12.9	1.2	47	4.0	1.8	0.2	0.5	38
PIONEER 8501	4555	14.5	2.3	48	3.2	2.3	0.3	0.3	40
DEKALB BR64**	4547	14.1	2.0	48	4.5	2.8	0.0	0.5	45
NK SAVANNA 3**	4487	13.7	4.9	55	5.0	2.8	0.0	0.0	38
TE TOTAL	4457	14.4	7.4	48	3.8	2.5	0.3	0.6	42
TE 88A	4330	13.5	0.7	55	3.0	2.6	0.3	0.2	40
FUNKS HW3170	4323	12.8	4.9	54	3.8	2.3	0.5	1.4	42
MCNAIR 654	4309	13.0	12.0	47	4.2	2.3	0.0	0.1	39
PIONEER 8386	4290	13.2	2.9	54	4.0	2.3	0.0	0.0	37
ACCO R109A	4276	13.5	2.4	45	3.6	1.8	0.0	0.0	37
MFA GS10	4261	13.2	1.2	50	3.8	1.8	0.0	0.0	37
ACCO R1090	4223	12.7	5.3	47	4.8	2.1	0.0	0.1	40
ACCO R1019	4213	13.0	5.4	44	4.1	2.1	0.0	0.3	38
DEKALB C42Y	4187	12.7	1.1	45	4.1	3.3	0.0	0.0	42
FUNKS G-766W	4178	14.2	0.9	48	2.5	2.3	0.0	0.0	43
TE Y101	4161	14.8	1.1	51	3.6	1.8	0.0	0.4	37
PAG-525	4147	13.4	0.8	65	3.6	1.9	0.0	0.0	38
WARNER W-901	4136	12.4	0.8	56	3.0	1.6	0.0	0.5	36
TE GRAINMASTER-R	4081	12.6	4.4	60	2.9	2.8	0.3	0.3	39
PIONEER 8877	4001	12.5	4.9	51	4.7	2.0	0.1	2.3	36
ACCO R1029A	4000	13.1	4.5	47	4.0	2.0	0.2	0.7	38
DEKALB E-57	3982	13.4	1.3	43	4.6	3.0	1.0	0.0	41
NK SAVANNA 4**	3955	14.2	5.3	44	3.9	2.7	0.3	0.2	37
FUNKS G-459BR**	3919	14.1	1.6	51	3.8	3.1	0.1	0.3	41
FUNKS G-490	3911	12.3	1.8	40	3.8	1.8	0.5	0.8	36
PIONEER 8311	3875	15.7	1.0	43	3.0	1.5	0.0	0.4	38
NK 222A	3774	12.9	1.6	54	4.3	2.3	0.0	0.1	37
FUNKS G-577	3755	13.0	1.0	50	2.9	2.8	0.1	0.6	41
FUNKS HW3550	3726	13.9	1.4	53	2.0	1.5	0.1	0.0	36
NK 222G	3668	13.2	1.8	51	4.2	2.0	0.0	0.4	38
FUNKS G-393	3571	14.2	1.3	54	4.1	2.9	0.6	0.9	40
PIONEER 878	2809	12.6	5.8	43	3.0	2.7	0.6	0.9	36
MARTIN	2358	13.7	3.4	44	4.1	2.3	0.3	0.3	35
AVERAGE	4297	13.4	2.8	51	3.8	2.3	0.2	0.4	39

LSD VALUE AT THE 5% LEVEL IS 500 POUNDS. HYBRIDS DIFFERING BY MORE THAN THIS VALUE WILL DIFFER SIGNIFICANTLY 19 OUT OF 20 TIMES GROWN.
LSD VALUE AT THE 20% LEVEL IS 320 POUNDS. HYBRIDS DIFFERING BY MORE THAN THIS VALUE WILL DIFFER SIGNIFICANTLY 16 OUT OF 20 TIMES GROWN.

Table 37. Hybrid and seed source of grain sorghum entries tested in 1975.

Brand	Hybrid	Seed Source
ACCO	R109-A*, R1019, R1090, X9418, R1029-A	ACCO Seed, Box 1630, Plainview, TX 79072
Advance	80	Hulting Hybrids, Box 24, Geneseo, IL 61254
Asgrow	Dorado*	Asgrow Seed Company, 4244 Clinton Ave., Des Moines, IA 50310
Cargill	TE Y101*	Cargill, Inc., 1433 Cargill Bldg., Minneapolis, MN 55402
DeKalb	E-57*, C-42Y*, BR-64*, E-59, BR-54	DeKalb Ag Research, Inc., Rt. 2, Lubbock, TX 79415
Funk	G-522, G-577, G766W, G-459BR, G-516BR, G-490, G-393, HW3170, HW3070, HW3550	Funk Seeds International, Inc., 719 26th St., Lubbock, TX 79404
Golden Harvest	H265	Columbiana Seed Company, Eldred, IL 62027
McNair	654	McNair Seed Company, Box 1132, Plainview, TX 79072
MFA	GS10	MFA Seed Operations, Box 550, Marshall, MO 65340
N-K	222G*, Savanna-3*, 222A*, NK278, NK279, Savanna-4, NK180	Northrup, King & Co., P. O. Box 370, Richardson, TX 75080
PAG	525	P-A-G Seeds, 1200 Northstar Center, Minneapolis, MN 55402
Pioneer	B877, 8442*, 878*, 8501, 8386, 8311	Garst & Thomas Hybrid Corn Company, Coon Rapids, IA 50058
T.E.	Total, Y-101*, Bird-A-Boo II, Grain Master R, 88A	Taylor-Evans Seed Co., P. O. Box 68, Tulia, TX 79088
Warner	W-832, W-866, W-869, W-901	George Warner Seed Co., Box 1448, Hereford, TX 79045

*Widely grown varieties.

PART III. SOYBEANS[4]

INTRODUCTION

The choice of a soybean variety or brand should be based on performance and cost of seed relative to other available varieties. The Missouri Soybean Trials were conducted to provide farmers with unbiased performance information upon which they could base this choice. In 1975, the emphasis of the program was to provide agronomic data on the ever increasing number of commercial varieties and blends that could be evaluated along with the experiment station lines.

TESTING PROCEDURES

Locations. Entries were evaluated at one or more locations within each area (Fig. 4). The state is divided into five areas--Area I, Northern Missouri; Area II, Central Missouri; Area III, Southwestern Missouri; Area IV, South Central Missouri; and Area V, Southeast Missouri (Bootheel). Since Area IV represents very little row crop production no trials were conducted in this area.

Row Width. The tests in Area I, II, and III were grown in 2-row plots with 30-inch spacings between each row. Both rows were harvested to obtain acre yields. In the Bootheel (Area V), 3-row plots were used with 38-inch spacings between the rows. The center row was used to determine acre yield.

Entries. Seed companies, Missouri Seed Improvement Association, and other interested agricultural experiment stations included entries in the 1975 Missouri Soybean Performance Trials. All 1975 entries were submitted voluntarily or by invitation, and no attempt was made to include commercial brands that were not voluntarily entered.

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[4]Performance data for soybean varieties evaluated in Southeast Missouri were not available at the time this report was printed. They will be reported at a later date in a Department of Agronomy Miscellaneous Publication.

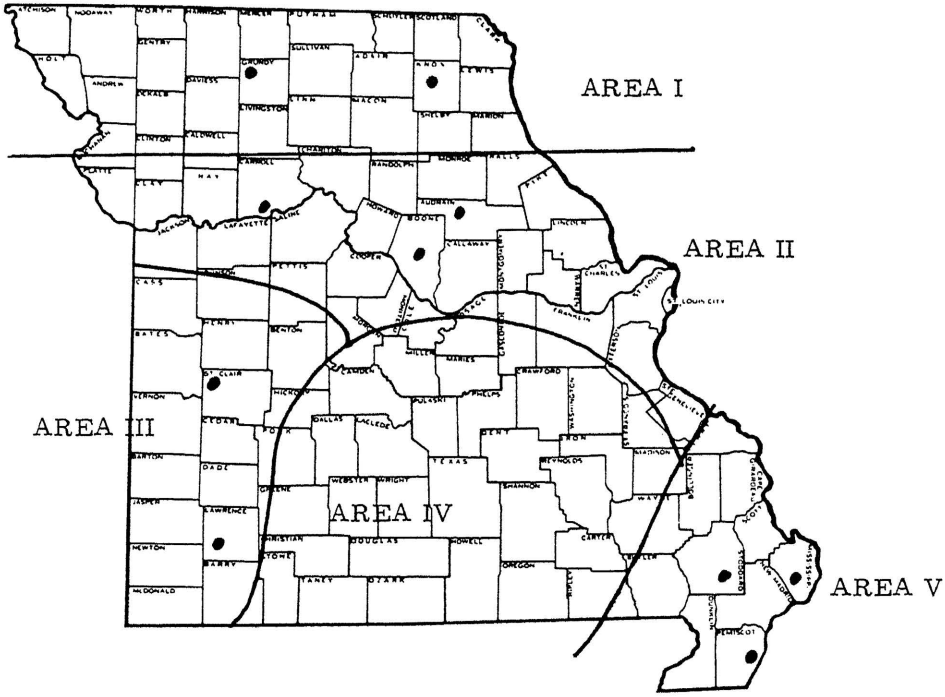

Fig. 4. Testing areas and locations in 1975.

Maturity. A variety was considered mature when approximately 75% of the pods had turned color. Harvesting was accomplished as soon after maturity as possible. During 1975, shattering losses were minor.

Lodging. Lodging notes were taken at maturity. A scale of 1 to 5 was used and is to be interpreted as follows.

1 = all plants erect;
2 = all plants leaning slightly or a few plants down;
3 = all plants leaning moderately or 20 to 50% down;
4 = all plants leaning considerably or 50 to 80% down;
5 = all plants down.

Height. Height was determined by measuring the average length from the ground to the tip of the stalks at maturity.

Yield. Yield was determined by weighing the seed from each plot and converting these weights to bushels per acre. Plot yields in Area I, II, and III were adjusted to 13.0% moisture. Those in the Bootheel (Area V) were allowed to dry to a constant weight with no correction for moisture content.

Seed Quality. Seed quality ratings were given to the samples from all four areas. Seed coat color, uniformity of size, brightness, wrinkling, and disease prevalence were all considered in the rating. Seed quality was rated from 1 to 5 according to the following scale:

1 = very good;
2 = good;
3 = fair;
4 = poor;
5 = very poor.

RESULTS

The results of the performance trials are shown in Tables 38 through 49.

Table 38. Cultural practices of 1975 soybean evaluation plots.

Location	Soil Test O.M.	Soil Test P_2O_5	Soil Test K	Fertilizer Added	Insecticide	Herbicide*	Row Width (in.)	Planting Rate Seeds/ft.	Date Planted	Date Harvested	Cooperator-(Town)
Area 1 (Grundy Co.)	4.1	104	280	25-100-100	None	Treflan+ Amiben	2.5	10	6-24	10-23	North Missouri Center (Spickard)
Area 1 (Knox Co.)	2.3	192	220		None	Lasso + Lorox	2.5	10	5-23	10-06 10-20	Lynn Douglas (Edina)
Area 2 (Carroll Co.)	4.9	448	500		None	Lasso + Lorox	2.5	10	5-20	10-13 10-23	Holton Eschenbach (Norborne)
Area 2 (Boone Co.)	2.1	186	260	15-50-50	None	Lasso + Lorox	2.5	10	5-13	10-09 10-14	Agronomy Research Center (Columbia)
Area 2 (Audrain Co.)	2.8	35	180		None	Lasso + Lorox	2.5	10	5-19	10-03 10-22	D. C. Matthews (Mexico)
Area 3 (St. Clair Co.)	2.7	118	460		None	Treflan	2.5	10	5-15	10-27	Warren Lewellen (Appleton City)
Area 3 (Lawrence Co.)	2.8	436	390	25-100-100	None	Amiben	2.5	10	5-12	9-25 10-09 10-20	Southwest Center (Mt. Vernon)

*Applied at recommended rates. See MU Guide 4436 for 1975 weed control recommendation.

TABLE 39. SUMMARY PERFORMANCE OF SOYBEAN VARIETIES EVALUATED IN GRUNDY AND KNOX COUNTIES (AREA I) DURING 1975. LOCATIONS WERE NORTH MISSOURI CENTER NEAR SPICKARD, AND EDINA.

BRAND-VARIETY	ACRE YIELD (BU)	LODGING SCORE* (1-5)	SEED QUALITY SCORE* (1-5)	PLANT HEIGHT (IN)	MATURITY DATE
MITCHELL	46.8	2.3	1.0	33	**
PETERSON 3125	42.9	1.6	1.8	33	**
WAYNE	36.6	1.5	1.5	32	**
WILLIAMS	40.6	1.1	1.5	30	**
A72-512	39.0	2.5	1.7	34	**
CLARK 63	40.4	1.8	1.3	33	**
CLEMENS EXP 6	33.9	2.1	1.5	32	**
NK MULTIVAR 80	40.1	1.1	1.8	31	**
TEWELES XK585	34.8	1.5	1.6	30	**
TEWELES XR70	39.8	1.3	1.7	31	**
AMSOY 71	35.4	1.0	2.6	32	**
CALLAND	38.1	1.1	2.6	31	**
CLEMENS EXP SW	34.9	2.3	1.8	32	**
PETERSON 3105	35.3	1.0	1.6	31	**
PETERSON 2120T	37.8	1.5	1.3	31	**
PETERSON 3120X	33.3	1.3	1.8	30	**
TEWELES XK351	38.5	2.1	2.7	34	**
TEWELES XK262	39.8	1.0	1.3	32	**
AGRIPRO 25	37.1	1.0	2.1	29	**
FUNKS G-3272	35.2	1.1	2.0	32	**
FUNKS G-3333	36.9	1.3	1.6	30	**
PETERSON 125	39.1	1.8	2.3	31	**
SRF 307P	39.2	2.1	2.0	31	**
WASH II	34.8	1.0	2.3	31	**
CLEMENS EXP 113	38.9	1.1	2.2	30	**
CLEMENS 9L-75	39.0	1.3	2.2	33	**
SRF 350	40.4	2.3	1.1	33	**
WOODWORTH	40.3	1.3	1.6	31	**
AGRIPRO 27	39.3	1.0	2.0	32	**
CLEMENS EXP 85	38.6	1.6	1.6	31	**
SRF 200	34.8	1.1	2.0	33	**
CLEMENS EXP C736	35.6	1.0	1.6	32	**
CUTLER 71	35.9	1.8	1.5	32	**
LANDERS L23-432	37.7	1.5	1.6	31	**
NK 3409 EXP	38.3	1.6	2.2	32	**
SRF 400	41.5	1.6	1.1	32	**
SRF 425	42.4	2.8	1.0	34	**
BEESON	31.3	1.0	2.2	30	**
BONUS	39.0	1.6	2.1	33	**
CHERO II	33.9	1.0	2.0	30	**
CLEMENS EXP 1	32.5	1.8	2.5	31	**
CLEMENS CX327	37.6	1.0	1.5	30	**
CLEMENS EXP B-G	39.3	1.1	2.0	32	**
CLEMENS EXP 66	37.3	1.1	1.5	31	**
CLEMENS EXP ST	32.3	1.8	1.8	30	**
PONTIAC	37.3	1.0	2.1	29	**
SRF 450	38.5	4.1	1.5	32	**
AGRIPRO 35	38.6	1.5	1.6	31	**
CLEMENS EXP 93	34.5	1.0	1.8	32	**
AVERAGE	37.7	1.5	1.8	31	
LSD(.05)**	3.6				

*LODGING SCORES: 1=NO LODGING; 5=ALL PLANTS LODGED.

**DIFFERENCES BETWEEN VARIETIES GREATER THAN THE GIVEN LEAST SIGNIFICANT DIFFERENCE (L.S.D.) CAN BE CONSIDERED DUE TO VARIETIES 19 OUT OF 20 TIMES GROWN.

**MATURITY DATE--FROSTED BEFORE PLANTS HAD REACHED STAGE WHERE 75% OF PODS HAD TURNED COLOR.

TABLE 40. SUMMARY PERFORMANCE OF SOYBEAN VARIETIES EVALUATED AT THE NORTH MISSOURI CENTER NEAR SPICKARD, MO. (GRUNDY COUNTY) DURING THE TWO-YEAR PERIOD 1974-75.

BRAND-VARIETY	ACRE YIELD (BU)	LODGING SCORE* (1-5)	PLANT HEIGHT (IN)	MATURITY DATE
	2-YEAR AVERAGE			
AMSOY 71	33.0	1.1	32.8	**
SRF 200	35.1	1.1	31.7	**
PONTIAC	34.3	1.0	28.8	**
TEWELES XK585	33.1	1.0	32.1	**
WAYNE	32.7	1.0	33.5	**
WOODWORTH	39.2	1.0	34.1	**
SRF 307P	36.1	1.3	33.8	**
CHEROKEE II	36.2	1.1	32.8	**
WILLIAMS	37.1	1.0	34.0	**
CALLAND	37.4	1.0	33.1	**
SRF 350	36.6	1.1	32.8	**
WASHINGTON II	36.3	1.0	33.0	**
CUTLER 71	35.5	1.1	33.7	**
PETERSON 125	39.8	1.0	33.3	**
TEWELES XK351	39.9	1.3	35.1	**
CLARK 63	36.3	1.0	35.2	**
TEWELES XR70	42.4	1.0	34.3	**
BONUS	38.7	1.0	33.8	**
SRF 400	35.8	1.0	34.8	**
SRF 425	37.8	1.0	36.0	**
MITCHELL	38.3	1.5	35.8	**
SRF 450	35.3	1.1	35.0	**
AVERAGE	36.7	1.1	33.6	

*1 = NO LODGING; 5 = COMPLETE LODGING

**MATURITY DATE NOT AVAILABLE.

TABLE 41. SUMMARY PERFORMANCE OF SOYBEAN VARIETIES EVALUATED AT THE LYNN DOUGLAS FARM NEAR EDINA, MO. (KNOX COUNTY) DURING THE TWO-YEAR PERIOD 1974-75.

BRAND-VARIETY	ACRE YIELD (BU)	LODGING SCORE* (1-5)	PLANT HEIGHT (IN)	MATURITY DATE
	2-YEAR AVERAGE			
AMSOY 71	35.1	1.0	32.7	9-21
WAYNE	37.3	1.5	32.2	9-23
TEWELES XK585	36.5	1.5	29.8	9-23
MITCHELL	45.1	2.5	32.3	9-25
SRF 200	35.3	1.1	32.5	9-25
WILLIAMS	42.6	1.1	31.0	9-25
SRF 307P	41.8	2.3	33.1	9-27
CLARK 63	36.2	2.0	33.0	9-28
WOODWORTH	38.7	1.3	31.3	9-28
CALLAND	38.4	1.1	32.0	9-28
TEWELES XR70	40.4	1.3	33.3	9-28
WASHINGTON II	37.2	1.1	30.6	9-29
TEWELES XK351	41.1	2.6	35.8	9-30
PONTIAC	39.4	1.0	28.0	9-30
PETERSON 125	40.4	1.6	31.5	9-30
SRF 350	37.8	2.3	32.5	10-01
CHEROKEE II	31.4	1.0	28.8	10-01
CUTLER 71	39.0	2.0	34.5	10-03
SRF 425	41.3	2.8	33.7	10-04
SRF 400	40.3	1.6	32.8	10-04
BONUS	33.8	1.6	34.8	10-06
SRF 450	43.8	4.1	31.6	**
AVERAGE	38.8	1.8	32.2	

*1 = NO LODGING; 5 = COMPLETE LODGING

**MATURITY DATE NOT AVAILABLE.

TABLE 42. SUMMARY PERFORMANCE OF SOYBEAN VARIETIES EVALUATED IN CARROLL, BOONE, AND AUDRAIN COUNTIES (AREA II) DURING 1975. LOCATIONS WERE AT NORBORNE, AGRONOMY RESEARCH CENTER NEAR COLUMBIA, AND MEXICO.

BRAND-VARIETY	ACRE YIELD (BU)	LODG-ING SCORE* (1-5)	SEED QUALITY SCORE* (1-5)	PLANT HEIGHT (IN)	MA-TURITY DATE
BONUS	27.0	1.3	2.4	30	9- 3
SRF 307P	21.7	1.4	3.3	29	9- 6
WAYNE	24.1	1.1	3.3	28	9- 7
FFR 444	21.7	1.6	2.9	29	9- 9
SRF 350	30.3	1.5	1.9	27	9- 9
A72-512	30.0	2.3	2.3	30	9-10
CUSTER	24.8	2.3	3.4	33	9-10
PETERSON 2120T	25.6	1.2	2.8	29	9-10
PONTIAC	24.7	1.3	3.8	27	9-10
SRF 200	15.4	1.7	3.9	28	9-10
CALLAND	22.0	1.2	3.8	29	9-12
CLARK 63	18.8	1.7	2.2	29	9-12
KENT	37.4	1.0	1.5	28	9-12
WASH II	19.5	1.4	3.6	27	9-12
WOODWORTH	21.7	1.0	3.2	28	9-12
AGRIPRO 35	25.7	1.2	3.3	29	9-13
CUTLER 71	28.0	1.2	2.1	30	9-13
FUNKS G-3333	21.3	1.6	3.1	27	9-13
BEESON	13.7	1.4	4.6	24	9-14
NK MULTIVAR 90	28.4	1.2	2.0	28	9-14
PETERSON 3120X	18.5	1.3	4.6	27	9-14
PETERSON 125	26.7	1.7	3.0	29	9-15
SRF 450	35.8	1.2	1.1	29	9-15
AMSOY 71	16.4	1.7	4.9	29	9-16
POMONA	36.3	1.0	1.7	29	9-16
SRF 425	30.3	1.4	2.2	30	9-16
AGRIPRO 27	20.6	1.2	3.3	26	9-17
PETERSON 3125	27.0	1.2	2.3	29	9-17
SRF 400	23.7	1.2	1.9	28	9-17
WILLIAMS	33.7	1.0	2.1	28	9-20
MITCHELL	37.8	1.8	2.1	29	9-21
AGRIPRO 25	19.6	1.0	3.6	26	**
AVERAGE	25.3	1.4	2.9	28	
LSD(.05)**	3.4				

*LODGING SCORES: 1=NO LODGING; 5=ALL PLANTS LODGED.

**DIFFERENCES BETWEEN VARIETIES GREATER THAN THE GIVEN LEAST SIGNIFICANT DIFFERENCE (L.S.D.) CAN BE CONSIDERED DUE TO VARIETIES 19 OUT OF 20 TIMES GROWN.

**MATURITY DATE--FROSTED BEFORE PLANTS HAD REACHED STAGE WHERE 75% OF PODS HAD TURNED COLOR.

TABLE 43. SUMMARY PERFORMANCE OF SOYBEAN VARIETIES EVALUATED AT THE HOLTON ESCHENBACH FARM NEAR NORBORNE, MO. (CARROLL COUNTY) DURING THE TWO-YEAR PERIOD 1974-75.

BRAND-VARIETY	ACRE YIELD (BU)	LODGING SCORE* (1-5)	PLANT HEIGHT (IN)	MATURITY DATE
	2-YEAR AVERAGE			
PONTIAC	30.4	1.5	30.1	9-21
AMSOY 71	32.4	2.0	28.6	9-22
WAYNE	34.5	1.1	31.6	9-23
SRF 307P	33.1	1.6	32.5	9-23
WOODWORTH	38.3	1.0	30.6	9-24
SRF 350	36.4	1.6	28.3	9-25
FFR 444	36.8	2.0	31.6	9-26
CALLAND	37.4	1.7	29.3	9-26
SRF 400	36.1	1.5	31.8	9-27
WASH II	37.6	1.8	31.0	9-28
BONUS	37.3	1.5	32.6	9-28
PETERSON 125	38.1	2.3	33.8	9-28
WILLIAMS	41.3	1.1	30.3	9-29
CUTLER 71	39.1	1.5	31.8	9-30
CLARK 63	30.4	2.1	33.6	10-01
MITCHELL	42.4	2.0	32.2	10-01
SRF 425	37.3	1.8	33.0	10-01
POMONA	46.6	1.3	36.5	**
SRF 450	49.8	1.6	36.3	**
CUSTER	33.9	2.8	39.8	**
KENT	50.4	1.3	36.2	**
AVERAGE	38.1	1.7	32.5	

*1 = NO LODGING; 5 = COMPLETE LODGING

**MATURITY DATE NOT AVAILABLE.

TABLE 44. SUMMARY PERFORMANCE OF SOYBEAN VARIETIES EVALUATED AT THE AGRONOMY RESEARCH CENTER NEAR COLUMBIA, MO. (BOONE COUNTY) DURING THE TWO-YEAR PERIOD 1974-75.

BRAND-VARIETY	ACRE YIELD (BU)	LODGING SCORE* (1-5)	PLANT HEIGHT (IN)	MATURITY DATE
	2-YEAR AVERAGE			
CUTLER 71	26.9	1.1	31.2	8-10
SRF 350	23.3	1.1	26.5	9-10
SRF 307P	17.8	1.0	27.5	9-11
BONUS	26.9	1.1	30.0	9-11
WAYNE	20.4	1.0	28.0	9-13
CALLAND	22.3	1.0	29.0	9-14
WOODWORTH	24.1	1.0	28.3	9-14
PONTIAC	24.4	1.0	25.2	9-15
AMSOY 71	17.6	1.0	28.5	9-16
FFR 444	21.9	1.0	28.8	9-17
SRF 425	28.0	1.0	29.5	9-17
WILLIAMS	27.1	1.0	28.8	9-19
WASH II	24.1	1.0	27.3	9-19
SRF 400	25.4	1.0	28.1	9-20
CLARK 63	19.7	1.0	29.8	9-20
MITCHELL	29.2	1.3	29.5	9-24
PETERSON 125	25.6	1.0	30.0	9-27
KENT	30.9	1.0	30.7	**
POMONA	32.3	1.0	30.3	**
CUSTER	17.6	2.0	32.3	**
SRF 450	30.5	1.1	30.2	**
AVERAGE	24.6	1.1	29.0	

*1 = NO LODGING; 5 = COMPLETE LODGING

**MATURITY DATE NOT AVAILABLE.

TABLE 45. SUMMARY PERFORMANCE OF SOYBEAN VARIETIES EVALUATED AT THE D.C. MATTHEWS FARM NEAR MEXICO, MO. (AUDRAIN COUNTY) DURING THE TWO-YEAR PERIOD 1974-75.

BRAND-VARIETY	ACRE YIELD (BU)	LODGING SCORE* (1-5)	PLANT HEIGHT (IN)	MATURITY DATE
	2-YEAR AVERAGE			
WAYNE	24.9	1.0	27.3	9-08
SRF 307P	24.9	1.0	28.3	9-10
AMSOY 71	19.2	1.0	26.8	9-14
WOODWORTH	17.1	1.0	25.8	9-14
PUNTIAC	25.4	1.0	26.1	9-14
BONUS	24.6	1.0	29.6	9-14
FFR 444	20.9	1.0	27.3	9-18
PETERSON 125	24.2	1.0	28.3	9-18
WASH II	19.5	1.0	27.5	9-18
SRF 350	31.5	1.0	26.8	9-18
CLARK 63	18.6	1.3	29.1	9-20
CUTLER 71	24.8	1.0	29.6	9-23
SRF 425	34.9	1.0	30.1	9-24
CALLAND	21.4	1.0	28.5	9-25
SRF 400	21.0	1.0	27.3	9-26
MITCHELL	35.1	1.1	27.3	9-28
WILLIAMS	32.9	1.0	28.0	10-04
CUSTER	14.4	1.1	49.6	**
KENT	33.3	1.0	29.3	**
SRF 450	33.9	1.0	29.7	**
POMONA	36.1	1.1	30.5	**
AVERAGE	25.6	1.0	29.2	

*1 = NO LODGING; 5 = COMPLETE LODGING

**MATURITY DATE NOT AVAILABLE.

TABLE 46. SUMMARY PERFORMANCE OF SOYBEAN VARIETIES EVALUATED IN ST. CLAIR AND LAWRENCE COUNTIES (AREA III) DURING 1975. LOCATIONS WERE APPLETON CITY AND SOUTH MISSOURI CENTER NEAR MT. VERNON.

BRAND-VARIETY	ACRE YIELD (BU)	LODG-ING SCORE* (1-5)	SEED QUALITY SCORE* (1-5)	PLANT HEIGHT (IN)	MA-TURITY DATE
CLARK 63	34.3	1.8	3.5	33	9- 7
SRF 400	30.9	1.0	2.6	31	9- 7
SRF 350	35.0	1.6	2.3	33	9-18
DYER	30.7	4.8	2.7	34	9-19
YORK	41.6	3.1	1.7	37	9-19
WILLIAMS	33.1	1.0	3.0	31	9-21
CUTLER 71	31.6	2.0	3.8	34	9-22
OKSOY	39.7	2.1	3.6	40	9-22
DARE	41.3	3.8	1.1	38	9-23
HILL	36.1	4.3	2.1	35	9-24
SRF 425	35.7	2.1	3.8	36	9-25
CALLAND	33.5	1.0	5.1	32	9-26
COLUMBUS	41.6	2.1	2.8	36	9-26
SRF 450	40.6	1.0	3.1	33	9-26
ESSEX	46.0	2.7	1.6	31	9-27
FFR 444	28.6	1.6	3.3	32	9-28
FFR 556	42.3	2.5	2.0	50	9-28
MACK	40.8	4.6	2.0	37	9-28
MITCHELL	41.2	2.7	4.0	34	9-28
CUSTER	28.4	2.5	4.8	40	9-29
OK963	43.8	1.6	1.7	33	9-29
PCMCNA	39.1	1.0	3.6	33	9-29
SCOTT	38.9	2.0	3.3	38	9-29
SRF 307P	29.6	2.1	4.5	33	9-29
BONUS	34.8	1.3	3.8	36	10- 1
KENT	34.9	1.0	3.8	33	10- 1
FFR 555	38.4	2.3	1.6	38	10- 4
WOODWORTH	33.9	1.0	3.6	32	10- 5
WAYNE	28.8	1.3	3.8	32	10- 6
AVERAGE	36.4	2.2	3.1	35	
LSD(.05)**	5.2				

*LODGING SCORES: 1=NO LODGING; 5=ALL PLANTS LODGED.

**DIFFERENCES BETWEEN VARIETIES GREATER THAN THE GIVEN LEAST SIGNIFICANT DIFFERENCE (L.S.D.) CAN BE CONSIDERED DUE TO VARIETIES 19 OUT OF 20 TIMES GROWN.

**MATURITY DATE--FROSTED BEFORE PLANTS HAD REACHED STAGE WHERE 75% OF PODS HAD TURNED COLOR.

TABLE 47. SUMMARY PERFORMANCE OF SOYBEAN VARIETIES EVALUATED AT THE WARREN LEWELLEN FARM NEAR APPLETON CITY, MO. (ST. CLAIR COUNTY) DURING THE TWO-YEAR PERIOD 1974-75.

BRAND-VARIETY	ACRE YIELD (BU)	LODGING SCORE* (1-5)	PLANT HEIGHT (IN)	MATURITY DATE
	2-YEAR AVERAGE			
SRF 400	39.8	1.0	29.6	9-17
WILLIAMS	37.8	1.0	29.5	9-23
CLARK 63	40.3	1.1	31.3	9-23
CALLAND	36.1	1.0	28.8	9-27
BONUS	36.8	1.0	31.3	9-28
WOODWORTH	36.2	1.0	29.6	9-30
WAYNE	31.0	1.0	27.8	9-30
SRF 425	37.1	1.1	32.0	10-01
SRF 450	47.4	1.0	31.7	10-01
CUTLER 71	37.1	1.0	31.0	10-03
OKSOY	46.7	1.1	34.5	10-03
POMONA	47.3	1.0	31.0	10-04
KENT	41.1	1.0	31.1	10-04
MITCHELL	43.1	1.3	31.0	10-04
COLUMBUS	40.5	1.3	33.6	10-07
YORK	46.8	1.6	34.1	10-09
DYER	36.6	2.2	31.6	10-11
HILL	42.4	2.6	34.0	10-12
ESSEX	50.4	1.5	30.8	10-13
MACK	40.8	2.5	33.7	10-13
DARE	49.1	2.5	34.8	10-14
FFR 555	45.4	1.8	35.3	10-20
CUSTER	26.9	1.5	33.0	**
AVERAGE	40.7	1.4	31.8	

*1 = NO LODGING; 5 = COMPLETE LODGING

**MATURITY DATE NOT AVAILABLE.

TABLE 48. SUMMARY PERFORMANCE OF SOYBEAN VARIETIES EVALUATED AT THE SOUTHWEST CENTER NEAR MT. VERNON, MO. (LAWRENCE COUNTY) DURING THE TWO-YEAR PERIOD 1974-75.

BRAND-VARIETY	ACRE YIELD (BU)	LODGING SCORE* (1-5)	PLANT HEIGHT (IN)	MATURITY DATE
	2-YEAR AVERAGE			
SRF 400	31.8	3.0	36.8	9-06
CLARK 63	33.0	3.6	38.0	9-12
WILLIAMS	38.7	1.6	35.1	9-13
CALLAND	36.4	3.3	35.8	9-15
BONUS	39.4	2.3	40.8	9-18
CUTLER 71	36.1	3.0	40.5	9-18
WOODWORTH	34.5	2.6	35.2	9-21
WAYNE	35.8	3.7	35.8	9-21
OKSOY	34.9	3.6	45.3	9-22
SRF 425	38.7	4.0	41.5	9-23
MITCHELL	41.6	5.0	40.0	9-24
COLUMBUS	41.9	4.3	42.5	9-25
DYER	24.6	6.3	36.8	9-26
KENT	36.8	1.6	38.8	9-27
HILL	30.6	6.3	38.1	9-27
SRF 450	39.2	1.6	39.3	9-27
POMONA	37.2	1.0	38.3	9-28
DARE	31.1	7.0	42.3	10-01
ESSEX	44.0	3.7	36.3	10-02
YORK	30.2	4.8	40.1	10-03
MACK	32.1	6.6	40.0	10-06
FFR 555	29.3	4.0	48.3	10-12
CUSTER	25.2	5.0	45.0	**
AVERAGE	34.9	3.8	39.6	

*1 = NO LODGING; 5 = COMPLETE LODGING

**MATURITY DATE NOT AVAILABLE.

Table 49. Seed source and name of soybean entries tested in 1975.

Brand-Variety	Seed Source
Agripro 25, 27, 35	Agripro, Inc. P. O. Box 1668 Ames, IA 50010
Asgrow AxP5205, A4007	Asgrow Seed Company Ames, IA 50010
Clemens CX327, 9L-75, Exp. 1, Exp. B-G, Exp. 85, Exp. 93, Exp. 5T, Exp. 5W, Exp. 113, Exp. C736, Exp. 66, Exp. 6	Clemens Seed Company Beaman, IA 50609
Coker 136	Cokers Pedigreed Seed Company P. O. Box 340 Hartsville, SC 29550
FFR 444, 555, 556	Farmers Forage Research Cooperative 4112 East State Rd. 225 West Lafayette, IN 47906
Funk G-3272, G-3333	Funk Seeds International, Inc. 1300 West Washington Bloomington, IL 61701
Landers L23-432	Landers Seed Company, Inc. P. O. Box 120 Sullivan, IL 61951
McNair 3-120, 600	McNair Seed Company P. O. Box 706 Laurinburg, NC 28352
Cherokee II, Mitchell, Pontiac, Washington II	The Missouri Seed Company P. O. Box 97 Green Ridge, MO 65332
NAPB 603	North American Plant Breeders R. R. #2 Brookston, IN 47923

Table 49. Continued

Brand-Variety	Seed Source
NK Multivar 80, Multivar 90, Exp. 3409	Northrup King and Company P. O. Box 49 Washington, IA 52353
Peterson 125, 2120T, 3105, 3120X, 3125	Peterson Soybean Seed Division 3261 Airline Highway Waterloo, IA 50701
SRF 200, 307P, 350, 400 425, 450	Soybean Research Foundation, Inc. P. O. Box 72 Mason City, IL 62664
Teweles Hibien XR 70, XK585, XK262, XK351	L. Teweles Seed Company Research Central, Route 1 Clinton, WI 53525
Amsoy 71, A72-512, Beeson Bonus, Calland, Clark 63, Columbus, Custer, Cutler 71, Dare, Davis, Delmar, D70-3185, Dyer, Essex, Forrest, Hill, Hood, Kent, Lee 68, Lee 74, Mack, OK 963, OKSOY, Pickett 71, Pomonia (K1004), Scott, S-100, Tracy, Wayne, Williams, Woodworth, York	Foundation Seed Stock 136 Mumford Columbia, MO 65201