



**1963
MISSOURI
HYBRID
CORN
YIELD
TRIALS**

O. V. SINGLETON
And
M. S. ZUBER

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O. V. Singleton is an instructor, Department of Field Crops, University of Missouri, and M. S. Zuber is research agronomist, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture, and professor, Department of Field Crops, University of Missouri. The bulletin reports on Department of Field Crops Research Projects 85 and 310.

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1963

MISSOURI

HYBRID CORN YIELD TRIALS

O. V. Singleton and M. S. Zuber

The 1963 estimated average corn yield for Missouri is 61 bushels per acre which is the second highest yield on record. The average yield of all hybrids tested at the 9 testing locations was 117 bushels per acre which is the highest average yield during the 7-year period these tests have been conducted. The average yield of the hybrids tested exceeded 100 bushels per acre for all locations except at Columbia (District 5). A total of 102 closed-pedigree and 45 open-pedigree hybrids were tested at the 9 locations. The highest yielding hybrid, US 523WA, produced 155 bushels per acre at the Washington location (District 6).

The total rainfall from May 1 to September 15 ranged from nearly 12 inches to more than 21 inches while the number of days with temperatures exceeding 90° varied from 27 to 59 at the different testing locations. Dry periods of 15 to 49 days were reported. Stalk lodging was more severe at Higginsville (District 4), Sikeston (District 9), and Washington (District 6). The high amount of stalk lodging at these locations was attributed to European corn borer damage combined with high winds. Stalk lodging at the other locations was of a lesser extent. Root lodging was of little or no consequence at any of the 9 testing locations.

TESTING PROCEDURES

Testing Areas:

The state was divided into 9 districts with 1 test located in each. Figure 1 shows the districts and locations of testing fields. The 9 districts match those currently used for reporting the Missouri Farm Census.

Seed Source:

In 1963, all producers and distributors of hybrid seed corn were eligible to enter these tests. No limit was placed on the number of hybrids any one seed producer could enter and any hybrid could be entered in as many districts as desired. Fifteen pounds of seed for each district was supplied by firms for each entry. Seed for the open-pedigree hybrids was furnished by the state agricultural experiment stations and by certified seed producers.

Type of Field Design:

The number of hybrids tested in each district ranged from 44 in District 8 to 72 in District 9. Each hybrid was planted in 4 plots at each testing location. Plots consisted of 2 rows of 5 hills; they were located at random over the testing area to minimize cultural and soil differences.

Stand:

All test plots were planted at the rate of 5 seeds per hill. Plants were thinned to 3 or 4 per hill, at 8 locations, the number depending upon expected environmental conditions. There was no thinning at the Wayland location (District 3). The stand percentages were computed on the basis of the total plants present divided by the number required for a perfect stand.

Lodging:

A plant was classified as root-lodged if it leaned from the ground level more than 30 degrees from the vertical and stalk-lodged if it was broken below the ear. A plant that was both root and stalk lodged was counted in both categories. The percent was based on the total 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 4 plots of a hybrid at a location. The grade consisted of the approximate number

of feet from the base of the plant to the point of attachment of the upper ear.

Moisture:

The grain moisture of each entry was determined at harvest by removing 2 rows of kernels from each of 10 ears, randomly selected from the first and fourth replications. The grain from each replication was thoroughly mixed and the moisture content of the 100-gram sample was determined with a Steinlite moisture meter. The moisture percentage reported is the average of the two replications.

Yield:

The corn from each plot was harvested and weighed. Yield was determined on the basis of shelled corn with a moisture content of 15.5 percent. Adjustments were made for missing hills, but not for other variations in stand. Therefore, the yields at each location constitute an average yield of the 4 plots after all adjustments were made.

1963 RESULTS

The 1963 results are reported on a relative maturity group basis. Group 1 - approximately 90 days; group 2 - 115 days; group 3 - 125 days; group 4 - 135 days.

Results reported for each district are for tests conducted in 1963. Summaries are for 1961, 1962, and 1963.

It has been the tendency for some farmers to select hybrids on a single year's yield test performance or results from a single location. Less risk is likely to be encountered if the choice of a hybrid is based on the average performance over a period of years.

THREE-YEAR PERFORMANCE RECORDS

A number of hybrids have been tested for a 3 or more years period, either in a single district or in groups of districts. Summaries of hybrids performance records for the 3-year period of 1961, 1962, and 1963 results are reported in tables for the respective districts.

It should be emphasized that the results of tests for a period of more than 1 year are of greater value in selecting hybrids than any single year's results. However, if one must rely on results from any

1 year, it is best to use the average performance from as many testing locations as possible in the area where the hybrid is to be grown.

The 3-year summaries of test results for hybrids grown in all of the 9 districts and in northern, central, and southern regions are found in Tables 10 to 13.

Pedigrees of all open-pedigree hybrids tested in 1963 are listed in Table 14.

Numerous new closed-pedigree hybrids were tested from 1957 through 1963 for the first time. The Missouri Agricultural Experiment Station does not make specific recommendations for these hybrids, but it is suggested that farmers growing a new hybrid for the first time try a small acreage to determine whether they like the hybrid before they plant a large acreage of it. This recommendation should be practiced for all new hybrids, whether of closed-or of open-pedigree origin.

Table 15 gives the districts in which different hybrids were entered by commercial companies in 1963. Table 16 gives the districts in which different open-pedigree hybrids were entered. Table 17 gives sources of seed of commercial hybrids.



Fig. 1. Map showing the 9 districts and the hybrid corn testing locations. (*) Location of tests.

Table A. Total Rainfall, Number of Days with Rain, and Dry Periods from May 1 to September 15 at Each of the Testing Locations in the State.

District	Testing Location	Total Rain-fall	No. of Days with Rain					Total	Dry Periods*
			May	June	July	Aug.	Sept. 1-15		
1	Tarkio	15.94	9	8	9	8	4	38	(5/16-6/14)(7/13-7/31)
2	Spickard	18.69	10	7	8	9	3	37	(7/18-8/5)
3	Wayland	11.65	11	4	7	7	5	34	(5/16-6/3)(6/5-6/28)
4	Higginsville	19.35	14	9	5	10	3	41	(6/21-7/12)
5	Columbia	17.92	12	8	7	7	8	42	(5/26-6/14)
6	Washington	15.81	12	6	8	8	6	40	(6/21-8/9)
7	Mt. Vernon	20.93	13	7	6	6	4	36	
8	Summersville	21.68	9	9	9	9	2	38	(8/26-9/15)
9	Sikeston	18.34	10	7	9	6	5	37	(5/1-5/16)(5/29-6/13)(6/21-7/12) (8/14-8/28)

* A dry period must have at least 15 consecutive days with less than 0.25 in. precipitation.

Table B. Average Temperature Departure from Normal, and the Number of Days with Temperatures of 90° or More, and 100° or More from May 1 to September 15 at each of the Testing Locations in the State.

District	Testing Location	Cooperator	Nearest Weather Station	Average Temp.	Degrees F. from Normal	No. days with Temperatures 90° or more		No. days with Temperatures 100° or more
						1963	Ave.	1963
1	Tarkio	Ray Schmidt	Tarkio	73.4	+1.7	51	45	4
2	Spickard	Univ. of Mo. North Mo. Center	Spickard	71.9	-1.4	27	42	0
3	Wayland	D.L. Shrauner	Memphis	70.7	-1.7	40	44	1
4	Higginsville	Wilbert Fahrmeier	Lexington	74.8	+0.4	58	47	1
5	Columbia	Mo. Agri. Exp. Station	Columbia	71.7	-0.6	43	39	1
6	Washington	Ben F. Geisert & Sons	Union	72.9	-0.8	46	37	3
7	Mt. Vernon	Univ. of Mo. Southwest Center	Mt. Vernon	74.9	+2.5	59	25	4
8	Summersville	Howard Weurtley	Houston	72.1	+0.3	39	32	1
9	Sikeston	Univ. of Mo. Delta Center	Sikeston	74.6	-0.9	47	51	1

DISTRICT 1

Data for District 1 are reported in Tables 1A to 1C. Temperatures averaged 1.7 degrees above normal. There were 51 days with temperatures above 90° and 4 days with temperatures above 100° F. Rainfall was slightly below the State average for the growing season, and there were 2 dry periods of 29, and 18 days, respectively. Leaf blight caused by *Helminthosporium turcicum*, was much less severe at this location than in 1962. This district had the highest average yield of 131.9 bushels per acre. The different hybrids in the test ranged from 107 to 150 bushels per acre.

Table 1A. Percent of Total Farmland Area Planted to Corn, Total Corn Acreage, Average Acre Yield and the Average Acre Yield for Hybrids Tested in the Missouri Corn Yield Trials for the 10-Year Period (1953-1962), 1961, 1962, and 1963 in District 1.

Period	Farmland Planted to Corn (%)	Total Corn Acreage	Avg. Acre Yield (Bu.)	Missouri Corn Yield Tests
10-year average	19.5	841,900	48.5	
1953-1962	13.5	592,000	64.1	109.0
1961	14.1	604,000	64.0	115.4
1962	16.9*	730,000*	72.6*	131.9
1963				

* Estimated as of December 1, 1963

Table 1B. 1963 Performance Record for Hybrids Tested in District 1, near Tarkio, Missouri in Atchison County. Planted May 21, 1963. Harvested October 15, 1963. (Exp. 1).

Hybrid	Acre Yield Bu.	Moist- ure in Grain %	Stand %	Lodged Plants		Drop- ped Ears %	Ear Height Grade
				Root %	Stalk %		
<u>Group I Maturity</u>							
PIONEER 3284	128.8	15.6	94	0.0	4.0	0.0	4.4
CORN KING 418	128.5	15.5	97	0.0	3.2	0.6	4.0
AES 704	125.0	14.3	96	0.0	1.9	0.0	4.0
PIONEER 3414	122.8	13.8	98	0.0	13.4	0.6	4.0
IOWA 4376	107.2	16.2	96	0.0	11.0	0.0	4.1
<u>Group II Maturity</u>							
MO 1035	150.1	16.9	98	0.0	3.8	0.0	4.6
MO 61-28	147.5	15.7	96	0.0	1.9	0.0	4.6
MAYGOLD 29X	146.5	15.8	99	0.0	8.2	0.0	4.4
MO 1034	146.2	17.3	92	0.0	4.8	0.0	4.6
MO 880	143.7	17.2	99	0.0	7.0	0.0	4.5
AA 366W*	143.5	17.5	98	0.0	9.6	0.0	4.9
UH 158	142.8	16.3	95	0.0	20.4	0.7	4.5
UHX8B1	140.7	14.7	98	0.0	10.9	0.0	4.4
MFA K6	140.6	15.8	94	0.0	4.6	0.0	4.6
MAYGOLD 2092	140.6	18.3	97	0.0	3.9	0.0	4.9
PIONEER 321	139.1	15.9	95	0.0	7.2	0.0	4.6
UH 1580	137.1	15.1	92	0.0	15.0	0.0	4.6
MO 61-22	136.9	16.6	95	0.0	2.0	0.0	4.0
MO 1023	136.6	18.0	99	0.0	6.3	0.0	4.6
MO 447W*	136.5	19.5	98	0.0	10.9	0.0	4.5
MCCURDY 7X11	135.7	16.2	99	0.0	11.4	0.0	4.5
MAYGOLD 49W*	135.7	19.7	99	0.0	11.9	0.0	4.6
IOWA 5043	135.5	14.6	96	0.0	4.6	0.0	4.8
MAYGOLD 2036	135.4	17.2	99	0.0	9.5	0.0	4.4
MAYGOLD 3003	135.4	16.7	93	0.0	4.1	0.0	4.6
IOWA 5118	135.1	15.4	99	0.0	8.2	0.0	4.8
MO 1007	134.8	17.8	100	0.0	2.5	0.6	4.4
CARGILL 340	134.4	16.6	96	0.0	6.5	0.6	4.4
MO 478W*	134.1	16.5	93	0.0	11.5	0.7	4.5
MO 61-23	132.5	16.2	93	0.0	8.7	0.0	4.5
MO 4080W*	131.9	16.3	98	0.0	6.4	0.6	4.4
US 13	131.8	14.6	93	0.0	11.5	0.0	4.8
MO 981	131.5	17.1	99	0.0	7.6	0.0	4.4
PIONEER 3268	131.4	15.7	97	0.0	7.1	0.0	4.4
CARGILL 360	131.4	16.8	94	0.0	6.6	0.0	4.9
MO 61-34	131.1	18.7	95	0.0	5.9	0.0	4.5
PIONEER 3304	130.2	15.3	96	0.0	3.9	0.0	4.4
MIDDLEKOOP M-33	129.6	16.3	97	0.0	1.9	0.0	4.1
IOWA 4732	129.5	15.8	96	0.0	1.3	0.0	4.3
PIONEER 314	129.4	18.2	96	0.0	3.9	0.0	4.4
NEBR NC+82	129.3	15.6	98	0.0	5.1	0.6	4.4
MFA 2120	128.4	16.9	99	0.0	8.9	0.0	4.3
MO 1017	128.1	17.1	91	0.0	2.1	0.0	4.4
DEKALB 805	128.1	14.3	97	0.0	4.5	0.0	4.5
UH 160	127.9	22.8	95	0.0	9.9	0.0	4.3
KAN 1639	127.1	17.0	93	0.0	10.1	0.0	4.8
UHX2B1	127.1	15.7	95	0.0	11.8	0.7	4.5
MAYGOLD 37	126.9	17.1	96	0.0	7.1	0.0	4.4
PIONEER 328	126.8	14.5	98	0.0	4.5	0.0	4.5
DEKALB 624	126.1	16.5	97	0.0	8.4	0.6	4.5
CARGILL S440	122.7	15.7	98	0.0	6.4	0.0	4.5
MO 1020	122.6	15.8	98	0.0	6.4	0.0	4.0
IOWA 5266	121.0	15.0	94	0.0	4.7	0.0	4.3
DEKALB D523	120.8	17.0	96	0.0	3.9	0.0	4.3
KAN 1859	120.1	17.1	99	0.0	10.8	0.0	4.0
MAYGOLD 58X	119.7	15.9	98	0.0	3.8	0.0	4.1
MFA 2180	118.1	14.1	98	0.0	6.4	0.0	4.0
MO 843	117.9	16.5	93	0.0	6.1	0.0	4.5
AES 801	115.9	16.4	99	0.0	2.5	0.0	4.1
<u>Group III Maturity</u>							
US 523WA*	148.0	20.8	96	0.0	8.4	1.3	4.9
US 619W*	143.3	15.2	94	0.0	14.6	0.0	4.8
DEKALB 831	139.6	15.9	98	0.0	17.2	0.6	4.5
DEKALB 824	138.0	16.7	100	0.0	9.4	0.0	4.8
US 523W*	<u>122.6</u>	<u>22.1</u>	<u>91</u>	<u>0.0</u>	<u>17.2</u>	<u>0.0</u>	<u>4.5</u>
Mean	131.9	16.6	96	0.0	7.4	0.1	4.5

Differences in yield between any two hybrids of less than 13.1 bushels are not considered significant.

* White Hybrids

Table 1C. Summary of Acre Yield and Lodging for Hybrids Tested in District 1 for the Three-year period of 1961, 1962, and 1963.

Hybrid	Acre Yield Bu.	Lodged Plants		Hybrid	Acre Yield Bu.	Lodged Plants	
		Root %	Stalk %			Root %	Stalk %
<u>Group I Maturity</u>				<u>Group II Maturity (Contd.)</u>			
Corn King 418	119.2	0.0	3.8	Mo 880	120.1	2.6	5.6
Iowa 4376	106.1	2.6	6.3	Pioneer 314	119.1	0.8	3.1
				Mo 1023	119.0	0.7	2.7
				Mo 843	117.4	0.9	7.8
				US 13	116.4	0.5	12.0
<u>Group II Maturity</u>				<u>Group III Maturity</u>			
MFA K6	133.6	0.2	2.9	Kan 1639	115.1	1.6	7.6
UH 158	131.0	1.9	14.9	Mo 1017	114.3	0.2	2.0
Pioneer 3304	128.1	0.4	4.1	Kan 1859	112.7	3.7	11.1
Pioneer 321	127.6	1.2	6.4	AES 801	105.1	0.4	2.0
DeKalb 805	126.1	0.7	2.9	Mo 1020	104.2	0.2	6.0
Maygold 29X	126.0	2.4	4.4				
Mo 447W*	124.2	3.4	6.9				
Iowa 5118	123.3	1.1	5.2				
Maygold 37	122.4	0.9	6.3	DeKalb 831	128.6	2.6	6.9
MFA 2120	122.2	0.2	5.2	US 619W*	121.7	1.3	8.3
Mo 4080W*	121.6	4.3	6.6	US 523W*	115.1	3.6	10.1
Mo 1007	120.7	0.0	1.1				

* White Hybrids

DISTRICT 2

Tables 2A to 2C give the 1963 results and 3-year summary for District 2. Environmental conditions were quite favorable for good yields at the Spickard location. The area received slightly above average rainfall and had the second lowest average temperature of all the testing locations in the State. There were only 27 days with temperatures above 90° F. This test had the second highest average yield of 131.5 bushels per acre with yield of the hybrid tested ranging from 115 to 148 bushels per acre.

Table 2A. Percent of Total Farmland Area Planted to Corn, Total Corn Acreage, Average Acre Yield and the Average Acre Yield for Hybrids Tested in the Missouri Corn Yield Trials for the 10-Year Period (1953-1962), 1961, 1962, and 1963 in District 2.

Period		Farmland Planted to Corn (%)	Total Corn Acreage	Avg. Acre Yield (Bu.)	Missouri Corn Yield Tests
10-year average	1953-1962	12.9	507,000	48.9	
	1961	10.4	408,000	64.0	109.7
	1962	10.5	410,000	63.0	99.9
	1963	13.5*	530,000*	66.6*	131.5

* Estimated as of December 1, 1963.

Table 2B. 1963 Performance Record for Hybrids Tested in District 2, near Spickard, Missouri in Grundy County. Planted May 8, 1963. Harvested October 16, 1963. (Exp. 2).

Hybrid	Acre Yield Bu.	Moist- ure in Grain %	Stand %	Lodged Plants		Drop- ped Ears %	Ear Height Grade
				Root %	Stalk %		
<u>Group I Maturity</u>							
CARGILL 285	120.8	15.9	97	0.0	2.6	0.0	4.0
IOWA 4376	117.9	15.9	99	0.0	3.4	0.0	4.0
AES 704	117.9	15.9	93	0.0	2.7	0.0	4.1
PIONEER 3414	117.6	14.4	99	0.0	5.0	0.8	4.0
<u>Group II Maturity</u>							
MO 1023	148.0	18.0	99	0.0	0.0	0.8	4.1
UH 158	146.8	15.6	96	0.0	2.6	0.9	4.5
UH 160	145.3	21.7	98	0.0	3.4	0.0	4.3
MCCURDY 7X11	144.9	18.3	97	0.0	2.6	0.9	4.6
MAYGOLD 2092	144.9	19.7	98	0.0	0.8	0.0	4.4
MO 1034	144.8	17.3	100	0.0	0.8	0.0	4.3
DEKALB 805	143.6	16.0	98	0.0	0.8	1.7	4.1
MO 61-28	143.4	16.3	95	0.9	1.8	0.0	4.5
MO 843	142.8	16.1	99	0.0	0.8	0.0	4.3
MAYGOLD 37	142.8	16.8	99	0.8	7.6	1.7	4.4
MO 447W*	141.9	19.2	98	0.0	5.1	0.0	4.4
MO 478W*	140.1	17.1	99	0.0	3.4	0.0	4.6
MAYGOLD 3003	139.8	17.0	94	0.0	3.5	1.8	4.6
MO 1007	139.7	17.4	99	0.0	0.8	1.7	4.0
MAYGOLD 2036	138.3	19.5	100	0.0	0.8	0.0	4.1
MO 61-34	138.2	18.5	98	0.0	1.7	3.4	4.4
PIONEER 3304	137.9	16.0	100	0.0	0.8	0.0	4.1
MO 880	136.2	19.3	96	0.9	2.6	1.7	4.6
MAYGOLD 29X	135.2	17.2	99	0.0	3.4	0.0	4.3
MO 61-22	134.8	15.7	98	0.0	1.7	0.8	4.3
KAN 1639	134.5	16.9	99	0.0	4.2	0.0	4.4
AA 366W*	134.1	19.5	98	1.7	8.5	0.0	4.5
CARGILL 366	134.1	16.3	100	0.0	0.0	0.0	4.6
CARGILL 330	134.0	16.7	98	0.0	3.4	0.0	4.3
MFA K6	132.9	17.5	93	0.0	0.9	1.8	4.3
MO 981	132.6	18.9	98	0.0	3.4	0.0	4.5
MO 1035	131.1	18.7	97	0.9	1.7	0.0	4.1
IOWA 5118	128.5	15.5	97	0.0	1.7	0.0	4.6
PIONEER 321	128.4	16.9	99	0.0	4.2	0.0	4.6
MCALLISTER 6104	128.4	18.1	100	0.0	5.0	0.0	4.3
CARGILL 340	128.2	15.5	100	0.0	8.3	0.8	4.1
IOWA 5043	128.0	15.2	97	0.0	4.3	0.9	4.8
PIONEER 314	127.2	17.5	100	0.0	1.7	0.0	4.1
MO 61-23	126.4	17.2	95	0.0	0.9	0.0	4.4
PIONEER 3268	126.1	15.9	100	0.0	3.3	0.0	4.1
DEKALB 624	126.1	16.5	99	0.0	2.5	0.0	4.1
DEKALB D523	124.1	14.6	99	0.0	0.8	0.0	4.1
IOWA 4732	123.4	15.8	98	0.0	0.8	0.0	4.1
MO 1017	122.1	16.6	98	0.0	9.4	0.9	4.3
DEKALB XL-361	121.4	16.2	97	0.0	3.4	0.0	4.0
MAYGOLD 58X	121.0	16.3	100	0.0	0.0	0.0	3.9
KAN 1859	120.7	16.6	96	2.6	6.1	1.7	4.0
MFA 2180	120.4	14.5	98	0.0	1.7	0.0	4.0
US 13	120.3	16.1	97	0.0	10.3	0.0	4.5
MO 4080W*	119.8	17.1	96	0.0	2.6	0.0	4.4
AES 801	116.8	15.8	98	0.0	12.0	0.0	4.3
IOWA 5266	116.5	15.4	97	0.0	0.9	0.0	4.0
MO 1020	115.1	16.7	97	0.0	0.9	1.7	4.1
<u>Group III Maturity</u>							
US 523WA*	140.2	21.7	98	0.0	6.8	0.8	4.9
US 619W*	136.6	20.3	99	0.0	10.1	0.0	4.6
DEKALB 824	135.6	16.3	98	0.0	11.0	0.0	4.5
US 523W*	130.9	20.0	99	2.5	7.6	0.0	4.6
Mean	131.5	17.1	98	0.2	3.5	0.4	4.3

Differences in yield between any two hybrids of less than 10.2 bushels are not considered significant.

* White Hybrids

Table 3B. 1963 Performance Records for Hybrids Tested in District 3, near Wayland, Missouri in Clark County. Planted May 8, 1963. Harvested October 24, 1963. (Exp. 3).

Hybrid	Acre Yield Bu.	Moist- ure in Grain %	Stand %	Lodged Plants		Drop- ped Ears %	Ear Height Grade
				Root %	Stalk %		
<u>Group I Maturity</u>							
PIONEER 3284	135.7	15.2	96	0.0	5.2	0.0	3.9
PIONEER 3414	120.6	14.9	97	0.0	3.6	0.5	3.5
AES 704	120.1	14.4	96	0.0	0.5	0.0	3.5
IOWA 4376	104.1	15.2	92	0.0	7.1	1.6	3.9
<u>Group II Maturity</u>							
PIONEER 321	150.4	15.3	96	0.0	11.5	0.5	4.3
BEAR UNICORN X800	144.0	16.5	94	0.0	6.4	2.1	4.0
MFA 3232	143.1	17.6	92	0.0	5.5	1.6	4.3
AA 366W*	141.0	16.2	97	0.0	10.4	0.5	4.5
MO 981	140.4	16.6	97	0.0	12.4	1.6	3.8
MO 447W*	137.8	17.3	98	0.0	5.1	1.0	4.3
MO 61-28	137.6	15.1	94	0.5	8.0	4.8	4.1
MO 1035	137.0	17.5	97	0.0	4.6	1.5	4.4
PIONEER 3268	135.8	14.9	94	0.0	8.5	2.1	4.1
MCALLISTER 6104	134.5	15.5	97	0.0	4.1	0.5	3.8
MFA K6	131.7	16.2	92	0.0	3.3	3.3	4.1
CARGILL 360	131.7	15.3	91	0.0	11.5	0.5	4.6
BEAR UNICORN X606	131.5	17.2	96	0.0	5.8	4.7	4.4
MO 1017	131.2	15.8	98	0.0	5.1	0.5	4.3
MO 880	130.3	16.9	97	0.0	4.6	0.0	4.1
IOWA 5118	130.3	14.4	95	0.0	8.9	2.1	4.3
MO 61-22	129.6	16.5	96	0.0	2.1	0.5	3.9
BEAR OK96	129.2	16.3	95	0.0	7.9	0.0	4.3
DEKALB 633	128.8	15.5	93	0.0	3.2	1.6	4.0
MO 1023	128.6	16.8	91	0.0	2.2	1.6	4.0
MFA 2180	127.9	14.3	96	0.0	3.6	1.0	3.5
PIONEER 314	127.8	15.6	95	0.0	2.6	0.0	4.0
IOWA 5043	126.9	15.2	95	0.0	9.0	0.0	4.4
BEAR OK878	126.9	16.4	95	0.0	6.8	0.0	4.4
AES 801	126.8	15.1	92	0.0	8.2	1.1	4.1
LEWIS L-744	125.9	15.9	87	0.0	4.0	4.6	4.0
US 13	125.1	14.3	91	0.0	22.0	1.6	4.6
MO 478W*	125.1	15.3	92	0.0	2.2	0.0	4.3
MO 61-23	124.9	16.1	93	0.0	7.5	1.1	4.1
CANTERBURY L4	124.8	15.6	97	0.0	2.1	1.6	4.1
CARGILL 340	124.5	15.2	94	0.0	8.0	2.7	4.0
PIONEER 3304	124.3	16.1	92	0.0	6.0	0.0	3.9
DEKALB 624	123.9	15.4	94	0.0	2.7	0.5	3.8
KAN 1639	123.3	16.5	93	0.0	8.6	0.0	4.0
DEKALB 805	123.0	15.0	97	0.0	4.1	3.6	3.9
DEKALB XL-361	123.0	15.4	96	0.0	2.6	0.0	3.6
MO 1020	121.8	16.1	89	0.0	7.3	0.6	3.6
MO 1034	121.1	17.6	98	0.0	3.1	3.1	4.0
MO 4080W*	120.0	17.2	95	0.0	10.0	0.5	3.9
MCALLISTER X505	119.5	14.6	97	0.0	5.7	2.1	3.9
IOWA 5266	118.8	14.6	92	0.0	1.1	0.5	3.6
MCCURDY 7X11	118.7	15.5	95	0.0	3.2	0.5	4.3
BO-JAC 660	116.5	16.3	96	0.0	5.8	0.0	3.9
KAN 1859	113.1	16.0	94	0.0	3.2	2.7	3.6
MO 61-34	112.5	16.0	96	0.0	3.7	2.1	3.8
MO 1007	109.9	17.5	96	0.0	3.7	1.6	4.0
BEAR OK55A	109.9	16.0	95	0.0	4.2	2.1	3.9
CARGILL S440	109.0	14.9	96	0.0	4.2	3.7	3.9
MO 843	108.6	16.3	96	0.0	8.9	1.6	3.9
MCALLISTER X101	106.3	14.6	93	0.0	3.2	1.6	3.9
IOWA 4732	106.0	14.7	93	0.0	3.8	2.7	3.8
<u>Group III Maturity</u>							
US 523WA*	147.6	17.2	96	0.0	11.0	5.2	4.4
PIONEER 312A	142.6	16.9	98	0.0	4.1	0.0	4.3
US 619W*	138.7	17.9	91	0.5	12.1	3.8	4.1
US 523W*	131.3	16.6	97	1.6	13.5	2.1	4.5
DEKALB 869	117.2	16.7	95	0.0	8.5	2.6	3.9
Mean	126.3	15.9	95	0.4	6.1	1.5	4.0

Differences in yield between any two hybrids of less than 11.2 bushels are not considered significant.
* White Hybrids

Table 3C. Summary of Acre Yield and Lodging for Hybrids Tested in District 3 for the Three-year period of 1961, 1962, and 1963.

Hybrid	Acre Yield Bu.	Lodged Plants		Hybrid	Acre Yield Bu.	Lodged Plants	
		Root %	Stalk %			Root %	Stalk %
<u>Group I Maturity</u>				<u>Group II Maturity (Contd.)</u>			
Iowa 4376	116.9	10.2	7.0	Mo 4078W*	128.6	10.2	4.8
				Mo 1023	128.0	9.0	3.8
				Cargill 340	127.8	2.8	7.2
				Mo 1017	126.3	7.8	3.3
				Kan 1639	125.7	6.3	10.1
				AES 801	123.5	3.6	6.3
				Pioneer 314	122.3	3.3	3.3
				Kan 1859	120.6	12.1	9.2
				Mo 1020	120.5	5.3	5.1
				US 13	120.4	7.9	13.7
				Mo 1007	117.6	3.7	2.8
				Iowa 4732	117.6	4.0	4.9
				Mo 843	116.8	9.1	11.9
				<u>Group III Maturity</u>			
				US 523W*	134.6	9.6	10.0
				US 619W*	129.5	8.9	10.0
				DeKalb 869	125.9	4.0	6.5

* White Hybrids

DISTRICT 4

Results for District 4 are given in Tables 4A to 4C. Poor stands caused by wireworms at the Higginsville location necessitated the first planting (April 12) to be planted a second time on June 10. Two replications of the second planting were not harvested due to poor stands. The results from this location are the average of 2 replications. Rainfall was above the State average and there were 2 dry periods of 18 and 21 days, respectively, during the growing season. There were 58 days of temperatures of 90° or more with the second highest temperature among all testing locations. The highest stalk lodging occurred at this location as the results of heavy wind storms.

Table 4A. Percent of Total Farmland Area Planted to Corn, Total Corn Acreage, Average Acre Yield and the Average Acre Yield for Hybrids Tested in the Missouri Corn Yield Trials for the 10-Year Period (1953-1962), 1961, 1962, and 1963 in District 4.

Period		Farmland Planted to Corn (%)	Total Corn Acreage	Avg. Acre Yield (Bu.)	Missouri Corn Yield Tests
10-year average	1953-1962	12.3	428,100	41.2	
	1961	8.5	301,000	60.0	95.1
	1962	9.7	330,000	54.7	103.6
	1963	10.2*	355,000*	57.2*	112.8

*Estimated as of December 1, 1963

Table 4B. 1963 Performance Record for Hybrids Tested in District 4, Near Higginsville, Missouri in Lafayette County. Planted June 10, 1963. Harvested October 28, 1963. (Exp. 4).

Hybrid	Acre Yield Bu.	Moisture in Grain %	** Stand %	Lodged Plants		Drop-ped Ears %	Ear Height Grade
				Root %	Stalk %		
<u>Group I Maturity</u>							
PIONEER 3414	113.8	14.7	74	5.1	22.0	1.7	3.8
IA 4376	102.5	16.4	89	0.0	49.3	0.0	4.5
AES 704	93.6	14.8	80	0.0	7.8	1.6	3.8
<u>Group II Maturity</u>							
PIONEER 321	131.9	16.4	94	0.0	33.3	0.0	4.5
MAYGOLD 3003	131.7	17.8	80	0.0	20.3	0.0	4.3
MO 1023	129.8	18.7	85	5.9	33.8	5.9	4.3
MFA 3232	128.7	20.0	81	0.0	12.3	0.0	4.0
MO 1035	127.1	20.4	90	0.0	26.4	0.0	4.0
MFA K6	127.0	18.0	69	0.0	27.3	0.0	4.3
MAYGOLD 2092	125.1	19.1	83	0.0	12.1	3.0	4.0
MAYGOLD 29X	124.9	18.8	90	0.0	27.8	5.6	4.0
MO 1034	124.8	19.0	94	9.3	33.3	1.3	4.0
MO 447W*	123.6	19.1	76	1.6	13.1	0.0	4.0
MAYGOLD 2036	122.3	18.9	90	0.0	23.6	0.0	4.0
MO 61-28	119.9	17.3	80	1.6	20.3	1.6	4.0
MO 61-23	119.0	17.4	93	0.0	35.1	1.4	4.3
MO 61-22	118.5	16.9	83	0.0	28.8	1.5	4.0
ASGROW 200	118.4	19.1	89	0.0	43.7	2.8	4.3
UH 160	117.3	22.7	79	0.0	47.6	9.5	4.3
MO 880	116.8	19.3	88	0.0	35.7	2.9	4.0
MO 4081W*	115.5	18.2	86	0.0	18.8	4.3	4.0
PIONEER 314	114.8	17.3	61	0.0	18.4	2.0	4.0
PIONEER 3268	114.8	17.2	70	0.0	21.4	1.8	4.0
MO 1007	113.3	17.5	75	0.0	16.7	0.0	4.0
UH 1580	113.0	16.5	70	0.0	28.6	3.6	4.0
MO 61-34	112.5	18.6	61	0.0	10.2	0.0	3.5
KAN 1639	109.4	17.8	81	0.0	30.8	3.1	4.0
MO 4080W*	108.0	17.6	86	0.0	40.6	0.0	4.5
DEKALB 805	107.0	17.1	70	1.8	28.6	1.8	4.0
UH X1600	106.2	19.6	69	0.0	12.7	7.3	3.5
MO 1017	105.3	17.7	93	0.0	58.1	1.4	4.3
CARGILL S440	103.6	16.8	69	0.0	5.5	5.5	4.0
CARGILL 340	102.9	17.7	63	0.0	32.0	2.0	3.8
MAYGOLD 58X	102.8	16.4	85	0.0	23.5	2.9	4.0
MO 955	102.1	22.7	90	0.0	34.7	1.4	4.3
MO 1020	101.8	17.9	83	0.0	47.0	1.5	3.8
KY 6001	101.7	17.7	90	0.0	36.1	1.4	4.3
MO 981	101.3	20.7	63	0.0	20.0	2.0	4.0
CARGILL 360	101.2	19.6	83	6.1	53.0	6.1	4.5
UH 158	98.7	15.6	69	0.0	25.5	3.6	3.8
MAYGOLD 37	98.2	18.2	79	0.0	14.3	6.3	4.0
US 13	98.1	16.4	80	0.0	56.3	4.7	4.3
PIONEER 3304	96.7	17.3	59	0.0	12.8	0.0	3.8
MO 843	92.2	18.2	63	0.0	24.0	0.0	3.8
POIROT 3X-115	78.4	15.9	66	0.0	35.8	1.9	4.0
<u>Group III Maturity</u>							
US 619W*	140.9	17.7	88	0.0	64.3	0.0	4.8
US 523WA*	135.6	19.6	81	0.0	32.3	0.0	4.5
ASGROW 300	130.4	23.3	91	0.0	67.1	6.8	4.5
US 523W*	129.2	17.9	89	0.0	36.6	0.0	4.5
MO 4076W*	120.0	20.3	90	0.0	41.7	1.4	4.3
MO 916	119.3	22.8	76	0.0	36.1	1.6	4.3
MO 881	112.9	18.4	93	5.4	45.9	4.1	4.3
KY 6013W*	112.9	18.8	94	0.0	41.3	4.0	4.0
DEKALB 824	111.0	19.0	84	0.0	28.4	0.0	4.3
DEKALB D723	110.3	15.2	89	0.0	49.3	0.0	4.5
PIONEER 509W*	109.1	20.0	75	0.0	35.0	0.0	4.5
MCNAIR 304A	108.4	22.5	93	0.0	31.1	0.0	4.5
PIONEER 312A	102.6	21.2	93	0.0	29.7	0.0	4.3
<u>Group IV Maturity</u>							
DEKALB 898B	106.9	18.8	76	0.0	32.8	0.0	4.5
DEKALB 925*	102.1	20.5	74	0.0	49.2	1.7	4.3
Mean	112.8	18.5	81	0.6	31.3	2.1	4.1

Differences in yield between any two hybrids of less than 15.0 bushels are not considered significant

* White Hybrids

** Poor stands in general due to considerable wire worm damage

Table 4C. Summary of Acre Yield and Lodging for Hybrids Tested in District 4 for the Three-year period of 1961, 1962, and 1963.

Hybrid	Acre Yield Bu.	Lodged Plants		Hybrid	Acre Yield Bu.	Lodged Plants	
		Root %	Stalk %			Root %	Stalk %
<u>Group I Maturity</u>				<u>Group II Maturity (Contd.)</u>			
Iowa 4376	97.8	9.8	23.8	Cargill 340	103.5	6.6	15.4
				Kan 1639	103.5	16.7	13.4
				Maygold 37	100.7	7.7	12.3
				Mo 4080W*	100.7	20.6	17.3
				Mo 1017	100.0	10.8	21.9
				Mo 955	98.6	14.4	15.8
				US 13	96.3	15.6	26.9
				Mo 843	95.6	9.1	16.3
				Mo 1020	90.0	10.4	19.7
<u>Group II Maturity</u>				<u>Group III Maturity</u>			
MFA K6	118.0	12.7	15.8	US 523W*	113.0	16.1	21.4
Mo 447W*	117.1	20.0	8.0	US 619W*	112.8	20.0	27.5
Mo 1023	113.0	22.0	15.0	Mo 916	101.7	12.4	15.9
Pioneer 321	111.8	8.9	17.2				
MFA 3232	111.8	9.3	8.8				
Maygold 29X	109.8	14.5	10.6				
DeKalb 805	109.1	11.9	12.9				
Mo 1007	108.9	7.5	7.8				
Mo 880	107.0	16.0	13.2				
Pioneer 314	105.7	5.9	10.9				
Pioneer 3304	105.5	9.1	5.0				

* White Hybrids

DISTRICT 5

Tables 5A to 5C give results of the trials in District 5. Environmental conditions were unfavorable for corn production as evidenced by the lowest yield among the 9 districts. The total rainfall was below average for the growing season but not as low as experienced in some of the other locations. The reduced yields received at this location were attributed to the very low sub-soil moisture caused by the below average precipitation of the previous year. The accumulative effects of below average rainfall and low soil moisture apparently accounted for the lowest average yield of 64.1 bushels.

Table 5A. Percent of Total Farmland Area Planted to Corn, Total Corn Acreage, Average Acre Yield and the Average Acre Yield for Hybrids Tested in the Missouri Corn Yield Trials for the 10-Year Period (1953-1962), 1961, 1962, and 1963 in District 5.

Period		Farmland Planted to Corn (%)	Total Corn Acreage	Avg. Acre Yield (Bu.)	Missouri Corn Yield Tests
10-year average	1953-1962	8.9	553,600	43.6	
	1961	7.3	438,000	62.0	104.2
	1962	8.1	485,000	51.6	100.3
	1963	9.2*	575,000*	59.2*	64.1

* Estimated as of December 1, 1963

Table 5B. 1963 Performance Record for Hybrids Tested in District 5, near Columbia, Missouri in Boone County. Planted April 22, 1963. Harvested September 30, 1963. (Exp. 5).

Hybrid	Acre Yield Bu.	Moisture in Grain %	Stand %	Lodged Plants		Dropped Ears %	Ear Height Grade
				Root %	Stalk %		
<u>Group I Maturity</u>							
IOWA 4376	68.4	15.8	94	0.0	8.0	0.9	2.9
PIONEER 3284	64.7	16.8	97	0.0	4.3	0.0	2.6
AES 704	60.1	16.0	100	0.0	1.7	0.0	2.5
<u>Group II Maturity</u>							
MFA K6	80.6	18.4	99	0.0	8.4	0.8	3.0
MO 61-7	78.8	17.7	85	0.0	3.9	1.0	3.1
MAYGOLD 3003	75.0	17.5	97	0.0	10.3	1.7	3.0
MAYGOLD 29X	74.1	21.1	98	0.0	6.8	0.8	2.6
MO 1035	73.6	20.0	95	0.0	4.4	0.9	2.6
MO 61-23	73.2	19.1	100	0.0	5.0	0.0	2.9
PIONEER 3304	72.3	17.7	100	0.0	10.0	0.8	2.6
MAYGOLD 2036	71.5	20.6	100	0.0	5.8	1.7	2.4
MO 1017	70.6	16.5	99	0.0	5.9	0.0	2.9
CARGILL 366	70.6	17.0	99	0.0	0.0	0.0	3.0
CARGILL, S440	70.0	18.6	91	0.0	16.5	0.0	2.9
PIONEER 3268	69.2	16.5	98	0.0	7.7	0.9	2.8
MCALLISTER 6104	69.0	18.9	99	0.0	12.6	0.8	2.8
MO 1034	67.6	21.9	94	0.0	8.8	0.0	2.8
PIONEER 321	66.6	18.4	99	0.0	9.2	1.7	2.8
DEKALB 805	66.3	19.1	100	1.7	12.5	0.8	2.6
MO 1020	66.0	16.4	99	0.0	13.4	0.0	2.5
MO 981	65.5	17.5	100	0.0	9.2	0.8	2.8
MO 447W*	64.6	19.6	100	0.0	10.8	0.0	2.9
MO 880	63.5	20.3	97	0.0	4.3	0.0	2.4
PIONEER 314	62.7	18.4	94	0.0	9.7	1.8	2.5
MO 4080W*	62.1	20.9	99	0.0	2.5	0.0	2.9
MFA 3232	62.0	21.4	99	0.0	5.0	1.7	2.5
MO 955	61.7	22.5	97	0.0	7.8	0.9	3.0
MO 61-22	61.2	22.0	99	0.0	14.3	0.8	2.6
MAYGOLD 58X	59.7	17.5	96	0.0	9.6	0.0	2.5
KY 6001	59.2	19.1	98	0.0	5.1	0.0	3.0
KAN 1639	58.4	21.9	98	0.0	13.7	0.9	2.6
MO 61-34	58.4	24.8	98	0.0	17.8	0.8	2.9
MO 1007	58.4	19.3	100	0.0	4.2	0.0	2.5
MO 61-28	58.2	24.3	99	0.0	16.8	0.8	2.8
MAYGOLD 2092	57.7	24.7	98	0.0	3.4	0.0	2.5
MO 1023	57.5	20.7	99	0.0	5.9	0.0	2.6
MO 61-10	57.0	21.2	100	0.0	5.0	1.7	2.3
MO 843	56.5	22.5	98	0.0	16.9	0.8	2.9
DEKALB 812	56.3	16.0	95	0.0	20.2	0.0	2.4
US 13	56.1	15.5	98	0.0	17.9	0.9	3.1
MO 4081W*	52.4	20.1	99	0.0	2.5	0.0	2.8
MAYGOLD 37	49.8	21.4	99	0.0	17.6	1.7	3.0
<u>Group III Maturity</u>							
DEKALB B722	75.2	20.8	95	0.0	3.5	0.0	2.6
US 523WA*	74.9	19.8	88	0.0	8.6	0.0	3.3
MO 916	68.9	23.0	98	0.0	4.3	0.0	3.4
DEKALB 824	67.7	20.8	100	0.0	5.0	0.0	2.8
US 523W*	66.6	23.2	96	0.0	20.0	1.7	2.9
MO 4077W*	66.5	21.1	100	0.0	4.2	0.8	3.4
MO 4076W*	66.4	18.4	100	0.0	6.7	0.0	3.0
KY 6013W*	63.2	24.9	100	0.0	8.3	0.0	2.9
PIONEER 302B	60.1	19.9	100	0.0	2.5	0.8	3.1
DEKALB D723	59.6	16.6	98	0.0	3.4	1.7	2.6
US 619W*	56.1	17.7	100	0.0	12.5	0.0	3.0
MO 881	56.1	23.0	96	0.0	7.0	0.0	3.3
MCNAIR 304A	54.6	20.9	98	1.7	6.8	0.8	2.9
PIONEER 509W*	48.8	22.4	99	0.8	9.2	5.0	3.1
Mean	64.1	19.8	98	0.1	8.5	0.7	2.8

Differences in yield between any two hybrids of less than 21.0 bushels are not considered significant.

* White Hybrids

Table 5C. Summary of Acre Yield and Lodging for Hybrids Tested in District 5 for the Three-year period of 1961, 1962, and 1963.

Hybrid	Acre Yield Bu.	Lodged Plants		Hybrid	Acre Yield Bu.	Lodged Plants	
		Root %	Stalk %			Root %	Stalk %
<u>Group I Maturity</u>				<u>Group II Maturity (Contd.)</u>			
Iowa 4376	85.1	2.1	8.8	Mo 880	87.6	5.1	5.6
				Mo 843	87.5	2.3	18.2
				Kan 1639	87.0	3.4	15.8
				Maygold 37	86.7	6.3	18.2
				Mo 1007	86.6	1.2	5.5
				Mo 4080W*	86.1	3.3	9.8
				Mo 1020	83.9	3.1	8.0
				US 13	83.0	2.6	21.6
<u>Group II Maturity</u>				<u>Group III Maturity</u>			
MFA K6	103.5	2.9	7.4	Mo 4077W*	98.2	8.9	11.8
DeKalb 805	98.7	4.4	8.9	US 523W*	95.5	7.0	20.5
Mo 447W*	95.0	6.5	11.1	Mo 916	94.1	3.2	7.9
Pioneer 321	91.7	2.2	11.6	US 619W*	85.9	3.1	20.1
Maygold 29X	91.3	3.6	7.7				
Mo 1017	90.5	2.9	8.1				
Mo 1023	89.6	6.4	5.9				
Pioneer 314	89.5	2.3	8.6				
MFA 3232	88.7	1.0	7.8				
Mo 955	88.4	6.8	9.6				

* White Hybrids

DISTRICT 6

Results for District 6 are found in Tables 6A to 6C. Rainfall was below average and was second lowest for the State. There was a dry period of 49 days from June 21 to August 9 which reduced yields considerably. European corn borer infestation and heavy winds resulted in considerable stalk lodging at this location, giving the third heaviest lodging record among the 9 testing locations.

Table 6A. Percent of Total Farmland Area Planted to Corn, Total Corn Acreage, Average Acre Yield and the Average Acre Yield for Hybrids Tested in the Missouri Corn Yield Trials for the 10-Year Period (1953-1962), 1961, 1962, and 1963 in District 6.

Period	Farm-land Planted to Corn (%)	Total Corn Acreage	Avg. Acre Yield (Bu.)	Missouri Corn Yield Tests
10-year average	1953-1962	10.7	344,000	46.3
	1961	8.1	269,000	62.0
	1962	8.8	275,000	54.7
	1963	11.5*	370,000*	46.4*
				128.8
				127.8
				123.8

* Estimated as of December 1, 1963

Table 6B. 1963 Performance Record for Hybrids Tested in District 6, near Washington, Missouri in Franklin County. Planted May 7., 1963. Harvested October 22, 1963. (Exp. 6).

Hybrid	Acre Yield Bu.	Moist- ure in Grain %	Stand %	Lodged Plants		Drop- ped Ears %	Ear Height Grade
				Root %	Stalk %		
<u>Group I Maturity</u>							
AES 704	122.2	11.8	100	0.0	6.3	1.9	4.1
PIONEER 3284	119.9	13.2	100	0.0	5.0	0.6	4.3
IOWA 4376	106.9	13.0	99	0.0	30.4	0.6	4.0
<u>Group II Maturity</u>							
STULLS 108Y	136.0	14.4	99	0.0	13.9	0.6	4.8
MO 61-7	135.6	13.6	98	5.1	6.4	0.0	4.8
STULLS 807Y	134.4	13.9	99	2.5	22.6	0.0	4.4
STULLS 500WA*	133.3	13.3	97	0.0	33.5	1.9	4.9
MO 447W*	130.6	14.8	100	0.0	10.0	0.6	4.4
MO 955	128.2	15.1	99	0.0	29.1	0.0	4.5
PIONEER 321	128.0	13.2	100	7.5	20.0	1.9	4.3
MFA 3232	126.6	14.3	98	0.0	11.5	0.0	4.1
MO 1034	125.7	13.8	100	0.0	8.1	1.3	4.0
MO 1035	124.5	15.1	98	0.0	3.8	0.0	4.1
MO 1017	124.4	12.7	99	0.0	21.4	0.0	4.1
MO 880	124.0	14.1	99	0.6	8.2	0.0	4.3
MO 1023	123.5	13.7	98	5.1	14.1	0.0	4.0
MO 61-22	123.5	13.8	100	0.0	11.9	0.6	3.9
KY 6001	122.9	13.7	99	0.0	24.5	0.0	4.5
BO-JAC 33A	122.6	13.4	99	0.0	22.2	0.0	4.3
MO 61-23	122.3	13.9	97	0.0	8.4	0.6	4.3
MO 4081W*	121.3	14.4	99	0.0	8.2	0.0	4.3
MO 61-28	121.2	13.2	97	0.0	14.2	0.6	4.3
CARGILL 360	121.2	13.9	96	0.0	23.4	0.0	4.8
MFA K6	121.1	13.1	96	0.0	33.3	0.7	4.6
PIONEER 3268	120.8	12.7	100	0.0	12.5	1.3	4.3
PIONEER 3304	120.4	13.0	99	0.0	44.7	0.0	3.9
US 13	119.9	12.6	98	0.0	45.5	1.9	4.6
MO 1007	119.8	14.5	98	0.0	5.1	0.0	4.0
MO 61-34	119.4	13.4	99	0.0	8.2	0.6	4.4
MO 843	119.3	14.0	99	0.0	22.6	0.0	4.4
KAN 1639	119.1	13.3	99	0.0	20.3	0.0	4.3
MO 981	119.1	14.3	98	0.0	26.8	0.0	4.4
DEKALB 805	119.1	12.0	99	0.0	10.1	0.0	4.3
STULLS 101Y	118.8	13.8	100	0.0	31.3	0.6	4.5
MO 61-10	117.5	14.6	99	0.0	11.3	0.0	4.0
MFA 2180	116.6	13.0	99	0.0	23.9	0.6	3.9
PIONEER 314	114.8	13.1	99	0.0	11.3	0.6	3.9
MO 4080W*	114.5	14.2	97	0.0	16.8	0.0	4.3
CANTERBURY L4	113.0	13.9	100	0.0	13.8	1.3	4.6
MO 1020	107.3	12.5	99	0.0	27.7	0.0	3.8
<u>Group III Maturity</u>							
US 523WA*	155.1	15.1	99	0.0	28.9	1.3	4.9
US 523W*	143.4	13.9	99	0.0	38.0	1.9	4.6
MO 4077W*	140.9	14.9	98	0.0	7.7	0.6	5.0
US 619W*	137.9	14.5	97	0.0	33.5	0.0	4.5
KY 6013W*	133.1	14.7	99	0.0	22.0	0.0	4.5
STULLS 500W*	130.7	15.2	97	0.0	38.7	0.6	5.0
MO 881	130.6	14.5	99	2.5	7.5	0.0	4.5
DEKALB 831	126.5	13.3	98	0.0	27.6	0.6	4.1
MO 916	123.9	14.9	100	0.0	21.9	0.6	4.9
MO 4076W*	121.3	14.6	98	1.9	31.8	0.0	4.4
MCNAIR 304A	117.7	14.9	96	0.0	20.3	0.0	4.5
PIONEER 312A	116.1	14.2	100	1.9	23.1	1.3	4.3
DEKALB 824	114.3	13.9	98	0.6	25.6	0.0	4.3
PIONEER 302B	113.8	12.7	98	0.0	24.2	0.6	4.3
<u>Group IV Maturity</u>							
DEKALB 925*	131.0	14.8	100	0.0	40.0	1.9	4.8
DEKALB 898B	119.8	14.2	100	0.0	29.4	0.6	5.0
Mean	123.8	13.8	99	0.5	20.4	0.5	4.4

Differences in yield between any two hybrids of less than 18.9 bushels are not considered significant.

* White Hybrids

Table 6C. Summary of Acre Yield and Lodging for Hybrids Tested in District 6 for the Three-year period of 1961, 1962, and 1963.

Hybrid	Acre Yield Bu.	Lodged Plants		Hybrid	Acre Yield Bu.	Lodged Plants	
		Root %	Stalk %			Root %	Stalk %
<u>Group I Maturity</u>				<u>Group II Maturity (Contd.)</u>			
Iowa 4376	110.2	10.5	34.6	US 13	121.8	7.6	47.8
				Mo 1017	121.4	6.1	26.4
				Pioneer 314	119.2	3.7	21.2
				Mo 4080W*	116.9	12.1	28.8
				Mo 1020	107.6	5.3	25.5
<u>Group II Maturity</u>				<u>Group III Maturity</u>			
Mo 447W*	135.4	17.5	22.0	Mo 4077W*	144.6	16.7	28.2
Pioneer 321	132.8	7.9	22.0	US 523W*	141.4	9.2	35.4
Mo 4081W*	128.8	16.3	23.4	US 619W*	136.0	13.9	35.1
Mo 955	128.5	19.3	26.9	Mo 916	128.7	13.0	34.2
Stalls 101Y	128.2	6.7	32.1				
Mo 1023	127.2	9.1	22.2				
Mo 1007	126.6	4.2	17.9				
Mo 880	125.5	4.6	15.3				
Mo 843	125.2	9.5	37.2				
MFA 3232	125.1	2.2	21.4				
Kan 1639	124.6	4.6	25.6				
				<u>Group IV Maturity</u>			
				DeKalb 925*	134.1	14.3	32.8

* White Hybrids

DISTRICT 7

Tables 7A to 7C report the results for District 7. Weather conditions were not favorable at Mt. Vernon for high yields. Temperatures averaged 2.5° F above normal and there were 49 days with temperatures above 90° F and 4 days of temperatures above 100° F. However, the stress conditions as indicated by the weather records were avoided to some extent by the early planting date of April 12, which resulted in an average yield of 122.3 bushels for the hybrids tested at this location.

Table 7A. Percent of Total Farmland Area Planted to Corn, Total Corn Acreage, Average Acre Yield and the Average Acre Yield for Hybrids Tested in the Missouri Corn Yield Trials for the 10-Year Period (1953-1962), 1961, 1962, and 1963 in District 7.

Period		Farmland Planted to Corn (%)	Total Corn Acreage	Avg. Acre Yield (Bu.)	Missouri Corn Yield Tests
10-year average	1953-1962	5.0	158,400	33.5	
	1961	3.2	101,000	50.0	110.2
	1962	3.9	112,000	49.6	120.8
	1963	4.3*	137,000*	44.2*	122.3

* Estimated as of December 1, 1963

Table 7B. 1963 Performance Record for Hybrids Tested in District 7, near Mt. Vernon, Missouri in Lawrence County. Planted April 12, 1963. Harvested October 8, 1963. (Exp. 7).

Hybrid	Acre Yield Bu.	Moist- ure in Grain %	Stand %	Lodged Plants		Drop- ped Ears %	Ear Height Grade
				Root %	Stalk %		
<u>Group I Maturity</u>							
PIONEER 3284	114.2	9.9	97	0.0	1.7	0.0	4.0
AES 704	109.4	10.1	98	0.0	0.9	0.0	3.8
IOWA 4376	106.6	10.9	97	0.0	4.3	0.0	3.6
<u>Group II Maturity</u>							
PIONEER 321	132.0	10.0	100	0.0	4.2	0.0	4.1
MO 61-28	128.3	11.5	100	0.0	0.8	0.0	4.1
MO 447W*	127.3	11.9	100	0.0	3.3	0.8	4.3
DEKALB 805	125.5	10.2	100	0.0	4.2	0.0	3.9
MO 981	124.3	11.0	100	0.0	1.7	0.0	4.0
MO 61-10	124.2	12.3	100	0.0	0.8	0.0	3.8
MFA K6	124.2	10.7	98	0.0	0.0	0.0	4.0
MO 61-34	124.1	10.9	98	0.0	1.7	0.0	4.0
MO 1023	123.9	11.1	99	0.0	0.8	0.0	4.0
PIONEER 3304	123.9	10.6	99	0.0	10.1	0.0	3.9
MFA 3232	122.4	11.6	99	0.0	0.0	0.0	4.1
MO 61-7	122.1	11.1	98	0.0	2.5	0.0	4.1
ASGROW 200	121.9	11.0	100	0.0	5.8	0.0	4.1
PIONEER 3268	121.5	12.8	100	0.0	3.3	0.0	4.3
MO 1034	120.6	11.9	100	0.0	3.3	0.0	3.9
KY 6001	117.2	11.3	99	0.0	0.0	0.0	3.8
KAN 1639	117.1	11.3	98	0.0	4.3	0.0	4.1
MO 843	116.7	11.6	97	0.0	3.4	0.0	4.0
MO 61-23	116.3	10.7	100	0.0	8.3	0.0	3.9
MO 955	116.3	12.6	99	0.0	0.8	0.0	4.4
MO 61-22	115.5	11.1	99	0.8	5.0	0.0	3.9
MO 880	114.6	11.9	100	0.0	0.8	0.8	4.0
MO 1035	110.7	12.3	86	0.0	2.9	0.0	3.9
PIONEER 328	108.2	10.3	89	0.0	0.0	0.0	4.0
POIROT 3X-115	107.8	10.1	99	0.0	0.8	0.0	3.8
US 13	105.8	10.7	96	1.7	6.1	0.9	4.1
MO 1020	100.0	11.3	100	0.0	4.2	0.0	3.9
<u>Group III Maturity</u>							
AES 904AW*	141.4	13.6	100	0.0	3.3	0.0	4.8
US 523W*	136.8	11.2	100	0.0	2.5	0.0	4.3
MO 916	136.7	11.7	99	0.0	5.0	0.0	4.8
US 523WA*	135.1	12.1	99	0.0	5.9	0.0	4.4
MO 542W*	133.6	13.9	100	0.0	5.0	0.8	4.5
MCNAIR 304A	131.5	12.8	98	0.0	1.7	0.0	4.3
US 619W*	129.6	12.0	99	0.8	7.6	0.0	4.0
ASGROW 300	128.6	12.9	100	0.0	10.8	0.0	4.6
MO 881	127.9	11.4	98	0.0	4.3	0.0	4.6
MO 4077W*	125.5	11.5	99	0.0	0.8	0.0	4.3
MO W6A*	125.0	11.9	97	0.0	4.3	0.0	4.6
KY 6013W*	122.3	12.1	100	0.0	0.8	0.0	4.3
PIONEER 9178	120.4	12.8	98	0.8	4.2	0.0	5.1
PIONEER 302B	116.8	11.6	98	0.0	5.1	0.0	4.0
PIONEER 314	116.6	10.7	99	0.0	4.2	0.8	3.9
MO 4076W*	116.0	12.1	100	0.0	0.8	0.0	4.3
<u>Group IV Maturity</u>							
DIXIE 33	142.0	12.2	99	0.0	7.6	0.0	5.3
DIXIE 29	140.0	14.0	98	0.0	4.2	0.0	4.9
DEKALB 1006	131.1	11.4	100	0.0	5.8	0.0	4.9
DEKALB 925	127.1	12.2	99	0.0	10.1	0.0	4.1
DEKALB 1004	122.0	12.6	100	0.0	11.7	0.0	4.6
DEKALB C919	113.1	14.7	95	0.0	0.9	0.0	5.4
Mean	122.3	11.7	98	0.8	3.7	0.1	4.2

Differences in yield between any two hybrids of less than 12.2 bushels are not considered significant.

* White Hybrids

Table 7C. Summary of Acre Yield and Lodging for Hybrids Tested in District 7 for the Three-year period of 1961, 1962, and 1963.

Hybrid	Acre Yield Bu.	Lodged Plants		Hybrid	Acre Yield Bu.	Lodged Plants	
		Root %	Stalk %			Root %	Stalk %
<u>Group I Maturity</u>				<u>Group III Maturity</u>			
Iowa 4376	106.2	3.8	21.6	Mo 916	130.1	5.9	18.4
				AES 904AW*	125.6	0.8	19.9
				US 523W*	123.1	1.7	23.0
				Mo 4077W*	123.0	7.5	20.2
				US 619W*	122.4	4.5	17.7
				Mo W6A*	121.0	2.1	24.6
<u>Group II Maturity</u>				<u>Group IV Maturity</u>			
Mo 447W*	126.4	7.2	18.2	Dixie 29*	133.2	2.6	23.7
Pioneer 321	126.0	2.4	17.3	Dixie 33*	129.4	4.1	33.7
MFA 3232	118.4	0.2	17.0	DeKalb 925*	120.8	1.9	21.7
Mo 1035	116.9	12.3	8.9				
Pioneer 314	114.3	5.4	11.6				
Kan 1639	114.0	1.4	24.0				
Mo 880	111.2	3.5	8.3				
Mo 843	111.0	4.8	21.3				
US 13	110.4	0.6	33.8				
Mo 955	109.8	5.1	19.7				

* White Hybrids

DISTRICT 8

Results of District 8 are given in Table 8A to 8C. The Summersville location had above average rainfall when compared with the State average, and environmental conditions were very favorable for high yields at this location. Hybrids tested at this location had the lowest average stalk lodging of all 9 locations.

Table 8A. Percent of Total Farmland Area Planted to Corn, Total Corn Acreage, Average Acre Yield and the Average Acre Yield for Hybrids Tested in the Missouri Corn Yield Trials for the 10-Year Period (1953-1962), 1961, 1962, and 1963 in District 8.

Period		Farmland Planted to Corn (%)	Total Corn Acreage	Avg. Acre Yield (Bu.)	Missouri Corn Yield Tests
10-year average	1953-1962	2.6	115,800	31.8	
	1961	2.0	91,000	44.0	100.7
	1962	2.2	92,000	31.5	92.2
	1963	2.4*	105,000*	45.7*	125.3

* Estimated as of December 1, 1963

Table 8B. 1963 Performance Record for Hybrids Tested in District 8, near Summersville, Missouri in Texas County. Planted May 10, 1963. Harvested October 21, 1963. (Exp. 8).

Hybrid	Acre Yield Bu.	Moist- ure in Grain %	Lodged Plants		Drop- ped Ears %	Ears Height Grade
			Stand %	Root %		
<u>Group I Maturity</u>						
AES 704	115.6	12.8	99	0.0	0.0	3.8
IOWA 4376	109.1	13.8	100	0.0	2.5	3.9
<u>Group II Maturity</u>						
MO 1023	134.3	14.6	99	0.0	0.8	3.8
MO 447W*	134.0	15.6	100	0.0	0.0	4.0
MFA K6	130.1	13.9	99	1.7	0.0	3.8
MO 981	126.5	15.0	100	0.0	0.0	4.1
STULLS 500WA*	126.4	14.0	100	0.8	5.8	4.1
MO 955	124.4	14.8	100	0.0	3.3	4.1
STULLS 807Y	124.0	14.6	100	3.3	0.0	3.9
STULLS 101Y	123.1	13.6	100	0.8	1.7	4.3
MO 1034	122.8	13.6	100	5.0	0.0	4.0
KY 6001	122.6	13.3	100	0.0	0.0	4.0
MO 843	121.4	13.0	100	0.8	3.3	3.9
MO 61-28	121.4	12.9	98	0.0	0.0	4.1
MO 61-34	120.7	13.8	99	0.0	0.0	4.1
KAN 1639	119.3	13.2	100	0.0	2.5	4.4
MO 61-23	118.1	12.8	99	0.0	2.5	4.0
MO 1035	117.9	15.3	98	19.5	2.5	4.0
MO 1020	114.0	13.4	100	0.0	0.8	3.8
US 13	113.4	12.3	97	0.0	0.9	4.3
STULLS 108Y	112.9	15.1	98	0.0	2.6	4.1
MO 61-22	111.7	13.5	100	2.5	3.3	3.9
MO 880	105.6	15.0	97	0.0	0.9	3.5
<u>Group III Maturity</u>						
AES 904AW*	146.1	16.7	99	0.0	5.9	4.3
MO 542W*	143.5	15.1	98	0.0	0.8	4.4
MO W6A*	138.7	14.7	99	4.2	4.2	5.0
US 523W*	138.2	14.6	99	2.5	1.7	4.0
US 523WA*	136.5	14.7	99	0.0	2.5	4.4
MO 4077W*	134.3	16.4	98	0.0	0.8	4.3
US 619W*	133.7	15.0	100	4.2	3.3	4.1
STULLS 400WA*	133.4	14.2	99	1.7	1.7	4.0
MO 881	132.6	14.3	98	0.0	0.0	3.9
MO 916	127.4	12.9	99	0.8	0.0	4.3
STULLS 500W*	126.2	14.3	99	0.8	6.7	4.3
KY 6013W*	124.0	16.3	100	0.0	0.8	3.9
MO 4076W*	121.2	14.4	99	0.0	3.4	3.9
MCNAIR 304A	108.2	18.5	99	0.0	0.0	3.9
<u>Group IV Maturity</u>						
DIXIE 33	150.8	14.3	99	4.2	8.4	4.9
DEKALB 1006	133.7	16.1	99	0.0	0.0	4.4
DEKALB C912	133.6	16.6	100	0.0	0.0	4.3
DEKALB 925	126.6	14.3	98	6.8	4.3	4.4
DIXIE 29	125.1	14.1	98	0.0	1.7	4.4
DEKALB 1004	116.8	14.9	100	2.5	6.7	4.5
DEKALB C919	112.7	19.1	88	0.0	1.0	4.6
Mean	125.3	14.6	99	1.4	2.0	4.1

Differences in yield between any two hybrids of less than 16.6 bushels are not considered significant.

* White Hybrids

Table 8C. Summary of Acre Yield and Lodging for Hybrids Tested in District 8 for the Three-year period of 1961, 1962, and 1963.

Hybrid	Acre Yield Bu.	Lodged Plants		Hybrid	Acre Yield Bu.	Lodged Plants	
		Root %	Stalk %			Root %	Stalk %
<u>Group I Maturity</u>				<u>Group III Maturity</u>			
Iowa 4376	95.6	1.5	4.0	US 619W*	118.4	4.6	11.3
				US 523W*	114.1	5.1	7.1
				Mo 4077W*	113.6	7.9	2.4
<u>Group II Maturity</u>				Mo W6A*	112.0	9.5	3.2
Mo 447W*	119.1	4.2	1.1	Mo 916	110.4	7.3	2.7
Stulls 101Y	110.3	1.8	2.7	AES 904AW*	109.0	2.2	3.6
Mo 955	104.5	0.9	3.3	Stulls 500W*	108.4	5.3	7.0
US 13	101.5	2.3	4.5				
Mo 1035	100.9	17.2	1.5	<u>Group IV Maturity</u>			
Kan 1639	100.5	4.2	11.1	Dixie 33*	120.5	6.6	7.3
Stulls 108Y	100.1	1.5	3.5	Dixie 29*	109.2	2.5	2.8
Mo 843	100.1	2.5	6.8				
Mo 880	99.2	1.2	3.1				

* White Hybrids

DISTRICT 9

Tables 9A to 9C give results of the test at Sikeston. Climatic conditions were not favorable at that location. There were 4 dry periods during the growing season, but irrigation helped the moisture situation. European corn borer and several heavy wind storms resulted in the second highest average stalk lodging record among the 9 testing locations. Undoubtedly these conditions also affected the resulting yields per acre.

Table 9A. Percent of Total Farmland Area Planted to Corn, Total Corn Acreage, Average Acre Yield and the Average Acre Yield for Hybrids Tested in the Missouri Corn Yield Trials for the 10-Year Period (1953-1962), 1961, 1962, and 1963 in District 9.

Period		Farmland Planted to Corn (%)	Total Corn Acreage	Avg. Acre Yield (Bu.)	Missouri Corn Yield Tests
10-year average	1953-1962	13.7	334,800	45.6	
	1961	9.6	236,000	66.2	107.2
	1962	11.0	270,000	57.8	102.9
	1963	14.7*	360,000*	73.8*	118.2

* Estimated as of December 1, 1963

Table 9B. 1963 Performance Record for Hybrids Tested in District 9, near Sikeston, Missouri in New Madrid County. Planted May 3, 1963. Harvested October 2, 1963. (Exp. 9).

Hybrid	Acre Yield Bu.	Moist- ure in Grain %	Stand %	Lodged Plants		Drop- ped Ears %	Ear Height Grade
				Root %	Stalk %		
<u>Group I Maturity</u>							
AES 704	103.1	14.0	100	0.0	10.8	0.0	3.4
Iowa 4376	102.2	13.7	98	21.4	25.6	0.0	3.4
<u>Group II Maturity</u>							
Zimmermans Z82X	125.0	15.6	99	7.6	25.2	1.7	3.6
MFA 3232	124.6	16.2	100	4.2	14.2	0.8	3.9
Zimmermans Z800Y	124.0	14.7	100	4.2	23.3	0.8	3.6
Mo 61-28	123.8	15.7	100	3.3	16.7	0.0	3.5
Meachams MX-50W*	123.4	18.7	99	15.1	21.8	0.0	4.0
Stulls 500WA*	123.1	15.2	100	11.7	54.2	1.7	3.9
Stulls 807Y	122.7	15.5	100	4.2	16.7	0.8	3.8
Mo 1023	122.5	15.2	100	1.7	23.3	0.0	3.4
Schenk S-87	122.3	14.2	99	1.7	21.8	0.8	4.0
Meachams M-5	120.7	15.5	99	5.9	28.6	0.0	3.8
Schenk S-73	120.6	15.0	99	1.7	21.8	0.8	3.9
Ky 6001	120.3	14.1	100	0.0	10.0	2.5	3.6
Meachams M-7	120.3	17.3	100	2.5	38.3	0.8	3.8
Mo 955	119.9	16.3	99	4.2	13.4	0.0	3.5
Pioneer 321	119.8	14.9	100	5.0	28.3	2.5	3.8
Schenk S-96W*	119.8	16.0	99	9.2	39.5	0.0	3.8
Bo-jac 11-2	119.8	14.3	100	5.0	22.5	0.0	3.9
Schenk S-77	119.5	15.0	97	4.3	15.5	0.9	3.5
Meachams MX-50W*	119.5	15.2	100	0.8	15.0	1.7	3.4
Mo 1035	118.8	17.5	99	20.2	10.1	0.8	3.6
Zimmermans Z824Y	118.7	15.2	99	0.0	27.7	0.0	4.0
Mo 880	118.6	14.3	99	2.5	23.5	0.0	3.6
Zimmermans Z906W*	118.4	17.6	100	5.8	22.5	0.8	3.9
Meachams M-33YB	117.9	15.0	100	8.3	39.2	0.8	3.8
Mo 447W*	117.3	16.8	98	28.0	28.8	0.0	3.9
MFA K6	116.7	15.5	100	1.7	17.5	0.8	3.5
Pioneer 3304	114.4	13.3	100	0.0	9.2	0.0	3.5
Mo 843	114.1	16.4	100	9.2	26.7	0.0	3.6
Princeton 890AA	113.9	15.8	98	0.0	26.3	0.0	3.6
Stulls 108Y	113.5	16.3	99	10.9	21.8	3.4	3.9
Mo 61-22	113.2	14.6	100	5.0	15.8	2.5	3.6
Mo 61-23	112.2	14.8	100	5.0	22.5	0.0	3.3
Stulls 101Y	112.2	14.6	97	0.9	19.8	0.9	3.6
Kan 1639	111.5	14.9	99	10.9	31.9	0.8	3.5
Schenk S-99AW*	110.5	17.1	99	5.9	31.1	0.0	4.0
Mo 1034	108.6	15.8	100	8.3	20.0	0.0	3.4
Mo 61-34	107.9	16.9	100	0.0	12.5	1.7	3.1
Mo 981	106.4	18.3	100	10.0	19.2	2.5	3.5
Princeton 8A	104.0	14.4	97	0.0	12.9	0.0	3.5
US 13	103.5	14.9	100	0.8	46.7	2.5	3.8
Deckers 4103	102.5	14.5	93	3.6	12.5	0.9	3.4
Princeton 840A	101.3	14.3	98	0.9	9.4	1.7	3.4
Mo 1020	98.6	13.9	100	0.0	24.2	0.8	3.4
<u>Group III Maturity</u>							
Mo W6A*	135.5	18.8	100	1.7	38.3	2.5	4.3
Mo 916	131.4	16.2	100	10.0	27.5	0.8	4.0
Mo 881	129.0	16.0	100	5.0	34.2	0.8	4.0
Stulls 500W*	127.8	15.8	98	0.8	46.6	0.0	4.0
Pioneer 509W*	127.8	16.4	100	0.0	39.2	0.8	3.9
Pioneer 310	127.7	16.4	99	0.0	20.2	0.0	3.9
US 523W*	127.6	16.3	100	4.2	37.5	0.0	3.8
McNair 304A	125.1	18.2	99	23.5	10.1	0.0	3.6
AES 904AW*	124.3	21.8	100	2.5	71.7	0.0	4.1
Princeton 990W*	123.9	15.2	100	0.8	39.2	0.8	3.9
US 523WA*	122.6	16.6	99	0.0	35.3	0.8	4.0
US 619W*	122.6	15.8	95	7.0	40.4	0.0	3.9
Mo 4077W*	122.2	15.3	100	5.0	23.3	0.0	3.9
Stulls 400WA*	120.8	16.9	99	11.8	29.4	1.7	4.0
Zimmermans Z914W*	120.8	16.8	99	5.0	19.3	0.8	3.9
Zimmermans Z911W*	120.6	16.2	100	2.5	26.7	0.0	3.9
Princeton 990AW*	120.5	15.4	98	2.6	26.5	4.3	3.9
Ky 6013W*	120.0	15.9	99	5.0	34.5	0.0	4.0
Mo 542W*	118.8	18.6	100	10.0	61.7	0.0	3.8
Mo 4076W*	113.5	15.7	100	11.7	26.7	0.0	3.6
DeKalb 869	111.3	13.9	99	2.5	26.1	2.5	3.6

Table 9B. 1963 Performance Record for Hybrids Tested in District 9, near Sikeston, Missouri in New Madrid County. Planted May 3, 1963. Harvested October 2, 1963. (Exp. 9).

Hybrid	Acre Yield Bu.	Moisture in Grain %	Stand %	Lodged Plants		Dropped Ears %	Ear Height Grade
				Root %	Stalk %		
<u>Group IV Maturity</u>							
Dixie 33	131.4	19.0	99	1.7	63.9	0.0	4.1
DeKalb 1006	127.7	16.5	100	10.0	35.0	0.0	4.1
Dixie 29	124.7	18.5	99	0.0	53.8	2.5	4.0
DeKalb C911	123.8	19.0	99	11.8	28.6	0.8	4.5
DeKalb 1004	114.4	18.8	99	5.0	45.4	5.0	4.0
DeKalb C919	<u>110.3</u>	<u>19.0</u>	<u>98</u>	<u>0.0</u>	<u>0.8</u>	<u>0.8</u>	<u>4.3</u>
Mean	118.2	16.1	99	5.4	27.2	0.9	3.8

Differences in yield between any two hybrids of less than 7.9 bushels are not considered significant.

* White Hybrids

Table 9C. Summary of Acre Yield and Lodging for Hybrids Tested in District 9 for the Three-year period of 1961, 1962, and 1963.

Hybrid	Acre Yield Bu.	Lodged Plants		Hybrid	Acre Yield Bu.	Lodged Plants	
		Root %	Stalk %			Root %	Stalk %
<u>Group I Maturity</u>				<u>Group III Maturity</u>			
Iowa 4376	96.4	12.7	18.2	Mo 4077W*	117.5	5.4	18.4
				Mo W6A*	115.6	0.6	25.9
				US 523W*	114.6	4.8	24.0
<u>Group II Maturity</u>				<u>Group IV Maturity</u>			
MFA K6	115.6	0.6	9.5	Mo 916	114.5	6.6	19.6
MFA 3232	115.2	1.4	8.6	AES 904AW*	113.0	1.3	38.2
Mo 447W*	113.0	16.4	18.3	US 619W*	111.3	7.9	32.5
Stulls 108Y	112.1	6.2	16.5	Stulls 500W*	110.1	9.4	31.2
Meachams M5	111.9	4.1	19.6	DeKalb 869	108.6	3.1	15.0
Stulls 101Y	110.5	0.8	12.3				
Mo 1035	110.5	13.6	6.1				
Mo 880	109.5	2.7	15.3	Dixie 33*	117.9	3.1	42.4
Schenks S-73	109.5	0.6	16.6	Dixie 29*	117.3	0.0	33.1
Schenks S-87	109.3	0.9	12.3				
Mo 955	109.0	8.0	10.6				
Mo 843	107.2	4.2	17.3				
US 13	102.3	0.7	28.9				
Kan 1639	102.0	5.5	19.5				

* White Hybrids

Table 10. Summary of Performance Records for Hybrids Tested in all Districts for the Three-year period of 1961, 1962, and 1963. Averages of 35 Tests.

Hybrid	Acre Yield Bu.	Lodged Plants		Hybrid	Acre Yield Bu.	Lodged Plants	
		Root %	Stalk %			Root %	Stalk %
<u>Group I Maturity</u>				<u>Group III Maturity</u>			
Iowa 4376	102.4	5.9	14.4	US 523W*	119.3	6.6	18.1
				US 619W*	116.8	7.5	19.7
<u>Group II Maturity</u>							
Mo 447W*	120.6	9.7	10.8				
Mo 880	111.4	4.8	8.2				
Kan 1639	110.3	4.9	15.2				
Mo 843	109.8	4.8	16.0				
US 13	105.9	4.2	23.0				

* White Hybrids

Table 11. Summary of Performance Records for Hybrids Tested in Districts 1, 2, and 3 for the Three-year Period of 1961, 1962, and 1963. Averages of 11 Tests.

Hybrid	Acre Yield Bu.	Lodged Plants		Hybrid	Acre Yield Bu.	Lodged Plants	
		Root %	Stalk %			Root %	Stalk %
<u>Group I Maturity</u>				<u>Group II Maturity (Contd.)</u>			
Iowa 4376	110.2	4.3	6.2	Kan 1639	120.5	2.7	9.1
<u>Group II Maturity</u>				Mo 4080W*	119.8	4.3	6.6
MFA K6	131.8	2.4	3.2	Mo 1007	119.5	1.2	2.0
DeKalb 805	129.6	2.4	2.8	Pioneer 314	117.8	1.4	3.4
Pioneer 321	128.3	2.6	7.6	Mo 1017	117.4	2.7	5.0
Pioneer 3304	127.3	2.7	5.0	Kan 1859	113.6	5.9	9.1
Mo 447W*	125.9	5.1	6.3	AES 801	112.6	1.3	6.5
Mo 1023	123.6	0.5	3.3	US 13	112.5	2.8	14.6
Iowa 5118	122.4	2.1	5.6	Mo 1020	108.4	2.3	4.5
Mo 880	121.0	3.4	4.1	<u>Group III Maturity</u>			
Mo 843	120.5	3.7	9.1	US 523W*	123.9	5.0	10.5
				US 619W*	121.3	4.4	10.8

* White Hybrids

Table 12. Summary of Performance Records for Hybrids Tested in Districts 4, 5, and 6 for the Three-year Period of 1961, 1962, and 1963. Averages of 13 Tests.

Hybrid	Acre Yield Bu.	Lodged Plants		Hybrid	Acre Yield Bu.	Lodged Plants	
		Root %	Stalk %			Root %	Stalk %
<u>Group I Maturity</u>				<u>Group II Maturity (Contd.)</u>			
Iowa 4376	97.7	7.5	22.4	Pioneer 314	104.8	4.0	13.6
<u>Group II Maturity</u>				Mo 1017	104.0	6.6	18.8
Mo 447W*	115.8	14.7	13.7	Mo 843	102.8	7.0	23.9
Pioneer 321	112.1	6.3	16.9	Mo 4080W*	101.2	12.0	18.6
Mo 1023	109.9	12.5	14.4	US 13	100.4	8.6	32.1
MFA 3232	108.5	4.2	12.7	Mo 1020	93.7	6.3	17.7
Mo 1007	107.4	4.3	10.4	<u>Group III Maturity</u>			
Mo 880	106.7	8.6	11.4	US 523W*	116.6	10.8	25.8
Mo 955	105.2	13.5	17.4	US 619W*	111.6	12.3	27.8
Kan 1639	105.0	8.2	18.3	Mo 916	108.2	9.5	19.3

* White Hybrids

Table 13. Summary of Performance Records for Hybrids Tested in Districts 7, 8, and 9 for the Three-year Period of 1961, 1962, and 1963. Averages of 11 Tests.

Hybrid	Acre Yield Bu.	Lodged Plants		Hybrid	Acre Yield Bu.	Lodged Plants	
		Root %	Stalk %			Root %	Stalk %
<u>Group I Maturity</u>				<u>Group III Maturity</u>			
Iowa 4376	99.4	6.0	14.6	Mo 916	118.3	6.6	13.6
<u>Group II Maturity</u>				Mo 4077W*	118.0	6.9	13.7
Mo 447W*	119.5	9.3	12.5	US 619W*	117.4	5.7	20.5
Mo 1035	109.4	14.4	5.5	US 523W*	117.3	3.9	18.0
Mo 955	107.8	4.7	11.2	Mo W6A*	116.2	4.1	17.9
Mo 880	106.6	2.5	9.2	AES 904AW*	115.9	1.4	20.6
Mo 843	106.1	3.8	15.1	<u>Group IV Maturity</u>			
Kan 1639	105.5	3.7	18.2	Dixie 33*	122.6	4.6	27.8
US 13	104.7	1.2	22.4	Dixie 29*	119.9	1.7	19.9

* White Hybrids

Table 14. Pedigrees of Open-Pedigree Hybrids Tested in 1963.

Hybrid	Pedigree	Endosperm Color
<u>Early (90 Day)</u>		
Iowa 4376	(WF9xB6)(187-2xM14)	Yellow
AES 704	(WF9xOh43)(B14xB37)	"
<u>Medium (115 - 120 Day)</u>		
AES 801	(WF9xB7)(B10xB14)	Yellow
Kan 1639	(WF9x38-11)(K148xK150)	"
Kan 1859	(WF9xN6)(K148xK150)	"
Mo 843	(WF9xOh7A)(B10xC103)	"
Mo 880	(WF9x38-11)(K148xMo5)	"
Mo 955	(WF9xOh7A)(Mo6xC121E)	"
US 13	(WF9x38-11)(L317xHy)	"
Mo 1023	(WF9xB41)(Mo5xC103)	"
Mo 1007	(WF9xB14)(C103xMo5)	"
Mo 1017	(WF9xOh7A)(C103xB14)	"
Mo 1020	(WF9xOh7A)(Oh43xC103)	"
Mo 1034	(B41xMo11)(Mo5xC103)	"
Mo 1035	(B41xMo11)(Mo5xK148)	"
Mo 61-28	(WF9tmsxH49)(Mo6xOh29)	"
Iowa 4732	(WF9xB7)(B14xN6)	"
Iowa 5118	(WF9xHy)(B14xC131A)	"
Iowa 5043	(WF9x38-11)(B14xC131A)	"
Mo 61-23	(H49xW64A)(K148xK150)	"
Mo 981	(WF9xOh7A)(Mo6xOh29)	"
Mo 61-22	(WF9tmsxH49)(K148xK150)	"
Mo 61-34	(WF9tmsxH49)(C103xC121E)	"
Mo 61-7	(H49xH41)(B14xC103)	"
Mo 61-10	(WF9tmsxH49)(Mo6xK148)	"
Ky 6001	(WF9xKy36-11)(C103xB14)	"
Iowa 5266	(WF9xB6)(B14xB37)	"
Mo 447W	(K55xK6)(H28xK41)	White
AA 366W	(H21x33-16)(H28xK55)	"
Mo 478W	(Mo1WxKy211)(H30xH41)	"
Mo 4080W	(Mo1WxKy211)(H26xH27)	"
<u>Late (125 - 135 Day)</u>		
Mo 881	(CI21ExMo7)(Oh7BxOh29)	Yellow
Mo 916	(Mo6xC121E)(Oh7BxOh29)	"
Mo 4081W	(Mo1WxKy211)(CI66xK6)	White
Mo 4077W	(Mo2RFxH28)(CI66xK6)	"
AES 904AW	(T111xT115)(CI64xMo22)	"
Mo W6A	(CI64xMo22)(Dixie 29)	"
US 523W	(K55xK64)(Ky27xKy49)	"
Mo 542W	(CI64xMo14W)(T111xT115)	"
US 619W	(K55xC164)(Ky27xKy49)	"
US 523WA	(CI66xC164)(Ky28xKy49)	"
Mo 476W	(33-16xH28)(K55xK6)	"
Ky 6013	(K55xC164)(Ky126xKy217)	"
<u>Very Late (135 - 145 Day)</u>		
Dixie 29	(T101xT105)(T111xT115)	White
Dixie 33	(T101xT105)(T13xT61)	"

Table 15. Location by Districts of Hybrids Entered by Commercial Companies in the 1963 Yield Tests.

Hybrid	1	2	3	4	5	6	7	8	9
Pioneer 3304	X	X	X	X	X	X	X		X
Pioneer 321	X	X	X	X	X	X	X		X
Pioneer 314	X	X	X	X	X	X	X		
Pioneer 312A			X	X	X	X			
Pioneer 3284	X		X		X	X	X		
Pioneer 3414	X	X	X	X					
Pioneer 3268	X	X	X	X	X	X	X		
Pioneer 328	X						X		
Pioneer 9178							X		
Pioneer 302B					X	X	X		
Pioneer 509W				X	X				X
Pioneer 310									X
DeKalb 805	X	X	X	X	X	X	X		
DeKalb 812					X				
DeKalb 824	X	X		X	X	X			
DeKalb 831	X					X			
DeKalb 869			X						X
DeKalb 925				X		X	X	X	
DeKalb 624	X	X	X						
DeKalb 898B				X		X			
DeKalb 633			X						
DeKalb C919							X	X	X
DeKalb D523	X	X							
DeKalb XL-361		X	X						
DeKalb D723				X	X				
DeKalb B722					X				
DeKalb C912								X	
DeKalb C911									X
DeKalb 1004							X	X	X
DeKalb 1006							X	X	X
Maygold 37	X	X		X	X				
Maygold 58X	X	X		X	X				
Maygold 49W	X								
Maygold 29X	X	X		X	X				
Maygold 2036	X	X		X	X				
Maygold 2092	X	X		X	X				
Maygold 3003	X	X		X	X				
Stulls 101Y						X		X	X
Stulls 108Y						X		X	X
Stulls 400WA								X	X
Stulls 500W						X		X	X
Stulls 500WA						X		X	X
Stulls 807Y						X		X	X
Cargill 285		X							
Cargill 330		X							
Cargill 340	X	X	X	X					
Cargill 360	X		X	X		X			
Cargill 366		X			X				
Cargill S440	X		X	X	X				
MFA K6	X	X	X	X	X	X	X	X	X
MFA 2120	X								
MFA 3232			X	X	X	X	X		X
MFA 2180	X	X	X			X			
UH 158	X	X		X					
UH 160	X	X		X					
UH 1580	X			X					
UH X2B1	X								
UH X8B1	X								
UH X1600				X					
McNair 304A				X	X	X	X	X	X
Zimmerman Z911W									X
Zimmerman Z906W									X
Zimmerman Z914W									X
Zimmerman Z800Y									X
Zimmerman Z824Y									X
Zimmerman Z82Y									X
Princeton 8A									X
Princeton 840A									X
Princeton 890AA									X
Princeton 990									X
Princeton 990A									X
Schenk S-73									X
Schenk S-77									X
Schenk S-87									X
Schenk S-96W									X
Schenk S-99AW									X
McAllister X101			X						
McAllister X505			X						
McAllister 6104		X	X		X				

Table 15. Location by Districts of Hybrids Entered by Commercial Companies in the 1963 Yield Tests.

Hybrid	1	2	3	4	5	6	7	8	9
Bear OK96			X						
Bear OK 55A			X						
Bear OK878			X						
Bear Unicorn X606			X						
Bear Unicorn X800			X						
Asgrow 200				X			X		
Asgrow 300				X			X		
Meachams M-7									X
Meachams M-5									X
Meachams M-33YB									X
Meachams MX-30Y									X
Meachams MX-50W									X
Bo-Jac 660			X						
Bo-Jac 33A						X			
Bo-Jac 11-2									X
McCurdy 7X11	X	X	X						
Canterbury L4			X			X			
Deckers 4103									X
Corn King 418	X								
Lewis L-744			X						
Nebr NC+82	X								
Middlekoop M-33	X								
Poirot 3X15				X			X		

Table 16. Location by Districts of Open-Pedigree Hybrids in the 1963 Yield Trials.

Hybrid	Districts								
	1	2	3	4	5	6	7	8	9
US 13	X	X	X	X	X	X	X	X	X
Mo 843	X	X	X	X	X	X	X	X	X
Mo 880	X	X	X	X	X	X	X	X	X
Mo 447W	X	X	X	X	X	X	X	X	X
Kan 1639	X	X	X	X	X	X	X	X	X
US 523W	X	X	X	X	X	X	X	X	X
US 523WA	X	X	X	X	X	X	X	X	X
US 619W	X	X	X	X	X	X	X	X	X
Ia 4376	X	X	X	X	X	X	X	X	X
AES 704	X	X	X	X	X	X	X	X	X
Mo 981	X	X	X	X	X	X	X	X	X
Mo 1020	X	X	X	X	X	X	X	X	X
Mo 1023	X	X	X	X	X	X	X	X	X
Mo 1034	X	X	X	X	X	X	X	X	X
Mo 1035	X	X	X	X	X	X	X	X	X
Mo 61-22	X	X	X	X	X	X	X	X	X
Mo 61-23	X	X	X	X	X	X	X	X	X
Mo 61-28	X	X	X	X	X	X	X	X	X
Mo 61-34	X	X	X	X	X	X	X	X	X
Ky 6001				X	X	X	X	X	X
Mo 1007	X	X	X	X	X	X			
Mo 1017	X	X	X	X	X	X			
Mo 4080W	X	X	X	X	X	X			
Ia 5118	X	X	X						
Ia 4732	X	X	X						
Ia 5043	X	X	X						
Mo 478W	X	X	X						
AA 366W	X	X	X						
AES 801	X	X	X						
Kan 1859	X	X	X						
Ia 5266	X	X	X						
Mo 955				X	X	X	X	X	X
Mo 916				X	X	X	X	X	X
Mo 881				X	X	X	X	X	X
Mo 4076W				X	X	X	X	X	X
Ky 6013W				X	X	X	X	X	X
Mo 4077W				X	X	X	X	X	X
AES 904AW							X	X	X
Mo W6A							X	X	X
Mo 542W							X	X	X
Dixie 33							X	X	X
Dixie 29							X	X	X
Mo 4081W				X	X	X			
Mo 61-7				X	X	X			
Mo 61-10				X	X	X			

Table 17. Sources of Seed for Commercial Hybrids.

Hybrids	Firm	Address
Asgrow	Asgrow Seed Co.	San Antonio 11, Texas
Bear	Bear Hybrid Corn Co., Inc.	Decatur, Illinois
Bo-Jac	Bo-Jac Hybrids	Mt. Pulaski, Illinois
Canterbury	C. E. Canterbury Seed Co.	Cantrall, Illinois
Cargill	Cargill, Inc.	Minneapolis 13, Minnesota
Corn King	Malcolm H. Grieve	Pierson, Iowa
Decker	H. C. Decker	Canalou, Missouri
DeKalb	DeKalb Agric. Assoc., Inc.	DeKalb, Illinois
Lewis	Frank W. Lewis & Son	Ursa, Illinois
Maygold	Earl May Seed Co.	Shenandoah, Iowa
Meacham	Meacham's Hybrids	Morganfield, Kentucky
Middlekoop	Middlekoop Hybrid Seed Co.	Packwood, Iowa
MFA	MFA Seed Division	Marshall, Missouri
McAllister	McAllister Seed Farms	Mt. Pleasant, Iowa
McCurdy	W. O. McCurdy & Sons	Fremont, Iowa
McNair	McNair Seed Co.	Laurinburg, N.C.
NC + Hybrids	NC + Hybrids	Lincoln, Nebraska
Pioneer	Garst & Thomas Hybrid Corn Co. and Pioneer Seed Corn Co., Inc.	Coon Rapids, Iowa Tipton, Indiana
Poirot	Severin Poirot III	Golden City, Missouri
Princeton	Princeton Farms	Princeton, Indiana
Schenk	Chas. Schenk & Sons	Vincennes, Indiana
Stull	Stull Bros.	Sebree, Kentucky
United Hagie	United Hagie Hybrids, Inc.	Ames, Iowa
Zimmerman	Zimmerman's Seed Corn	Evansville, Indiana

COMPARISON OF HYBRIDS IN STATE YIELD TESTS WITH
ALL CORN PRODUCED IN MISSOURI BY YEARS
(1957 - 1963)

See Figure 2 for summary of comparative average yields per acre of all corn acres grown in Missouri and the average yields of all hybrids grown in the State Yield Trials by years from 1957 to 1963.

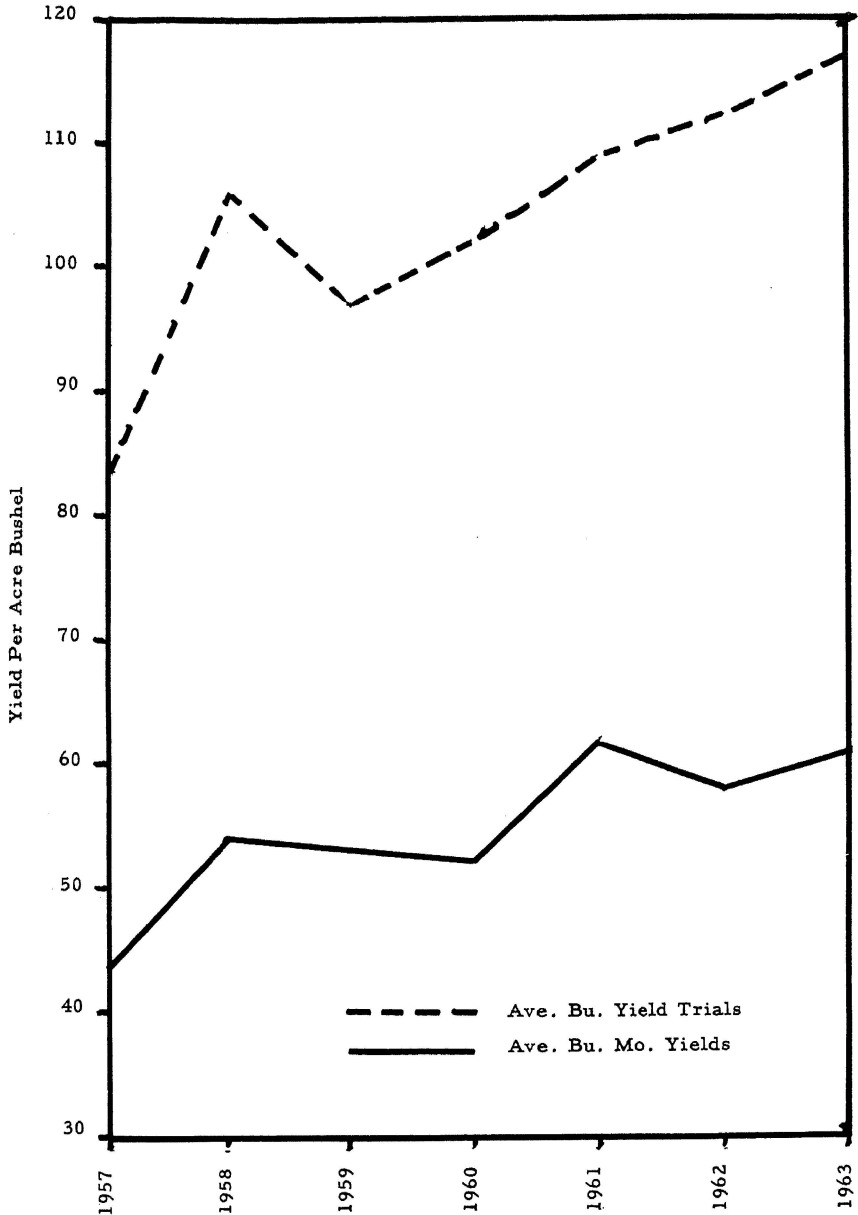


Fig. 2. Comparative average bushel yields per acre of all hybrid corn grown in the Missouri Hybrid Corn Yield Trials and the average bushel yield per acre of all corn grown in Missouri by years during the period 1957 to 1963, inclusive.