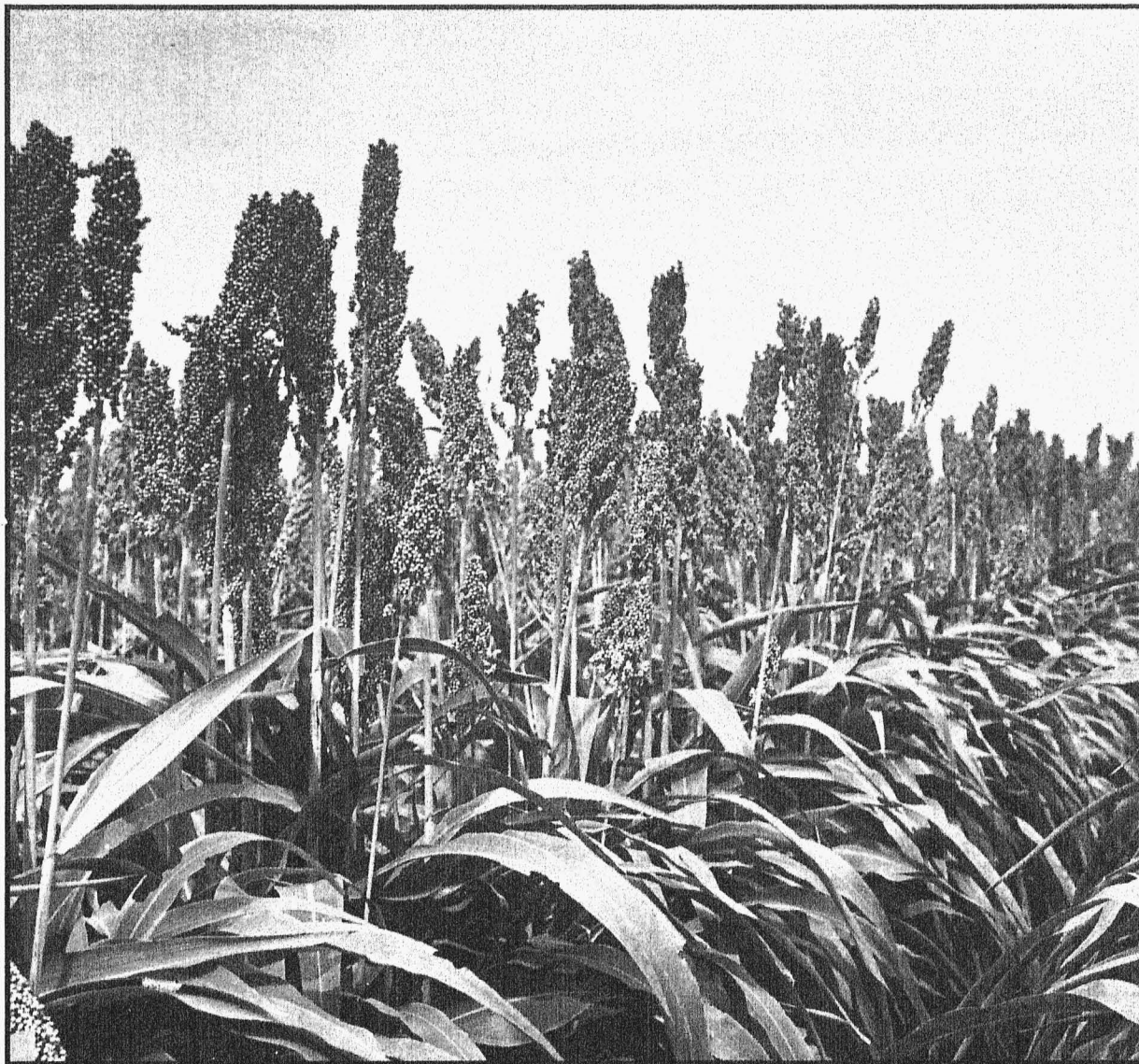


Grain Sorghum

1990 Missouri Crop Performance

Minor, Morris, Mason, Knerr, Lawman



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MISSOURI CROP PERFORMANCE

1990

GRAIN SORGHUM

This report on Research Project 363 is a contribution of the Department of Agronomy, University of Missouri Agricultural Experiment Station. The work received significant support through fees paid by the companies submitting hybrids for evaluation.

The University of Missouri began its performance testing program for grain sorghum hybrids in 1958. The number of commercial entries in the program has grown from 40 in 1958 to 94 today.

The large number of commercial hybrids available makes selection of a superior hybrid difficult. To select intelligently, producers need a reliable, unbiased, up-to-date source of information that will permit valid comparisons among available hybrids. The objective of the University of Missouri's performance testing program is to provide this information. The tests are conducted under as uniform conditions as possible. Small plots are used to reduce the chance of soil and climatic variations occurring from one plot to another. Results obtained should aid the individual grower in judging the relative merits of many of the commercial grain sorghum hybrids available in Missouri today.

COMPARING HYBRIDS

The performance of a hybrid cannot be measured with absolute precision. Uncontrollable variability is involved in the determination of each yield average. This variability sometimes occurs because the soil isn't uniform, but many other conditions may contribute to it. Because variability exists in all field experimentation, statistics are used as a tool to assist in making decisions. The statistical tool used for these trials is the test of least significant difference (L.S.D.). The L.S.D. is quite simple to apply. When two entries are compared and the difference between them is greater than the L.S.D., the entries are judged to be significantly different. Differences smaller than the L.S.D. may have occurred by chance and are judged to be not significant.

Hybrid performance may seem inconsistent from location to location and from year to year because of differences in rainfall, temperature, soil fertility, diseases, insects and other factors. To obtain an improved estimate of relative hybrid performance, readers should consider results from more than one location or year. In this publication, the authors have tried to facilitate comparisons across years and locations.

In each trial, the "top yielding" hybrids have been identified. These hybrids are those that did not yield significantly less than the highest yielding hybrid in the test. They are denoted in the tables by an asterisk (*) next to their yields. Thus, by going down a column, readers can readily identify the highest yielding hybrids in a trial. By going across, readers can evaluate the relative performance of a hybrid during several years or at several locations. From the standpoint of yield, the most desirable hybrids will be those among the "top yielding" hybrids (that is, those that have an asterisk) the greatest number of times.

Although yield usually receives first consideration, other agronomic characteristics may be equally important when selecting a grain sorghum hybrid. Moisture content at harvest, stalk strength and resistance to insects and diseases are among the hybrid characteristics that deserve careful consideration. High moisture content at harvest, whether due to later maturity or slow dry-down, may indicate an increased drying requirement. Poor stalk strength or susceptibility to pests may decrease harvestable yield because of lodging or stand loss. Therefore, when selecting a hybrid, producers should also consider the data presented on agronomic characteristics other than yield.

The Missouri Agricultural Experiment Station does not recommend specific hybrids. Farmers growing a new hybrid for the first time should consider the information contained in this report and then grow a small acreage to determine adaptability. This should be the practice for all new hybrids regardless of origin.

EXPERIMENTAL PROCEDURES

Entries. All producers of hybrid seed were eligible to enter hybrids in the 1990 evaluation trials. Participation was voluntary. The researchers exercised no control over which hybrid or how many hybrids were entered. However, to help finance the evaluation program, a fee of \$90 per location was charged for each hybrid entered by the seed producer. Identification of widely grown hybrids was made through a telephone survey of companies that market commercial hybrids in Missouri.

Locations. On the basis of geographical characteristics, the state is divided into regions. Grain Sorghum hybrid evaluation trials are located in the north-central, southwestern, and southeastern regions of the state. In 1990, the locations for these trials were the North Missouri Center near Spickard in Grundy County, the Clarence Phears farm near Mexico in Audrain County, the Kenny Tevis farm near Hughesville in Pettis County, the Gilbert Wilson farm near Nevada in Vernon County, the Wally Norton farm near Lamar in Barton County, the Glenn Nothdurft farm near Oran in Scott County and the Harley Bixler farm near Canalou in New Madrid County. The test near Mexico was abandoned due to disuniformity. Trial locations are shown on the adjacent map.



Grain Sorghum Locations.

Field Plot Design. Each test was arranged in a lattice field plot design with three replications. All plots were four rows wide and 20 feet long. The between-row spacing was 30 inches at all locations. Only the center two rows were harvested to determine yield.

Plot Management. The tests were planted and harvested with commercial equipment modified for small-plot work. Fertilizer applied at each site was equal to, or above, that recommended by the University of Missouri's Soil Testing Laboratory. Herbicides and cultivation were used for weed control and plots were hand weeded as necessary. Management details varied from location to location and are specified on individual yield tables.

Data Recorded. Bloom date was recorded when 50 percent of the plants in a plot were shedding pollen. The other agronomic characteristics were evaluated at harvest. Head compactness was scored on a scale of 1 to 5. A score of 1 indicates the most compact or tight head, while 5 indicates the most lax or loose head. Lodging was determined by counting the number of culms inclined more than 30 degrees from vertical. This value was converted to a percentage of the total number of culms in each plot. Yield was measured in number of bushels per acre at a moisture content of 12.5 percent. An electronic moisture tester was used for all moisture readings. To convert yield to pounds/acre, multiply bushels/acre by 56.

Electronic Accessibility of Data. Results of the Missouri Crop Performance Trials are now available in two forms: this printed Special Report and Missouri's Agricultural Electronic Bulletin Board (AgEBB). Variety test information is accessible from the MAIN MENU of the AgEBB under "CROP PERFORMANCE TESTING". The system number is 314/882-8289. If you need assistance in accessing the system call 314/882-4827 for the system staff's help.

SUMMARY OF RESULTS

Results for each location include data on plant height, head compactness, percent off-type heads, lodging, grain moisture at harvest, and yield adjusted to 12.5 percent moisture.

Yield results are presented for each location. Significant variation among hybrids was observed at each location. Individual hybrid performance across the two north-central, two southwest and two southwestern locations are summarized in Table 4, 7, and 10.

The differences between the lowest and highest yielding hybrids for each trial are summarized in Table 1. Because environmental conditions influence the performance of hybrid sorghums, the reader is encouraged to give more weight to results from several locations or years than to those from a single test.

The Mexico trial was not reported because poor emergence and unfavorable weather caused extensive variation within the trial.

TABLE 1. 1990 YIELD SUMMARY

LOCATION	NUMBER OF ENTRIES	IRRI- GATED	YIELD (BU/ACRE)		DATA TABLE
			RANGE	AVERAGE	
SPICKARD	52	NO	106-146	126	2
HUGHESVILLE	52	NO	104-139	119	3
NEVADA	56	NO	62- 82	72	5
LAMAR	56	NO	84-123	106	6
ORAN	56	YES	98-161	132	8
CANALOU	56	NO	54- 96	79	9

An indication of hybrid maturity is moisture content of the grain at harvest. At times a hybrid may have a noticeably higher or lower moisture content in relation to the other hybrids in the same maturity grouping. Any large variation in moisture content may suggest a difference in maturity or dry down rate.

TABLE 2. PERFORMANCE OF GRAIN SORGHUM HYBRIDS EVALUATED NEAR SPICKARD (GRUNDY COUNTY) ON THE NORTH MISSOURI CENTER DURING 1989-90 AND NEAR JAMESPORT (DAVISS COUNTY) ON THE KIME FARM DURING 1988.

PLANTED: 4 JUNE 1990.
 HARVESTED: 12 OCTOBER 1990.
 PLANTED POPULATION: 104,500 SEEDS/A.
 ROW SPACING: 30 INCHES.

FERTILIZER: N = 120; P2O5 = 0; K2O = 95.
 HERBICIDES: RAMROD + ATRAZINE.
 INSECTICIDE: NONE.
 GROWING SEASON RAINFALL: 21.53"; IRRIGATION: 0.00".

BRAND-HYBRID	1990				LODGING (%)			YIELD (BU/ACRE)		
	MOIS- TURE (%)	PLANT HGT. (IN)	OFF HEADS (%)	COMPT- NESS SCORE	1990	1989	1988	1990	1989	1988
	WARNER W-917-E	20.5	66	0.0	2.0	0.0	0.0	--	146.2**	122.9*
FUNK'S G XSG 6006	19.2	64	0.0	3.3	0.0	--	--	143.1*	--	--
CARGILL 575	19.0	60	0.0	4.0	0.0	--	--	143.1*	--	--
MFA 650	19.3	58	0.0	4.3	0.0	0.0	--	142.1*	108.9	--
FONTANELLE G-5590	19.1	60	0.0	1.7	0.0	0.0	0.0	140.9*	95.1	89.7*
CARGILL 847	18.6	60	0.0	2.3	0.0	0.0	--	139.6*	114.0*	--
FUNK'S G 1607	18.1	54	0.0	3.7	0.0	0.0	--	137.0*	114.0*	--
PIONEER BRAND HYBRID 8260	19.8	60	0.0	5.0	0.0	0.0	0.0	133.7*	114.3*	77.9
GOLDEN HARVEST H-444W	19.6	68	0.0	2.0	0.0	0.0	0.0	132.8*	126.1**	80.7
DEKALB DK-56	22.2	60	0.0	3.3	0.0	--	--	132.5*	--	--
FONTANELLE W-5000	19.2	54	0.0	4.0	0.0	0.0	0.0	132.4*	108.9	79.5
CARGILL X15277	18.4	58	0.0	2.7	0.0	--	--	132.1*	--	--
GARRISON SG-932	19.3	60	0.0	1.7	0.0	0.0	--	131.9*	102.0	--
PIONEER BRAND HYBRID 8500	18.6	54	0.0	1.7	0.0	0.0	0.0	131.5*	124.6*	79.6
MFA 645	19.8	56	0.0	2.3	0.0	0.0	--	131.1*	120.9*	--
NORTHROP KING KS737	17.8	52	0.0	2.7	0.0	0.0	--	130.7*	110.0	--
GROAGRI GSA 1310A	19.5	50	0.0	2.7	0.0	0.0	0.0	130.0*	103.7	79.4
TRIUMPH TR 74CR	21.5	60	0.0	1.3	0.0	--	--	130.0*	--	--
ASGROW SEED TOFAZ##	20.4	56	0.0	3.0	0.0	0.0	0.0	129.5	112.7*	83.3*
NORTHROP KING KS714Y	18.0	54	0.0	3.7	0.0	0.0	--	129.1	113.4*	--
ASGROW SEED OSAGE##	18.7	60	0.0	2.3	0.0	0.0	0.0	128.8	107.0	92.0*
NC+ 7B81	19.3	48	0.0	3.3	0.0	--	--	128.7	--	--
GROAGRI GSC 3146	19.9	60	0.0	2.0	0.0	0.0	--	127.9	110.5	--
PIONEER BRAND HYBRID 8358	19.8	56	0.0	4.0	0.0	0.0	0.0	127.2	116.2*	91.7*
FUNK'S G 1616	18.6	66	0.0	2.0	0.0	0.0	--	127.1	120.8*	--
FONTANELLE GE-5571	20.4	58	0.0	2.0	0.0	0.0	0.0	126.3	113.7*	75.3
SUPER CROST SC30	19.0	58	0.0	3.7	0.0	0.0	--	125.8	121.3*	--
MFA GS-301A	19.8	48	0.0	2.3	0.0	0.0	0.0	125.8	105.8	91.1*
PIONEER BRAND HYBRID 8333	21.2	50	0.0	4.3	0.0	0.0	0.0	125.5	101.8	99.5*
GARRISON SGX-850	18.0	50	0.0	4.0	0.0	--	--	124.8	--	--
NC+ 472	20.4	54	0.0	2.3	0.0	0.0	--	124.7	97.0	--
ASGROW SEED XP5049	18.1	54	0.0	3.0	0.0	--	--	124.2	--	--
PIONEER BRAND HYBRID 8379	19.8	52	0.0	1.7	0.0	0.0	--	123.8	104.5	--
TRIUMPH TWO 66YG	19.4	56	0.0	2.7	0.0	--	--	123.6	--	--
GARRISON SGX-950	22.1	54	0.0	3.0	0.0	--	--	123.3	--	--
TRIUMPH TWO 64YG	19.6	48	0.0	2.7	0.0	--	--	122.9	--	--
DEKALB DK-48##	21.8	54	0.0	3.3	0.0	0.0	0.0	122.9	100.6	101.1*
FUNK'S G 1655	21.9	58	0.0	2.0	0.0	0.0	0.0	122.3	117.6*	95.3*
CARGILL 618Y	17.5	54	0.0	3.3	0.0	--	--	122.0	--	--
MFA GS-10##	18.6	54	0.0	4.3	0.0	0.0	0.0	120.9	110.3	72.4
ASGROW SEED GS712	20.0	60	0.0	2.0	0.0	0.0	0.0	118.8	98.9	89.9*
CARGILL 630	20.0	54	0.0	2.0	0.0	--	0.0	117.3	--	63.3
GOLDEN HARVEST H-520	18.9	54	0.0	2.0	0.0	0.0	0.0	116.7	92.6	82.9*
CARGILL 70##	18.9	50	0.0	2.3	0.0	0.0	0.0	116.6	106.4	105.7*
CARGILL 607E	19.5	48	0.0	3.7	0.0	0.0	--	113.6	106.9	--
SUPER CROST SC40	19.1	60	0.0	2.0	0.0	--	--	113.4	--	--
JMS HORIZON 103G	19.1	58	0.0	2.7	0.0	--	--	113.2	--	--
GARRISON SG-822	21.2	56	0.0	3.0	0.0	0.0	--	112.3	113.0*	--
WARNER W-744DR	21.9	58	0.0	5.0	0.0	--	--	107.1	--	--
JMS HORIZON 45G	17.6	56	0.0	1.3	0.0	--	--	106.7	--	--
AGRIPRO AP 9250	18.2	50	0.0	2.0	0.0	--	--	106.3	--	--
NORTHROP KING KS710	19.7	52	0.0	2.7	0.0	--	--	105.7	--	--
TRIAL AVERAGE	19.5	56	0.0	2.8	0.0	0.0	0.0	125.9	107.9	82.9
L.S.D. AT .05	1.6	5	NS	0.9	NS	NS	NS	16.2	15.1	30.3
C.V. %	5.2	5.0		18.6				8.0	8.6	

-- DATA NOT AVAILABLE.

** HIGHEST-YIELDING HYBRID IN THE TEST.

* HYBRID WHICH DID NOT YIELD SIGNIFICANTLY LESS THAN THE HIGHEST-YIELDING HYBRID IN THE TEST.

WIDELY CROWN HYBRID.

NS NOT SIGNIFICANT.

TABLE 3. PERFORMANCE OF GRAIN SORGHUM HYBRIDS EVALUATED NEAR HUGHESVILLE (PETTIS COUNTY) ON THE KENNY TEVIS FARM DURING 1989-90 AND NEAR LA MONTE (PETTIS COUNTY) ON THE VAN NATTA FARM DURING 1988.

PLANTED: 4 JUNE 1990.
 HARVESTED: 17 OCTOBER 1990.
 PLANTED POPULATION: 104,500 SEEDS/A.
 ROW SPACING: 30 INCHES.

FERTILIZER: N = 110; P2O5 = 50; K2O = 95.
 HERBICIDES: RAMROD + ATRAZINE.
 INSECTICIDE: NONE.
 GROWING SEASON RAINFALL: 17.94"; IRRIGATION: 0.00".

BRAND-HYBRID	1990				LODGING (%)			YIELD (BU/ACRE)		
	MOIS- TURE (%)	PLANT HGT. (IN)	OFF HEADS (%)	COMPT- NESS SCORE	1990	1989	1988	1990	1989	1988
CARGILL 575	14.1	58	0.5	2.7	0.0	--	--	138.8**	--	--
DEKALB DK-56	14.9	64	0.9	2.3	0.0	--	--	134.1*	--	--
TRIUMPH TWO 66YG	14.6	54	0.3	2.7	0.0	--	--	133.5*	--	--
CARGILL 847	15.4	56	1.1	2.3	0.0	0.0	--	131.5*	116.1*	--
MFA GS-301A	13.6	50	0.0	3.0	0.0	0.0	0.0	129.7*	105.7	80.2
NC+ 7B81	14.3	48	1.4	3.3	0.0	--	--	128.9*	--	--
GOLDEN HARVEST H-444W	14.2	64	1.4	2.3	0.0	0.0	0.0	128.7*	111.4*	83.4
ASGROW SEED OSAGE##	14.9	58	0.0	2.3	0.0	0.0	0.0	128.0*	106.7	97.5*
PIONEER BRAND HYBRID 8358	14.4	54	0.0	4.3	0.0	0.0	0.0	127.4*	110.7*	92.8*
PIONEER BRAND HYBRID 8260	14.4	62	1.5	4.3	0.0	0.0	0.0	127.2*	109.6*	83.2
GARRISON SG-932	14.2	58	1.1	2.0	0.0	0.0	--	125.8*	96.2	--
DEKALB DK-48##	15.6	54	0.5	2.3	0.0	0.0	0.0	125.4*	103.5	91.3*
WARNER W-917-E	15.3	66	0.7	2.0	0.0	0.0	--	123.8*	112.7*	--
GARRISON SGX-950	16.3	56	2.2	1.7	0.0	--	--	123.7*	--	--
PIONEER BRAND HYBRID 8379	13.9	54	1.0	2.3	0.0	0.0	--	122.8*	107.4	--
ASGROW SEED XP5049	14.0	58	1.4	3.0	0.0	--	--	122.7*	--	--
TRIUMPH TR 74CR	14.6	60	0.7	2.0	0.0	--	--	122.3*	--	--
FUNK'S G 1616	14.3	60	2.3	2.3	0.0	0.0	--	122.2*	111.7*	--
NORTHRUP KING KS710	14.8	52	0.3	2.0	0.0	--	--	122.2*	--	--
SUPER CROST SC40	15.2	58	0.9	2.3	0.0	--	--	121.4*	--	--
FONTANELLE G-5590	15.4	56	1.6	2.0	0.0	0.0	0.0	121.3*	94.5	82.0
GROAGRI GSA 1310A	13.5	52	0.5	3.3	0.0	0.0	0.0	121.3*	102.6	92.9*
GARRISON SG-822	14.2	56	0.6	2.7	0.0	0.0	--	120.8*	110.9*	--
GARRISON SGX-850	13.8	50	0.9	4.0	0.0	--	--	119.8	--	--
FUNK'S G 1607	13.8	58	1.5	3.0	0.0	0.0	--	119.4	97.1	--
JMS HORIZON 103G	14.9	60	0.0	2.7	0.0	--	--	119.0	--	--
NORTHRUP KING KS737	14.0	54	1.6	3.3	0.0	0.0	--	117.9	110.8*	--
MFA GS-10##	13.6	50	1.9	3.3	0.0	0.0	0.0	117.8	109.0	83.1
ASGROW SEED TOPAZ##	14.8	54	0.6	2.0	0.0	0.0	0.0	117.2	114.7*	81.8
CARGILL 70##	14.4	50	0.0	3.3	0.0	0.0	0.0	117.1	101.8	90.1*
MFA 645	14.5	56	1.6	2.0	0.0	0.0	--	115.7	98.3	--
WARNER W-744DR	16.1	56	1.7	4.3	0.0	--	--	115.5	--	--
TRIUMPH TWO 64YG	14.8	52	2.8	3.3	0.0	--	--	115.3	--	--
AGRIPRO AP 9250	13.9	50	4.1	1.7	0.0	--	--	114.3	--	--
PIONEER BRAND HYBRID 8500	14.6	52	0.7	2.0	0.0	0.0	0.0	113.9	101.6	97.6*
MFA 650	13.4	58	0.0	2.0	0.0	0.0	--	113.8	111.3*	--
PIONEER BRAND HYBRID 8333	15.2	52	0.0	4.0	0.0	0.0	0.0	113.7	110.1*	96.7*
FUNK'S G XSG 6006	15.6	66	0.0	2.3	0.0	--	--	112.9	--	--
FUNK'S G 1655	15.2	56	1.0	1.7	0.0	0.0	0.0	112.4	103.9	90.5*
JMS HORIZON 45G	13.7	52	1.3	1.7	0.0	--	--	112.0	--	--
FONTANELLE GE-5571	15.2	60	0.0	1.7	0.0	0.0	0.0	111.8	94.1	94.5*
ASGROW SEED GS712	15.0	60	2.0	2.7	0.0	0.0	0.0	111.0	98.6	92.6*
NC+ 472	13.6	50	0.0	2.3	0.0	0.0	--	109.8	109.6*	--
CARGILL 618Y	13.3	50	0.8	2.7	0.0	--	--	109.2	--	--
FONTANELLE W-5000	14.0	56	0.3	2.3	0.0	0.0	0.0	108.9	105.5	78.6
CARGILL 630	14.7	54	0.3	2.3	0.0	--	0.0	108.6	--	80.1
SUPER CROST SC30	15.2	52	0.5	2.3	0.0	0.0	--	108.1	110.8*	--
GOLDEN HARVEST H-520	14.3	56	1.2	2.3	0.0	0.0	0.0	108.1	103.5	93.0*
CARGILL X15277	14.6	58	1.0	2.7	0.0	--	--	107.4	--	--
CARGILL 607E	14.8	48	0.3	3.0	0.0	0.0	--	105.0	88.8	--
NORTHRUP KING KS714Y	14.6	56	0.2	3.7	0.0	0.0	--	104.5	97.1	--
GROAGRI GSC 3146	13.8	56	0.0	2.0	0.0	0.0	--	104.2	116.8*	--
TRIAL AVERAGE	14.5	56	0.9	2.6	0.0	0.0	0.0	118.6	103.7	86.8
L.S.D. AT .05	1.2	5	1.8	1.1	NS	NS	NS	18.8	13.9	14.8
C.V. %	5.0	5.5		25.1				9.9	8.3	

-- DATA NOT AVAILABLE.

** HIGHEST-YIELDING HYBRID IN THE TEST.

* HYBRID WHICH DID NOT YIELD SIGNIFICANTLY LESS THAN THE HIGHEST-YIELDING HYBRID IN THE TEST.

WIDELY GROWN HYBRID.

NS NOT SIGNIFICANT.

TABLE 4. PERFORMANCE RECORD OF GRAIN SORGHUM HYBRIDS EVALUATED AT TWO NORTH-CENTRAL MISSOURI LOCATIONS (SPICKARD AND HUGHESVILLE) DURING 1990.

PLANTED POPULATION: 104,500 SEEDS/A.
 ROW SPACING: 30 INCHES.
 HERBICIDES: RAMROD + ATRAZINE.

BRAND-HYBRID	MOISTURE (%)			LODGING (%)			YIELD (BU/ACRE)		
	SPICKARD	HUGHESVILLE	MEAN	SPICKARD	HUGHESVILLE	MEAN	SPICKARD	HUGHESVILLE	MEAN
CARGILL 575	19.0	14.1	16.6	0.0	0.0	0.0	143.1*	138.8**	141.0**
CARGILL 847	18.6	15.4	17.0	0.0	0.0	0.0	139.6*	131.5*	135.6*
WARNER W-917-E	20.5	15.3	17.9	0.0	0.0	0.0	146.2**	123.8*	135.0*
DEKALB DK-56	22.2	14.9	18.6	0.0	0.0	0.0	132.5*	134.1*	133.3*
FONTANELLE G-5590	19.1	15.4	17.2	0.0	0.0	0.0	140.9*	121.3*	131.1*
GOLDEN HARVEST H-444W	19.6	14.2	16.9	0.0	0.0	0.0	132.8*	128.7*	130.8*
PIONEER BRAND HYBRID 8260	19.8	14.4	17.1	0.0	0.0	0.0	133.7*	127.2*	130.4*
GARRISON SG-932	19.3	14.2	16.8	0.0	0.0	0.0	131.9*	125.8*	128.8*
NC+ 7B81	19.3	14.3	16.8	0.0	0.0	0.0	128.7	128.9*	128.8*
TRIUMPH TWO 66YG	19.4	14.6	17.0	0.0	0.0	0.0	123.6	133.5*	128.6*
ASGROW SEED OSAGE##	18.7	14.9	16.8	0.0	0.0	0.0	128.8	128.0*	128.4*
FUNK'S G 1607	18.1	13.8	16.0	0.0	0.0	0.0	137.0*	119.4	128.2
MFA 650	19.3	13.4	16.4	0.0	0.0	0.0	142.1*	113.8	128.0
FUNK'S G XSG 6006	19.2	15.6	17.4	0.0	0.0	0.0	143.1*	112.9	128.0
MFA GS-301A	19.8	13.6	16.7	0.0	0.0	0.0	125.8	129.7*	127.8
PIONEER BRAND HYBRID 8358	19.8	14.4	17.1	0.0	0.0	0.0	127.2	127.4*	127.3
TRIUMPH TR 74CR	21.5	14.6	18.0	0.0	0.0	0.0	130.0*	122.3*	126.2
GROAGRI GSA 1310A	19.5	13.5	16.5	0.0	0.0	0.0	130.0*	121.3*	125.6
FUNK'S G 1616	18.6	14.3	16.4	0.0	0.0	0.0	127.1	122.2*	124.6
NORTHTRUP KING KS737	17.8	14.0	15.9	0.0	0.0	0.0	130.7*	117.9	124.3
DEKALB DK-48##	21.8	15.6	18.7	0.0	0.0	0.0	122.9	125.4*	124.2
GARRISON SGX-950	22.1	16.3	19.2	0.0	0.0	0.0	123.3	123.7*	123.5
ASGROW SEED TOPAZ##	20.4	14.8	17.6	0.0	0.0	0.0	129.5	117.2	123.4
MFA 645	19.8	14.5	17.2	0.0	0.0	0.0	131.1*	115.7	123.4
ASGROW SEED XP5049	18.1	14.0	16.0	0.0	0.0	0.0	124.2	122.7*	123.4
PIONEER BRAND HYBRID 8379	19.8	13.9	16.8	0.0	0.0	0.0	123.8	122.8*	123.3
PIONEER BRAND HYBRID 8500	18.6	14.6	16.6	0.0	0.0	0.0	131.5*	113.9	122.7
GARRISON SGX-850	18.0	13.8	15.9	0.0	0.0	0.0	124.8	119.8	122.3
FONTANELLE W-5000	19.2	14.0	16.6	0.0	0.0	0.0	132.4*	108.9	120.6
CARGILL X15277	18.4	14.6	16.5	0.0	0.0	0.0	132.1*	107.4	119.8
PIONEER BRAND HYBRID 8333	21.2	15.2	18.2	0.0	0.0	0.0	125.5	113.7	119.6
MFA GS-10##	18.6	13.6	16.1	0.0	0.0	0.0	120.9	117.8	119.4
TRIUMPH TWO 64YG	19.6	14.8	17.2	0.0	0.0	0.0	122.9	115.3	119.1
FONTANELLE GE-5571	20.4	15.2	17.8	0.0	0.0	0.0	126.3	111.8	119.0
FUNK'S G 1655	21.9	15.2	18.6	0.0	0.0	0.0	122.3	112.4	117.4
SUPER CROST SC40	19.1	15.2	17.2	0.0	0.0	0.0	113.4	121.4*	117.4
NC+ 472	20.4	13.6	17.0	0.0	0.0	0.0	124.7	109.8	117.2
SUPER CROST SC30	19.0	15.2	17.1	0.0	0.0	0.0	125.8	108.1	117.0
CARGILL 70##	18.9	14.4	16.6	0.0	0.0	0.0	116.6	117.1	116.8
NORTHTRUP KING KS714Y	18.0	14.6	16.3	0.0	0.0	0.0	129.1	104.5	116.8
GARRISON SG-822	21.2	14.2	17.7	0.0	0.0	0.0	112.3	120.8*	116.6
JMS HORIZON 103G	19.1	14.9	17.0	0.0	0.0	0.0	113.2	119.0	116.1
GROAGRI GSC 3146	19.9	13.8	16.8	0.0	0.0	0.0	127.9	104.2	116.0
CARGILL 618Y	17.5	13.3	15.4	0.0	0.0	0.0	122.0	109.2	115.6
ASGROW SEED GS712	20.0	15.0	17.5	0.0	0.0	0.0	118.8	111.0	114.9
NORTHTRUP KING KS710	19.7	14.8	17.2	0.0	0.0	0.0	105.7	122.2*	114.0
CARGILL 630	20.0	14.7	17.4	0.0	0.0	0.0	117.3	108.6	113.0
GOLDEN HARVEST H-520	18.9	14.3	16.6	0.0	0.0	0.0	116.7	108.1	112.4
WARNER W-744DR	21.9	16.1	19.0	0.0	0.0	0.0	107.1	115.5	111.3
AGRIPRO AP 9250	18.2	13.9	16.0	0.0	0.0	0.0	106.3	114.3	110.3
JMS HORIZON 45G	17.6	13.7	15.6	0.0	0.0	0.0	106.7	112.0	109.4
CARGILL 607E	19.5	14.8	17.2	0.0	0.0	0.0	113.6	105.0	109.3
TRIAL AVERAGE	19.5	14.5	17.0	0.0	0.0	0.0	125.9	118.6	122.0
L.S.D. AT .05	1.6	1.2	0.8	NS	NS	NS	16.2	18.8	12.6
C.V. %	5.2	5.0	5.9				8.0	9.9	9.7

** HIGHEST-YIELDING HYBRID IN THE TEST.
 * HYBRID WHICH DID NOT YIELD SIGNIFICANTLY LESS THAN THE HIGHEST-YIELDING HYBRID IN THE TEST.
 ## WIDELY GROWN HYBRID.
 NS NOT SIGNIFICANT.

TABLE 5. PERFORMANCE OF GRAIN SORGHUM HYBRIDS EVALUATED NEAR NEVADA (VERNON COUNTY) ON THE GILBERT WILSON FARM DURING 1988-90.

PLANTED: 12 JUNE 1990.
 HARVESTED: 15 OCTOBER 1990.
 PLANTED POPULATION: 104,500 SEEDS/A.
 ROW SPACING: 30 INCHES.

FERTILIZER: N = 125; P2O5 = 70; K2O = 70.
 HERBICIDES: RAMROD + ATRAZINE.
 INSECTICIDE: NONE.
 GROWING SEASON RAINFALL: 10.10"; IRRIGATION: 0.00".

BRAND-HYBRID	1990				LODGING (%)			YIELD (BU/ACRE)		
	MOIS- TURE (%)	PLANT HGT. (IN)	OFF HEADS (%)	COMPT- NESS SCORE	1990	1989	1988	1990	1989	1988
	TAYLOR EVANS T-E 77-E	16.7	56	0.0	2.7	0.0	--	--	81.6**	--
TAYLOR EVANS T-E 76	16.5	50	0.0	4.3	0.0	0.0	--	80.8*	98.3	--
MFA 645	17.1	55	0.3	3.3	0.0	0.0	--	79.1*	117.9*	--
CARGILL 575	15.7	56	0.3	3.7	0.0	--	--	78.9*	--	--
GARRISON SG-932	17.6	54	0.0	3.3	0.0	0.0	--	78.7*	108.6	--
WARNER W-744DR	18.2	52	0.0	4.7	0.0	--	--	78.3*	--	--
GROAGRI GSC 3146	15.5	54	0.0	2.3	0.0	0.0	--	78.1*	108.6	--
FUNK'S G 1607	15.8	54	0.0	4.0	0.0	0.0	--	76.7*	93.0	--
GOLDEN HARVEST H-444W	16.6	58	0.0	2.3	0.0	0.0	0.0	76.7*	127.7**	111.8*
ASGROW SEED GS712	17.9	56	0.0	2.3	0.0	0.0	0.0	76.3*	105.3	117.8*
MFA GS-10##	15.7	50	0.0	4.7	0.0	0.0	0.0	75.9*	106.2	111.9*
JACQUES 606E	16.3	54	0.0	3.0	0.0	--	--	75.9*	--	--
NC+ 7B81	16.5	44	0.0	3.7	0.0	--	--	75.7*	--	--
ASGROW SEED XP5049	15.9	54	0.0	3.7	0.0	--	--	75.1*	--	--
S-BRAND EXP.46-89	18.5	58	0.0	2.0	0.0	--	--	75.0*	--	--
GARRISON SGX-850	15.7	48	0.0	4.7	0.0	--	--	74.9*	--	--
FUNK'S G 1616	16.1	60	0.0	3.3	0.0	0.0	--	74.5*	113.8	--
S-BRAND SM74	16.9	51	0.0	3.3	0.0	0.0	--	74.4*	102.6	--
JMS HORIZON 103G	17.3	58	0.0	2.7	0.0	--	--	74.0*	--	--
CARGILL 70##	16.0	48	0.0	3.3	0.0	0.0	0.0	73.9*	88.9	100.2
GARRISON SG-822	15.6	54	0.7	3.0	0.0	0.0	--	73.8*	112.5	--
CARGILL X15277	16.1	55	0.0	4.0	0.0	--	--	73.7*	--	--
GROAGRI GSA 1310A	16.0	48	0.0	4.0	0.0	0.0	0.0	73.6*	92.4	121.3*
TAYLOR EVANS T-E DINERO	17.0	54	0.0	3.3	0.0	--	--	73.6*	--	--
FUNK'S G 1655	17.2	52	0.0	2.3	0.0	0.0	0.0	73.1*	108.8	102.4
GARRISON SGX-950	19.2	54	0.6	2.0	0.0	--	--	72.9*	--	--
ORO G XTRA	16.9	54	0.0	2.7	0.0	--	--	72.8*	--	--
ASGROW SEED OSAGE##	15.2	54	0.0	4.0	0.0	0.0	0.0	72.7*	105.0	102.0
PIONEER BRAND HYBRID 8333	17.5	48	0.0	4.0	0.0	0.0	0.0	72.2*	104.5	111.6*
TAYLOR EVANS T-E X490	17.0	58	0.4	3.0	0.0	--	--	71.6*	--	--
ORO BARON	16.5	54	0.4	2.7	0.0	--	--	71.2*	--	--
NORTHRUP KING KS737	15.7	50	0.0	4.3	0.0	0.0	--	70.8*	107.5	--
MFA 650	15.5	56	0.0	4.0	0.0	0.0	--	70.3*	101.1	--
TAYLOR EVANS T-E Y-75	17.4	54	0.3	3.3	0.0	0.0	0.0	69.8*	104.5	120.1*
JACQUES 477-W	16.1	54	0.0	3.7	0.0	--	--	69.8*	--	--
MFA GS-301A	15.9	50	0.0	4.0	0.0	0.0	0.0	69.3*	95.6	94.8
CARGILL 630	18.4	54	0.0	3.3	0.0	--	0.0	69.3*	--	97.2
NORTHRUP KING KS714Y	15.2	52	0.0	4.7	0.0	0.0	--	69.2*	102.2	--
PIONEER BRAND HYBRID 8500	16.0	54	0.0	4.7	0.0	0.0	0.0	69.2*	99.9	113.8*
CARGILL 618Y	14.3	52	0.3	4.0	0.0	--	--	68.6*	--	--
JACQUES 411	15.5	50	0.3	4.0	0.0	--	--	68.5*	--	--
CARGILL 847	16.9	56	0.0	3.3	0.0	0.0	--	68.3*	100.4	--
PIONEER BRAND HYBRID 8260	17.5	52	0.0	5.0	0.0	0.0	0.0	67.8	113.2	104.0
DEKALB DK-41Y##	17.8	54	0.0	3.7	0.0	--	--	67.4	--	--
DEKALB DK-56	17.8	60	0.0	3.0	0.0	--	--	67.3	--	--
FUNK'S G XSG 6006	17.8	62	0.0	3.3	0.0	--	--	67.2	--	--
DEKALB DK-48##	18.0	54	0.0	2.7	0.0	0.0	0.0	67.0	101.6	125.0*
S-BRAND SM69	17.9	54	0.0	2.3	0.0	--	--	66.8	--	--
PIONEER BRAND HYBRID 8358	15.9	50	0.0	4.0	0.0	0.0	0.0	66.6	110.2	125.3*
ASGROW SEED TOPAZ##	17.2	54	0.0	3.3	0.0	0.0	0.0	66.4	107.6	114.5*
GOLDEN HARVEST H-520	17.3	52	0.0	2.7	0.0	0.0	0.0	66.3	94.6	122.3*
CARGILL 607E	17.3	48	0.0	4.0	0.0	0.0	--	65.8	89.5	--
PIONEER BRAND HYBRID 8379	17.0	48	0.0	2.7	0.0	0.0	--	65.6	111.1	--
NORTHRUP KING KS710	15.9	48	0.0	2.7	0.0	--	--	65.0	--	--
NC+ 472	16.8	48	0.0	3.0	0.0	0.0	--	63.3	109.7	--
JMS HORIZON 45G	15.8	52	0.0	2.0	0.0	--	--	62.1	--	--
TRIAL AVERAGE	16.7	53	0.0	3.4	0.0	0.0	0.0	71.8	102.7	106.8
L.S.D. AT .05	1.7	4	0.4	1.2	NS	NS	NS	14.1	12.6	22.7
C.V. %	6.4	4.3		22.7				12.1	7.6	

-- DATA NOT AVAILABLE.

** HIGHEST-YIELDING HYBRID IN THE TEST.

* HYBRID WHICH DID NOT YIELD SIGNIFICANTLY LESS THAN THE HIGHEST-YIELDING HYBRID IN THE TEST.

WIDELY GROWN HYBRID.

NS NOT SIGNIFICANT.

TABLE 6. PERFORMANCE OF GRAIN SORGHUM HYBRIDS EVALUATED NEAR LAMAR (BARTON COUNTY) ON THE WALLY NORTON FARM DURING 1988-90.

PLANTED: 11 JUNE 1990.
 HARVESTED: 16 OCTOBER 1990.
 PLANTED POPULATION: 104,500 SEEDS/A.
 ROW SPACING: 30 INCHES.

FERTILIZER: N = 80; P2O5 = 40; K2O = 80.
 HERBICIDES: RAMROD + ATRAZINE.
 INSECTICIDE: NONE.
 GROWING SEASON RAINFALL: 14.97"; IRRIGATION: 0.00".

BRAND-HYBRID	1990				LODGING (%)			YIELD (BU/ACRE)		
	MOIS- TURE (%)	PLANT HGT. (IN)	OFF HEADS (%)	COMPT- NESS SCORE	1990	1989	1988	1990	1989	1988
	GARRISON SG-932	14.8	52	0.0	2.0	0.0	0.0	--	123.4**	106.2
FUNK'S G 1616	15.2	60	0.0	2.0	0.0	0.0	--	121.3*	117.8*	--
TAYLOR EVANS T-E DINERO	13.5	48	0.0	2.3	0.0	--	--	117.6*	--	--
S-BRAND SM74	15.1	54	0.0	2.0	0.0	0.0	--	117.3*	101.4	--
TAYLOR EVANS T-E X490	13.2	52	0.0	2.3	0.0	--	--	117.2*	--	--
CARGILL 847	14.5	54	0.0	3.0	13.1	0.0	--	117.1*	107.1	--
GOLDEN HARVEST H-444W	14.1	54	0.0	2.0	0.0	0.0	0.0	115.7*	124.4*	128.2*
ASGROW SEED GS712	14.9	50	0.0	1.3	0.0	0.0	0.0	114.7*	109.5	134.1*
JACQUES 606E	14.3	54	0.0	2.7	0.0	--	--	113.2*	--	--
TAYLOR EVANS T-E 76	14.2	48	0.0	3.7	0.0	0.0	--	113.1*	103.5	--
GARRISON SG-822	14.4	48	0.0	3.0	0.0	0.0	--	112.9*	126.5*	--
FUNK'S G 1655	16.2	50	0.0	2.0	0.0	0.0	0.0	112.7*	121.0*	124.7*
MFA 650	13.4	54	0.0	3.0	0.0	0.0	--	112.5*	96.7	--
TAYLOR EVANS T-E 77-E	14.2	50	0.0	3.3	0.0	--	--	110.1*	--	--
MFA GS-10##	13.8	46	0.0	4.3	0.0	0.0	0.0	109.5*	104.7	116.3
S-BRAND SM69	14.6	48	0.0	2.7	2.8	--	--	108.9*	--	--
GARRISON SGX-850	13.6	48	0.0	3.7	0.0	--	--	108.9*	--	--
PIONEER BRAND HYBRID 8379	14.5	48	0.0	2.7	0.0	0.0	--	108.7*	116.2*	--
GOLDEN HARVEST H-520	13.9	48	0.0	2.7	0.0	0.0	0.0	108.7*	105.9	111.6
CARGILL 575	14.2	50	0.0	2.3	0.0	--	--	108.5*	--	--
ASGROW SEED XP5049	14.4	50	0.0	3.0	0.0	--	--	107.9*	--	--
S-BRAND EXP.46-89	15.9	54	0.0	2.0	0.0	--	--	107.9*	--	--
ORO G XTRA	15.1	54	0.0	2.7	0.0	--	--	107.3	--	--
NC+ 7B81	14.6	46	0.0	3.0	0.0	--	--	107.1	--	--
DEKALB DK-48##	15.4	48	0.0	2.3	0.0	0.0	0.0	107.0	103.7	108.5
DEKALB DK-56	16.2	58	0.0	3.0	0.0	--	--	106.9	--	--
WARNER W-744DR	15.4	48	0.0	4.7	0.0	--	--	105.9	--	--
GROAGRI GSA 1310A	13.8	48	0.0	2.3	0.0	0.0	0.0	105.9	103.4	120.6*
CARGILL X15277	15.0	54	0.0	3.7	0.0	--	--	105.7	--	--
TAYLOR EVANS T-E Y-75	15.1	52	0.0	2.3	6.1	0.0	0.0	105.6	122.7*	123.2*
GARRISON SGX-950	16.0	48	0.0	2.3	0.0	--	--	105.3	--	--
FUNK'S G 1607	14.5	50	0.0	2.7	0.0	0.0	--	105.3	107.4	--
JACQUES 477-W	14.0	50	0.2	2.3	0.0	--	--	104.7	--	--
NORTHROP KING KS710	13.7	44	0.0	2.7	0.0	--	--	104.3	--	--
MFA 645	15.1	48	0.0	2.7	0.0	0.0	--	104.2	118.4*	--
GROAGRI GSC 3146	14.7	50	0.6	2.0	0.0	0.0	--	104.1	106.7	--
MFA GS-301A	13.8	48	0.3	2.7	0.0	0.0	0.0	103.4	103.0	114.2
ASGROW SEED OSAGE##	14.8	50	0.0	3.0	3.0	0.0	0.0	102.9	122.0*	122.2*
CARGILL 70##	14.9	48	0.0	2.0	0.0	0.0	0.0	102.3	102.3	110.2
JACQUES 411	13.3	48	0.0	3.7	0.0	--	--	101.9	--	--
ORO BARON	15.2	54	0.0	3.0	5.1	--	--	101.6	--	--
NC+ 472	14.5	48	0.0	2.0	0.0	0.0	--	100.9	108.1	--
ASGROW SEED TOPAZ##	14.0	48	0.0	2.7	0.0	0.0	0.0	100.6	117.2*	131.5*
PIONEER BRAND HYBRID 8358	14.5	48	0.0	3.3	3.0	0.0	0.0	100.2	114.1*	126.4*
CARGILL 630	15.4	48	0.0	2.0	0.0	--	0.0	99.3	--	123.9*
PIONEER BRAND HYBRID 8500	15.3	50	0.0	3.0	0.0	0.0	0.0	98.7	103.4	128.1*
CARGILL 607E	14.3	48	0.0	2.3	0.0	0.0	--	97.3	94.3	--
FUNK'S G XSG 6006	14.5	58	0.0	3.0	0.0	--	--	96.7	--	--
PIONEER BRAND HYBRID 8333	15.8	46	0.0	3.0	0.0	0.0	0.0	96.7	106.3	124.7*
JMS HORIZON 103G	13.3	50	0.0	2.7	0.0	--	--	96.6	--	--
DEKALB DK-41Y##	15.2	48	0.0	2.7	0.0	--	--	96.3	--	--
NORTHROP KING KS737	13.1	50	0.0	3.7	0.0	0.0	--	95.7	114.4*	--
PIONEER BRAND HYBRID 8260	14.4	48	0.0	4.7	0.0	0.0	0.0	95.4	99.8	115.2
CARGILL 618Y	12.9	48	0.0	2.7	0.0	--	--	90.3	--	--
JMS HORIZON 45G	13.8	48	0.0	2.0	0.0	--	--	85.2	--	--
NORTHROP KING KS714Y	13.1	48	0.0	4.0	0.0	0.0	--	84.2	114.1*	--
TRIAL AVERAGE	14.5	50	0.0	2.8	0.6	0.0	0.0	105.6	108.3	122.1
L.S.D. AT .05	1.3	4	0.2	1.0	4.2	NS	NS	16.0	14.8	18.6
C.V. %	5.7	4.3		22.1				9.3	8.5	

-- DATA NOT AVAILABLE.
 ** HIGHEST-YIELDING HYBRID IN THE TEST.
 * HYBRID WHICH DID NOT YIELD SIGNIFICANTLY LESS THAN THE HIGHEST-YIELDING HYBRID IN THE TEST.
 ## WIDELY GROWN HYBRID.
 NS NOT SIGNIFICANT.

TABLE 7. PERFORMANCE RECORD OF GRAIN SORGHUM HYBRIDS EVALUATED AT TWO SOUTHWEST MISSOURI LOCATIONS (NEVADA AND LAMAR) DURING 1990.

PLANTED POPULATION: 104,500 SEEDS/A.
 ROW SPACING: 30 INCHES.
 HERBICIDES: RAMROD + ATRAZINE.

BRAND-HYBRID	MOISTURE (%)			LODGING (%)			YIELD (BU/ACRE)		
	NEVADA	LAMAR	MEAN	NEVADA	LAMAR	MEAN	NEVADA	LAMAR	MEAN
GARRISON SG-932	17.6	14.8	16.2	0.0	0.0	0.0	78.7*	123.4**	101.1**
FUNK'S G 1616	16.1	15.2	15.6	0.0	0.0	0.0	74.5*	121.3*	97.9*
TAYLOR EVANS T-E 76	16.5	14.2	15.4	0.0	0.0	0.0	80.8*	113.1*	97.0*
GOLDEN HARVEST H-444W	16.6	14.1	15.4	0.0	0.0	0.0	76.7*	115.7*	96.2*
S-BRAND SM74	16.9	15.1	16.0	0.0	0.0	0.0	74.4*	117.3*	95.9*
TAYLOR EVANS T-E 77-E	16.7	14.2	15.4	0.0	0.0	0.0	81.6**	110.1*	95.9*
TAYLOR EVANS T-E DINERO	17.0	13.5	15.2	0.0	0.0	0.0	73.6*	117.6*	95.6*
ASGROW SEED GS712	17.9	14.9	16.4	0.0	0.0	0.0	76.3*	114.7*	95.5*
JACQUES 606E	16.3	14.3	15.3	0.0	0.0	0.0	75.9*	113.2*	94.6*
TAYLOR EVANS T-E X490	17.0	13.2	15.1	0.0	0.0	0.0	71.6*	117.2*	94.4*
CARGILL 575	15.7	14.2	15.0	0.0	0.0	0.0	78.9*	108.5*	93.7*
GARRISON SG-822	15.6	14.4	15.0	0.0	0.0	0.0	73.8*	112.9*	93.4*
FUNK'S G 1655	17.2	16.2	16.7	0.0	0.0	0.0	73.1*	112.7*	92.9*
MFA GS-10##	15.7	13.8	14.8	0.0	0.0	0.0	75.9*	109.5*	92.7*
CARGILL 847	16.9	14.5	15.7	0.0	13.1	6.6	68.3*	117.1*	92.7*
WARNER W-744DR	18.2	15.4	16.8	0.0	0.0	0.0	78.3*	105.9	92.1*
GARRISON SGX-850	15.7	13.6	14.6	0.0	0.0	0.0	74.9*	108.9*	91.9*
MFA 645	17.1	15.1	16.1	0.0	0.0	0.0	79.1*	104.2	91.7*
ASGROW SEED XP5049	15.9	14.4	15.2	0.0	0.0	0.0	75.1*	107.9*	91.5*
S-BRAND EXP.46-89	18.5	15.9	17.2	0.0	0.0	0.0	75.0*	107.9*	91.5*
MFA 650	15.5	13.4	14.4	0.0	0.0	0.0	70.3*	112.5*	91.4*
NC+ 7B81	16.5	14.6	15.6	0.0	0.0	0.0	75.7*	107.1	91.4*
GROAGRI GSC 3146	15.5	14.7	15.1	0.0	0.0	0.0	78.1*	104.1	91.1*
FUNK'S G 1607	15.8	14.5	15.2	0.0	0.0	0.0	76.7*	105.3	91.0*
ORO G XTRA	16.9	15.1	16.0	0.0	0.0	0.0	72.8*	107.3	90.0
PROAGRI GSA 1310A	16.0	13.8	14.9	0.0	0.0	0.0	73.6*	105.9	89.8
CARGILL X15277	16.1	15.0	15.6	0.0	0.0	0.0	73.7*	105.7	89.7
GARRISON SGX-950	19.2	16.0	17.6	0.0	0.0	0.0	72.9*	105.3	89.1
CARGILL 70##	16.0	14.9	15.4	0.0	0.0	0.0	73.9*	102.3	88.1
S-BRAND SM69	17.9	14.6	16.2	0.0	2.8	1.4	66.8	108.9*	87.9
ASGROW SEED OSAGE##	15.2	14.8	15.0	0.0	3.0	1.5	72.7*	102.9	87.8
TAYLOR EVANS T-E Y-75	17.4	15.1	16.2	0.0	6.1	3.0	69.8*	105.6	87.7
GOLDEN HARVEST H-520	17.3	13.9	15.6	0.0	0.0	0.0	66.3	108.7*	87.5
JACQUES 477-W	16.1	14.0	15.0	0.0	0.0	0.0	69.8*	104.7	87.3
PIONEER BRAND HYBRID 8379	17.0	14.5	15.8	0.0	0.0	0.0	65.6	108.7*	87.2
DEKALB DK-56	17.8	16.2	17.0	0.0	0.0	0.0	67.3	106.9	87.1
DEKALB DK-48##	18.0	15.4	16.7	0.0	0.0	0.0	67.0	107.0	87.0
ORO BARON	16.5	15.2	15.8	0.0	5.1	2.6	71.2*	101.6	86.4
MFA GS-301A	15.9	13.8	14.8	0.0	0.0	0.0	69.3*	103.4	86.4
JMS HORIZON 103G	17.3	13.3	15.3	0.0	0.0	0.0	74.0*	96.6	85.3
JACQUES 411	15.5	13.3	14.4	0.0	0.0	0.0	68.5*	101.9	85.2
NORTHRUP KING KS710	15.9	13.7	14.8	0.0	0.0	0.0	65.0	104.3	84.6
PIONEER BRAND HYBRID 8333	17.5	15.8	16.6	0.0	0.0	0.0	72.2*	96.7	84.4
CARGILL 630	18.4	15.4	16.9	0.0	0.0	0.0	69.3*	99.3	84.3
PIONEER BRAND HYBRID 8500	16.0	15.3	15.6	0.0	0.0	0.0	69.2*	98.7	84.0
ASGROW SEED TOPAZ##	17.2	14.0	15.6	0.0	0.0	0.0	66.4	100.6	83.5
PIONEER BRAND HYBRID 8358	15.9	14.5	15.2	0.0	3.0	1.5	66.6	100.2	83.4
NORTHRUP KING KS737	15.7	13.1	14.4	0.0	0.0	0.0	70.8*	95.7	83.2
NC+ 472	16.8	14.5	15.6	0.0	0.0	0.0	63.3	100.9	82.1
FUNK'S G XSG 6006	17.8	14.5	16.2	0.0	0.0	0.0	67.2	96.7	82.0
CARGILL 607E	17.3	14.3	15.8	0.0	0.0	0.0	65.8	97.3	81.6
DEKALB DK-41Y##	17.8	15.2	16.5	0.0	0.0	0.0	67.4	96.3	81.8
PIONEER BRAND HYBRID 8260	17.5	14.4	16.0	0.0	0.0	0.0	67.8	95.4	81.6
CARGILL 618Y	14.3	12.9	13.6	0.0	0.0	0.0	68.6*	90.3	79.4
NORTHRUP KING KS714Y	15.2	13.1	14.2	0.0	0.0	0.0	69.2*	84.2	76.7
JMS HORIZON 45G	15.8	13.8	14.8	0.0	0.0	0.0	62.1	85.2	73.6
TRIAL AVERAGE	16.7	14.5	15.6	0.0	0.6	0.3	71.8	105.6	85.3
L.S.D. AT .05	1.7	1.3	1.1	NS	4.2	2.1	14.1	16.0	10.4
C.V. %	6.4	5.7	6.1				12.1	9.3	10.4

** HIGHEST-YIELDING HYBRID IN THE TEST.
 * HYBRID WHICH DID NOT YIELD SIGNIFICANTLY LESS THAN THE HIGHEST-YIELDING HYBRID IN THE TEST.
 ## WIDELY GROWN HYBRID.
 NS NOT SIGNIFICANT.

TABLE 8. PERFORMANCE OF GRAIN SORGHUM HYBRIDS EVALUATED NEAR ORAN (SCOTT COUNTY) ON THE GLENN NOTHDURFT FARM DURING 1988-90.

PLANTED: 1 JUNE 1990.
 HARVESTED: 5 OCTOBER 1990.
 PLANTED POPULATION: 104,500 SEEDS/A.
 ROW SPACING: 30 INCHES.

FERTILIZER: N = 140; P2O5 = 45; K2O = 60.
 HERBICIDES: RAMROD + ATRAZINE.
 INSECTICIDE: NONE.
 GROWING SEASON RAINFALL: 9.34"; IRRIGATION: 6.00".

BRAND-HYBRID	1990				LODGING (%)			YIELD (BU/ACRE)		
	MOIS- TURE (%)	PLANT HGT. (IN)	OFF HEADS (%)	COMPT- NESS SCORE	1990	1989	1988	1990	1989	1988
	CARGILL X15277	13.3	58	0.4	2.0	0.0	0.0	0.0	160.8**	162.5**
DEKALB DK-60	14.4	59	0.0	2.3	0.0	0.0	--	154.1*	151.6*	--
GARRISON SGX-850	13.9	52	0.0	4.0	0.0	--	--	153.9*	--	--
PIONEER BRAND HYBRID 8230	14.2	55	0.2	1.7	0.0	0.0	0.0	150.9*	130.6	128.0*
PIONEER BRAND HYBRID 8333	14.6	51	0.0	3.7	0.0	0.0	0.0	148.7*	155.6*	129.3*
DELTAPINE 6012XS	15.4	60	0.0	3.7	0.0	--	--	146.9*	--	--
ASGROW SEED TOPAZ##	14.2	51	0.0	2.7	0.0	0.0	0.0	148.2*	148.7*	120.2*
AGRATECH 805WG	14.9	55	0.0	3.3	0.0	0.0	--	145.2*	134.7	--
CARGILL 70##	15.3	57	0.0	2.7	0.0	0.0	0.0	144.9*	149.3*	121.1*
CARGILL 575	14.0	56	0.2	3.0	0.0	--	--	142.0*	--	--
AGRATECH GK 802G	15.1	57	0.0	2.0	0.0	0.0	0.0	141.3*	147.2*	115.7
McCURDY M737	14.8	50	0.0	3.3	0.0	0.0	--	141.0*	154.6*	--
DEKALB DK-56	15.2	61	1.1	2.0	0.0	--	--	140.5*	--	--
GARRISON SGX-950	15.4	55	0.4	1.7	0.0	--	--	140.4*	--	--
CARGILL 847	14.3	55	0.0	1.7	0.1	0.0	--	139.9*	162.1*	--
MFA GS-10##	13.7	52	0.2	3.7	0.0	0.0	0.0	139.2*	154.8*	112.4
GARRISON SG-822	14.5	60	0.0	3.7	0.0	--	--	137.9*	--	--
ASGROW SEED XP5049	14.4	53	0.4	3.7	0.0	--	--	137.7*	--	--
DELTAPINE G-1616	16.0	61	0.0	1.7	0.0	--	--	137.7*	--	--
NORTHRUP KING KS710	14.4	52	0.0	3.3	0.0	--	--	137.4*	--	--
MFA GS-301A	13.9	52	0.0	2.3	0.0	0.0	0.0	137.3*	142.8	121.5*
MFA 645	14.8	57	0.0	2.0	0.0	0.0	--	136.9*	151.0*	--
McCURDY M650W	14.7	56	0.0	3.0	0.0	--	--	136.3*	--	--
JACQUES 411	13.9	54	0.4	3.3	0.0	0.0	0.0	135.2*	145.6*	124.5*
NORTHRUP KING KS737	14.8	58	0.0	3.0	0.0	0.0	--	134.8*	136.8	--
CAPEHART CREAM	14.3	54	0.8	3.7	0.0	--	--	134.6*	--	--
PIONEER BRAND HYBRID 8313	14.6	54	0.4	4.0	0.0	--	--	134.0*	--	--
McCURDY M757	13.3	59	0.0	1.7	0.0	--	--	131.3	--	--
ASGROW SEED OSAGE##	16.5	56	0.0	2.0	0.0	0.0	0.0	130.6	154.2*	126.7*
HYPERFORMER HSC CHEROKEE	14.7	50	0.0	3.3	0.0	0.0	0.0	129.6	152.3*	125.6*
GROAGRI GSC 3146	14.0	54	1.1	2.0	0.0	0.0	--	129.2	154.2*	--
SUPER CROST SC43	14.5	54	0.0	2.0	0.0	0.0	--	128.2	155.4*	--
AGRATECH GK 712G	15.5	52	1.0	2.7	0.0	0.0	0.0	127.9	146.8*	122.5*
GROAGRI GSA 1310A	13.9	49	0.0	3.0	0.0	0.0	0.0	127.8	144.5*	112.8
MFA 650	15.5	56	0.0	2.7	0.0	0.0	--	127.8	153.0*	--
HYPERFORMER 1225DR	14.6	55	0.0	2.0	0.0	0.0	0.0	127.2	146.9*	119.6*
CAPEHART CHALLENGER	14.0	55	0.0	2.0	0.0	0.0	0.0	127.1	155.5*	120.0*
NORTHRUP KING KS714Y	15.8	55	0.0	3.3	0.0	0.0	--	126.4	147.7*	--
ORO BARON	15.9	56	0.0	3.0	0.0	0.0	0.0	126.3	155.9*	125.7*
ASGROW SEED XP5128	14.8	54	0.0	3.0	0.0	0.0	--	126.2	152.4*	--
JACQUES 606E	14.9	55	0.0	2.0	0.0	0.0	0.0	125.3	148.6*	122.4*
WARNER W-917-E	15.5	64	0.0	2.3	0.5	0.0	--	124.6	146.5*	--
HYPERFORMER HSC 1289C	15.0	56	0.7	3.0	0.0	--	--	123.1	--	--
GARRISON SG-932	14.1	56	0.0	2.3	0.0	0.0	0.0	122.7	158.7*	119.9*
DELTAPINE G-522A	14.8	51	0.0	2.3	0.0	0.0	0.0	121.2	145.7*	120.6*
HYPERFORMER HSC WINGS	14.5	57	0.0	1.7	0.0	0.0	0.0	120.2	149.7*	101.7
CAPEHART CHAMPION	14.8	66	0.0	1.7	0.0	0.0	0.0	119.3	143.5	120.2*
HYPERFORMER 1330DR	15.5	62	0.0	2.0	0.0	0.0	0.0	117.9	154.1*	108.2
DEKALB DK-66	17.3	65	0.0	3.3	0.2	--	0.0	117.3	--	108.3
DELTAPINE G-522DR	15.4	51	0.0	2.3	0.0	0.0	0.0	116.8	141.5	124.0*
SUPER CROST SC46	15.2	59	0.2	2.0	0.0	0.0	--	114.8	141.1	--
DELTAPINE G-1711	14.4	54	0.2	1.3	0.0	0.0	0.0	114.5	156.2*	122.1*
CAPEHART CONTENDER	14.4	54	0.0	1.7	0.0	0.0	0.0	111.8	152.7*	113.2
ASGROW SEED GS712	14.9	56	0.0	2.0	0.0	0.0	0.0	111.6	146.6*	116.8
ORO XTRA	14.3	53	0.0	1.7	0.0	0.0	0.0	109.9	137.3	134.4**
ORO G XTRA	14.3	56	0.0	1.3	0.0	0.0	0.0	98.0	151.5*	127.6*
TRIAL AVERAGE	14.7	56	0.1	2.6	0.0	0.0	0.0	131.6	146.8	119.0
L.S.D. AT .05	1.9	5	NS	1.1	NS	NS	NS	27.6	18.8	17.5
C.V. %	8.1	5.7		26.4				13.2	7.9	

-- DATA NOT AVAILABLE

** HIGHEST-YIELDING HYBRID IN THE TEST.

* HYBRID WHICH DID NOT YIELD SIGNIFICANTLY LESS THAN THE HIGHEST-YIELDING HYBRID IN THE TEST.

WIDELY GROWN HYBRID.

NS NOT SIGNIFICANT.

TABLE 9. PERFORMANCE OF GRAIN SORGHUM HYBRIDS EVALUATED NEAR CANALOU (NEW MADRID COUNTY) ON THE HARLEY BIXLER FARM DURING 1990, THE ALEX FOWLER FARM NEAR KEWANEE DURING 1988 AND THE PAUL CROUTHERS FARM NEAR LIBOURN DURING 1987.

PLANTED: 7 JUNE 1990.
 HARVESTED: 6 OCTOBER 1989.
 PLANTED POPULATION: 104,500 SEEDS/A.
 ROW SPACING: 30 INCHES.

FERTILIZER: N = 100; P2O5 = 0; K2O = 0.
 HERBICIDES: RAMROD + ATRAZINE.
 INSECTICIDE: NONE.
 GROWING SEASON RAINFALL: 13.00"; IRRIGATION: 0.00".

BRAND-HYBRID	1990				LODGING (%)			YIELD (BU/ACRE)		
	MOIS- TURE (%)	PLANT HGT. (IN)	OFF HEADS (%)	COMPT- NESS SCORE	1990	1988	1987	1990	1988	1987
DELTAPINE G-522DR	22.8	50	0.0	3.0	0.0	0.0	0.0	96.5**	87.3	56.1*
DELTAPINE 6012XS	22.6	54	0.0	4.0	0.0	--	--	94.8*	--	--
JACQUES 411	21.0	46	0.0	3.3	0.0	0.0	0.0	94.3*	87.9	45.6
McCURDY M737	20.8	48	0.0	4.0	0.0	--	0.0	91.3*	--	58.7*
DEKALB DK-66	22.7	56	0.0	2.7	0.0	0.0	--	91.2*	104.2*	--
MFA 650	20.6	54	0.0	3.7	0.0	--	--	90.9*	--	--
HYPERFORMER 1330DR	20.2	60	0.0	1.7	0.0	0.0	0.0	88.9*	122.8**	60.2*
AGRATECH GK 802G	19.8	48	1.0	3.3	0.0	0.0	0.0	88.7*	96.1	49.5*
McCURDY M757	19.1	48	0.0	3.0	0.0	--	--	88.6*	--	--
CAPEHART CREAM	22.0	54	0.4	4.3	0.0	--	--	88.4*	--	--
JACQUES 606E	19.9	52	0.0	3.0	0.0	0.0	0.0	87.6*	104.2*	39.1
HYPERFORMER HSC CHEROKEE	19.5	48	0.0	2.7	0.0	0.0	--	86.4*	91.6	--
SUPER CROST SC43	18.8	50	0.0	3.7	0.0	--	0.0	85.8*	--	53.1*
CARGILL 70##	21.8	48	0.0	3.7	0.0	0.0	0.0	85.6*	118.0*	44.4
NORTHRUP KING KS737	19.4	50	0.0	4.0	0.0	--	--	84.8*	--	--
GROAGRI GSC 3146	19.8	50	0.0	2.0	0.0	--	--	84.7*	--	--
PIONEER BRAND HYBRID 8230	24.4	52	0.0	2.3	0.0	0.0	--	84.6*	96.4	--
HYPERFORMER HSC WINGS	21.5	52	0.0	3.0	0.0	0.0	0.0	84.0*	111.1*	52.8*
AGRATECH 805WG	21.5	52	0.0	4.0	0.0	--	--	83.9*	--	--
CAPEHART CHAMPION	21.9	56	0.0	2.3	0.0	0.0	0.0	83.7*	99.3	63.3*
DELTAPINE G-1616	22.0	56	0.0	1.3	0.0	--	--	83.0*	--	--
ORO XTRA	18.7	50	0.0	3.0	0.0	0.0	0.0	82.8*	104.4*	34.1
NORTHRUP KING KS710	19.8	46	0.0	4.3	0.0	--	--	82.6*	--	--
CAPEHART CHALLENGER	21.6	54	0.0	2.3	0.0	0.0	0.0	82.1*	92.0	53.1*
PIONEER BRAND HYBRID 8313	19.1	50	0.0	5.0	0.0	--	--	82.1*	--	--
McCURDY M650W	21.5	54	0.0	3.3	0.0	--	--	80.2*	--	--
ORO G XTRA	19.5	48	0.0	2.0	0.0	0.0	0.0	80.2*	101.7*	60.3*
CAPEHART CONTENDER	21.9	48	0.0	2.0	0.0	0.0	0.0	79.8*	103.0*	47.7
ASGROW SEED TOPAZ##	19.6	52	0.0	3.3	0.0	0.0	0.0	78.2*	92.4	38.2
MFA GS-301A	20.4	48	0.0	3.7	0.0	0.0	0.0	78.0*	105.7*	43.9
DEKALB DK-60	23.1	56	0.0	1.7	1.0	--	--	77.7*	--	--
GROAGRI GSA 1310A	19.0	48	0.0	3.7	0.0	0.0	0.0	77.6*	95.6	50.6*
ASGROW SEED XP5049	23.1	52	0.0	4.0	0.0	--	--	76.7*	--	--
AGRATECH GK 712G	23.0	48	1.0	3.0	0.0	0.0	0.0	76.7*	95.6	57.4*
DELTAPINE G-522A	22.4	46	0.0	4.7	0.0	0.0	0.0	76.5*	98.9	57.9*
HYPERFORMER 1225DR	19.7	48	0.0	3.3	0.0	0.0	0.0	76.2*	93.4	39.8
GARRISON SG-932	19.6	50	0.0	3.0	0.0	0.0	0.0	75.3*	98.4	45.0
HYPERFORMER HSC 1289C	20.1	52	0.3	4.0	0.0	--	--	73.7*	--	--
CARGILL 575	23.3	56	1.0	3.7	0.0	--	--	73.4*	--	--
NORTHRUP KING KS714Y	22.6	48	0.0	4.0	0.0	--	--	72.8*	--	--
GARRISON SGX-850	19.3	48	0.0	4.7	0.0	--	--	72.6*	--	--
ASGROW SEED XP5128	22.9	48	0.0	3.3	0.0	--	--	71.8*	--	--
SUPER CROST SC46	24.7	50	0.0	2.7	0.0	--	--	71.1*	--	--
PIONEER BRAND HYBRID 8333	24.8	48	0.0	4.3	0.0	0.0	0.0	70.9*	103.4*	53.9*
GARRISON SGX-950	21.9	48	0.0	3.0	0.0	--	--	69.1*	--	--
WARNER W-917-E	20.5	52	0.0	2.0	0.0	--	--	69.1*	--	--
GARRISON SG-822	19.6	52	0.6	4.3	0.0	--	--	68.9*	--	--
MFA 645	21.2	48	0.0	3.3	0.0	--	--	68.7*	--	--
CARGILL 847	20.8	50	0.0	2.7	0.0	--	--	68.7*	--	--
ASGROW SEED OSAGE##	19.2	50	0.0	2.0	0.0	0.0	--	66.8	98.4	--
DEKALB DK-56	26.9	54	0.0	3.7	0.0	--	--	66.8	--	--
CARGILL X15277	21.1	52	0.0	3.0	0.0	0.0	--	66.3	77.1	--
DELTAPINE G-1711	20.2	52	0.0	2.0	0.0	0.0	--	65.0	103.7*	--
ORO BARON	21.6	54	0.6	3.0	0.0	0.0	--	64.0	103.9*	--
MFA GS-10##	20.4	44	0.0	4.7	2.8	0.0	0.0	61.0	101.9*	47.9*
ASGROW SEED GS712	21.2	50	0.0	1.7	0.0	0.0	0.0	54.0	112.9*	34.9
TRIAL AVERAGE	21.2	51	0.1	3.2	0.1	0.0	0.0	78.7	96.7	47.2
L.S.D. AT .05	3.6	6	0.7	1.1	1.1	NS	NS	28.0	21.4	21.6
C.V. %	10.5	7.0		22.0				21.9	7.9	

-- DATA NOT AVAILABLE.
 ** HIGHEST-YIELDING HYBRID IN THE TEST.
 * HYBRID WHICH DID NOT YIELD SIGNIFICANTLY LESS THAN THE HIGHEST-YIELDING HYBRID IN THE TEST.
 ## WIDELY GROWN HYBRID.
 NS NOT SIGNIFICANT.

TABLE 10. PERFORMANCE RECORD OF GRAIN SORGHUM HYBRIDS EVALUATED AT TWO SOUTHEAST MISSOURI LOCATIONS (ORAN AND CANALOU) DURING 1990.

PLANTED POPULATION: 104,500 SEEDS/A.
 ROW SPACING: 30 INCHES.
 HERBICIDES: RAMROD + ATRAZINE.

BRAND-HYBRID	MOISTURE (%)			LODGING (%)			YIELD (BU/ACRE)		
	ORAN	CANALOU	MEAN	ORAN	CANALOU	MEAN	ORAN	CANALOU	MEAN
DELTAPINE 6012XS	15.4	22.6	19.0	0.0	0.0	0.0	146.9*	94.8*	120.8**
PIONEER BRAND HYBRID 8230	14.2	24.4	19.3	0.0	0.0	0.0	150.9*	84.6*	117.8*
McCURDY M737	14.8	20.8	17.8	0.0	0.0	0.0	141.0*	91.3*	116.2*
DEKALB DK-60	14.4	23.1	18.8	0.0	1.0	0.5	154.1*	77.7*	115.9*
CARGILL 70##	15.3	21.8	18.6	0.0	0.0	0.0	144.9*	85.6*	115.2*
AGRATECH GK 802G	15.1	19.8	17.4	0.0	0.0	0.0	141.3*	88.7*	115.0*
JACQUES 411	13.9	21.0	17.4	0.0	0.0	0.0	135.2*	94.3*	114.8*
AGRATECH 805WG	14.9	21.5	18.2	0.0	0.0	0.0	145.2*	83.9*	114.6*
CARGILL X15277	13.3	21.1	17.2	0.0	0.0	0.0	160.8**	66.3	113.6*
GARRISON SGX-850	13.9	19.3	16.6	0.0	0.0	0.0	153.9*	72.6*	113.2*
ASGROW SEED TOPAZ##	14.2	19.6	16.9	0.0	0.0	0.0	148.2*	78.2*	113.2*
CAPEHART CREAM	14.3	22.0	18.2	0.0	0.0	0.0	134.6*	88.4*	111.5*
DELTAPINE G-1616	16.0	22.0	19.5	0.0	0.0	0.0	137.7*	83.0*	110.4*
NORTHROP KING KS710	14.4	19.8	17.1	0.0	0.0	0.0	137.4*	82.6*	110.0*
McCURDY M757	13.3	19.1	16.2	0.0	0.0	0.0	131.3	88.6*	110.0*
NORTHROP KING KS737	14.8	19.4	17.1	0.0	0.0	0.0	134.8*	84.8*	109.8*
PIONEER BRAND HYBRID 8333	14.6	24.8	19.7	0.0	0.0	0.0	148.7*	70.9*	109.8*
MFA 650	15.5	20.6	18.0	0.0	0.0	0.0	127.8	90.9*	109.4*
McCURDY M650W	14.7	21.5	18.1	0.0	0.0	0.0	136.3*	80.2*	108.2*
PIONEER BRAND HYBRID 8313	14.6	19.1	16.8	0.0	0.0	0.0	134.0*	82.1*	108.0*
HYPERFORMER HSC CHEROKEE	14.7	19.5	17.1	0.0	0.0	0.0	129.6	86.4*	108.0*
CARGILL 575	14.0	23.3	18.6	0.0	0.0	0.0	142.0*	73.4*	107.7*
MFA GS-301A	13.9	20.4	17.2	0.0	0.0	0.0	137.3*	78.0*	107.6*
ASGROW SEED XP5049	14.4	23.1	18.8	0.0	0.0	0.0	137.7*	76.7*	107.2*
GROAGRI GSC 3146	14.0	19.8	16.9	0.0	0.0	0.0	129.2	84.7*	107.0*
SUPER CROST SC43	14.5	18.8	16.6	0.0	0.0	0.0	128.2	85.8*	107.0*
DELTAPINE G-522DR	15.4	22.8	19.1	0.0	0.0	0.0	116.8	96.5**	106.6*
JACQUES 606E	14.9	19.9	17.4	0.0	0.0	0.0	125.3	87.6*	106.4*
GARRISON SGX-950	15.4	21.9	18.6	0.0	0.0	0.0	140.4*	69.1*	104.8*
CAPEHART CHALLENGER	14.0	21.6	17.8	0.0	0.0	0.0	127.1	82.1*	104.6*
CARGILL 847	14.3	20.8	17.6	0.1	0.0	0.0	139.9*	68.7*	104.3*
DEKALB DK-66	17.3	22.7	20.0	0.2	0.0	0.1	117.3	91.2*	104.2*
DEKALB DK-56	15.2	26.9	21.0	0.0	0.0	0.0	140.5*	66.8	103.6*
GARRISON SG-822	14.5	19.6	17.0	0.0	0.0	0.0	137.9*	68.9*	103.4*
HYPERFORMER 1330DR	15.5	20.2	17.8	0.0	0.0	0.0	117.9	88.9*	103.4*
MFA 645	14.8	21.2	18.0	0.0	0.0	0.0	136.9*	68.7*	102.8*
GROAGRI GSA 1310A	13.9	19.0	16.4	0.0	0.0	0.0	127.8	77.6*	102.7*
AGRATECH GK 712G	15.5	23.0	19.2	0.0	0.0	0.0	127.9	76.7*	102.3*
HYPERFORMER HSC WINGS	14.5	21.5	18.0	0.0	0.0	0.0	120.2	84.0*	102.1*
HYPERFORMER 1225DR	14.6	19.7	17.2	0.0	0.0	0.0	127.2	76.2*	101.7*
CAPEHART CHAMPION	14.8	21.9	18.4	0.0	0.0	0.0	119.3	83.7*	101.5*
MFA GS-10##	13.7	20.4	17.0	0.0	2.8	1.4	139.2*	61.0	100.1*
NORTHROP KING KS714Y	15.8	22.6	19.2	0.0	0.0	0.0	126.4	72.8*	99.6*
GARRISON SG-932	14.1	19.6	16.8	0.0	0.0	0.0	122.7	75.3*	99.0*
ASGROW SEED XP5128	14.8	22.9	18.8	0.0	0.0	0.0	126.2	71.8*	99.0*
DELTAPINE G-522A	14.8	22.4	18.6	0.0	0.0	0.0	121.2	76.5*	98.8*
ASGROW SEED OSAGE##	16.5	19.2	17.8	0.0	0.0	0.0	130.6	66.8	98.7*
HYPERFORMER HSC 1289C	15.0	20.1	17.6	0.0	0.0	0.0	123.1	73.7*	98.4*
WARNER W-917-E	15.5	20.5	18.0	0.5	0.0	0.3	124.6	69.1*	96.8*
ORO XTRA	14.3	18.7	16.5	0.0	0.0	0.0	109.9	82.8*	96.4*
CAPEHART CONTENDER	14.4	21.9	18.2	0.0	0.0	0.0	111.8	79.8*	95.8*
ORO BARON	15.9	21.6	18.8	0.0	0.0	0.0	126.3	64.0	95.2*
SUPER CROST SC46	15.2	24.7	20.0	0.0	0.0	0.0	114.8	71.1*	93.0
DELTAPINE G-1711	14.4	20.2	17.3	0.0	0.0	0.0	114.5	65.0	89.8
ORO G XTRA	14.3	19.5	16.9	0.0	0.0	0.0	98.0	80.2*	89.1
ASGROW SEED GS712	14.9	21.2	18.0	0.0	0.0	0.0	111.6	54.0	82.8
TRIAL AVERAGE	14.7	21.2	18.0	0.0	0.1	0.0	131.6	78.7	105.2
L.S.D. AT .05	1.9	3.6	2.1	NS	1.1	0.5	27.6	28.0	26.3
C.V. %	8.1	10.5	10.3				13.2	21.9	23.5

** HIGHEST-YIELDING HYBRID IN THE TEST.

* HYBRID WHICH DID NOT YIELD SIGNIFICANTLY LESS THAN THE HIGHEST-YIELDING HYBRID IN THE TEST.

WIDELY GROWN HYBRID.

NS NOT SIGNIFICANT.

TABLE 11. CHARACTERISTICS* OF GRAIN SORGHUM HYBRIDS.

BRAND-HYBRID	BIRD RESIS-TANT	MAT-URITY GROUP	COLOR		ENDO-SPERM TYPE	BIOTYPE E GR. BUG RESPONSE
			SEED COAT	ENDO-SPERM		
AGRATECH GK 712G	NO	2	BZ	Y	N	T
AGRATECH GK 802G	NO	3	BZ	Y	N	T
AGRATECH 805WG	NO	3	W	Y	N	T
AGRIPRO AP 9250	NO	1	W	HY	N	S
ASGROW SEED OSAGE	NO	3	R	W	N	R
ASGROW SEED TOPAZ	NO	3	BZ	HY	N	S
ASGROW SEED GS712	NO	4	BZ	HY	N	S
ASGROW SEED XP5128	NO	3	BZ	W	N	S
ASGROW SEED XP5049	NO	3	W	W	N	S
CAPEHART CHALLENGER	NO	3	BZ	HY	N	R
CAPEHART CHAMPION	NO	3	BZ	HY	N	S
CAPEHART CONTENDER	NO	2	BZ	HY	N	S
CAPEHART CREAM	NO	3	W	Y	N	R
CARGILL 70	NO	3	BZ	HY	N	S
CARGILL 575	NO	3	Y	HY	N	T
CARGILL 607E	NO	1	BZ	HY	N	S
CARGILL 618Y	NO	2	Y	HY	N	S
CARGILL 630	NO	2	BZ	HY	N	S
CARGILL 847	NO	3	BZ	HY	N	T
CARGILL X15277	NO	3	BZ	HY	N	S
DEKALB DK-41y	NO	2	Y	Y	N	R
DEKALB DK-48	NO	2	HY	HY	N	R
DEKALB DK-56	NO	3	R	W	N	R
DEKALB DK-60	NO	3	HY	HY	N	S
DEKALB DK-66	NO	4	R	W	N	R
DELTAPINE G-522A	NO	2	BZ	HY	N	S
DELTAPINE G-522DR	NO	2	BZ	HY	N	S
DELTAPINE G-1616	NO	2	BZ	HY	N	R
DELTAPINE G-1711	NO	3	BZ	HY	N	S
DELTAPINE 6012XS	NO	2	R	HY	N	S
FONTANELLE W-5000	NO	2	Y	HY	N	S
FONTANELLE GE-5571	NO	2	BZ	HY	N	R
FONTANELLE G-5590	NO	2	BZ	HY	N	S
FUNK'S G 1607	NO	2	HY	HY	N	S
FUNK'S G 1616	NO	2	R	HY	N	T
FUNK'S G 1655	NO	2	R	HY	N	R
FUNK'S G XSG 6006	NO	2	BZ	HY	N	R
GARRISON SG-822	NO	3	HY	HY	N	S
GARRISON SGX-850	NO	3	-	-	-	-
GARRISON SGX-950	NO	3	-	-	-	-
GARRISON SG-932	NO	3	R	HY	N	S
GOLDEN HARVEST H-444W	NO	2	W	HY	N	S
GOLDEN HARVEST H-520	NO	3	R	HY	N	S
GROAGRI GSA 1310A	NO	2	R	HY	N	S
GROAGRI EXP 3146	NO	2	R	HY	N	S
HYPERFORMER 1225DR	NO	2	R	Y	HW	S
HYPERFORMER 1330DR	NO	3	R	Y	HW	S
HYPERFORMER HSC 1289C	NO	2	R	Y	HW	R
HYPERFORMER HSC CHEROKEE	NO	2	R	Y	HW	T
HYPERFORMER HSC WINGS	NO	3	R	Y	HW	S
JACQUES 411	NO	2	R	HY	N	S
JACQUES 477-W	NO	3	-	-	-	-
JACQUES 606E	NO	3	R	HY	N	R
JMS HORIZON 45G	NO	1	BZ	Y	N	T
JMS HORIZON 103G	NO	3	BZ	Y	N	T
McCURDY M650W	NO	3	W	W	N	S
McCURDY M737	NO	2	R	HY	N	S
McCURDY M757	NO	3	R	HY	N	R
MFA 645	NO	3	R	Y	N	T
MFA 650	NO	3	Y	Y	N	T
MFA GS-10	NO	2	R	Y	N	S
MFA GS-301A	NO	2	R	Y	N	T
NC+ HYBRIDS 472	NO	2	BZ	Y	N	S
NC+ HYBRIDS 7B81	NO	3	BZ	Y	N	R
NORTHROP KING KS710	NO	2	BZ	HY	N	R
NORTHROP KING KS714Y	NO	3	Y	HY	N	R
NORTHROP KING KS737	NO	3	BZ	HY	N	R
ORO BARON	NO	3	R	HY	N	R
ORO XTRA	NO	3	BZ	HY	N	S
ORO G XTRA	NO	4	BZ	HY	N	T

TABLE 11. CONTINUED.

BRAND-HYBRID	BIRD RESIS- TANT	MAT- URITY GROUP	COLOR		ENDO- SPERM TYPE	BIOTYPE E GR. BUG RESPONSE
			SEED COAT	ENDO- SPERM		
PIONEER BRAND HYBRID 8230	NO	3	Y	Y	HW	S
PIONEER BRAND HYBRID 8260	NO	3	BZ	Y	HW	S
PIONEER BRAND HYBRID 8313	NO	3	BZ	Y	HW	S
PIONEER BRAND HYBRID 8333	NO	3	R	Y	HW	S
PIONEER BRAND HYBRID 8358	NO	3	R	W	HW	R
PIONEER BRAND HYBRID 8379	NO	3	BZ	Y	HW	R
PIONEER BRAND HYBRID 8500	NO	2	R	W	HW	S
S-BRAND SM69	NO	2	R	HY	N	R
S-BRAND SM74	NO	3	BZ	Y	N	T
S-BRAND EXP. 46-89	NO	4	BZ	HY	N	R
SUPER CROST SC30	NO	2	W	Y	HW	S
SUPER CROST SC40	NO	3	R	Y	N	R
SUPER CROST SC43	NO	3	R	HY	N	S
SUPER CROST SC46	NO	3	R	Y	N	S
TAYLOR-EVANS T-E Y-75	NO	3	R	W	N	R
TAYLOR-EVANS T-E 76	NO	3	R	W	N	R
TAYLOR-EVANS T-E 77-E	NO	3	BZ	HY	N	R
TAYLOR-EVANS T-E X490	NO	3	W	HY	N	S
TAYLOR-EVANS T-E DINERO	NO	2	BZ	HY	N	S
TRIUMPH TWO 64yG	NO	2	BZ	W	N	S
TRIUMPH TWO 66Yg	NO	2	BZ	W	N	S
TRIUMPH TR 74CR	NO	2	HY	W	N	S
WARNER W-744DR	YES	3	R	W	N	R
WARNER W-917-E	NO	4	R	W	N	R

* DESCRIPTIONS FOR COMMERCIAL HYBRIDS WERE PROVIDED BY THE COMPANIES SUBMITTING THEM FOR EVALUATION.
 - DATA NOT PROVIDED BY THE COMPANIES.

COLOR CODES

 HY - HETEROYELLOW
 W - WHITE
 Y - YELLOW
 R - RED
 BZ - BRONZE

ENDOSPERM TYPE CODE

 HW - HETEROWAXY
 N - NON-WAXY
 W - WAXY

DISEASE REACTION CODE

 S - SUSCEPTIBLE
 T - TOLERANT
 R - RESISTANT

TABLE 12. NAMES OF GRAIN SORGHUM ENTRIES EVALUATED IN 1990 AND THEIR COMPANY'S ADDRESS.

BRAND	HYBRID	SEED SOURCE
AGRATECH	GK 712 G, GK 802 G, 805 WG	AGRATECH SEEDS, INC., 5559 N. 500 W., McCORDSVILLE, IN 46055
AGRIPRO	AP 9250	AGRIPRO SEEDS, RT.2, EAST HWY 30, AMES, IA 50010
ASGROW SEED	OSAGE, TOPAZ, GS 712, XP5049, XP5128	ASGROW SEED COMPANY, BOX 1945, PLAINVIEW, TX 79072
CAPEHART	CHALLENGER, CHAMPION, CONTENDER, CREAM	CAPEHART SEED SERVICE, BOX 10, HWY 615, HOLLAND, MO 63853
CARGILL	70, 575, 607E, 618Y, 630, 847, X15277	CARGILL HYBRID SEEDS, BOX 5645, MINNEAPOLIS, MN 55440
DEKALB	DK-41Y, DK-48, DK-56, DK-60, DK-66	DEKALB Plant Genetics, RT.2, BOX 56, LUBBOCK, TX 79415
DELTAPINE	G-522A, G-522DR, G-1616, G-1711, 6012XS	DELTA AND PINE LAND COMPANY, 1301 E. 50TH ST., LUBBOCK, TX 79404
FONTANELLE	W-5000, GE-5571, G-5590	FONTANELLE HYBRIDS, RT.1, BOX 18, NICKERSON, NE 68044
FUNK'S	G 1607, G 1616, G XSG 6006, G 1655	CIBA-GEIGY SEED DIV., BOX 18300. GREENSBORO, NC 27419
GARRISON	SG-822, SGX-850, SG-932, SG-950	GARRISON SEED CO., INC., DRAWER 2420, HEREFORD, TX 79045
GOLDEN HARVEST	H-444W, H-520	THE J.C. ROBINSON SEED CO., 100 J.C. ROBINSON BLVD., WATERLOO, NE 68069
GROAGRI	GSA 1310A, GSC 3146	GROAGRI SEED CO., BOX 1656, LUBBOCK, TX 79408
HYPERFORMER	1225DR, 1330DR, HSC 1289C, HSC CHEROKEE, HSC WINGS	HYPERFORMER SEED COMPANY, 5100 POPLAR, SUITE 3200, MEMPHIS, TN 38137
JACQUES	411, 477-W, 606E	JACQUES SEED COMPANY, 720 SAINT CROIX ST., PRESCOTT, WI 54021
JMS HORIZON	45G, 103G	J.M. SCHULTZ SEED CO., 105 PINE ST., DIETERICH, IL 62424
McCURDY	M650W, M737, M757	McCURDY SEED COMPANY, 522 E. MAIN STREET, FREMONT, IA 52561
MFA	645, 650, GS-10, GS-301A	MFA INC., 615 LOCUST, COLUMBIA, MO 65201
NC+	472, 7B81	NC+ HYBRIDS, 3820 N. 56TH ST., BOX 4408, LINCOLN, NE 68504
NORTHRUP KING	KS710, KS714Y, KS737	THE NEW NORTHRUP KING CO., RT.2, BOX 200, HIGHLAND, IL 62249
ORO	BARON, G XTRA, XTRA	ORO HYBRIDS, 624 27TH ST., LUBBOCK, TX 79404
PIONEER HYBRID	8230, 8260, 8313, 8333, 8358, 8379, 8500	PIONEER HI-BRED INTERNATIONAL, INC., 1000 W. JEFFERSON ST., TIPTON, IN 46072
S-BRAND	SM69, SM74, EXP 46-89	SCHECHINGER SEED COMPANY, RT.1, BOX 149, HARLAN, IA 51537
SUPER CROST	SC30, SC40, SC43, SC46	EDWARD J. FUNK & SONS, INC., 601 FUNK PARKWAY, BOX 67, KENTLAND, IN 47951
TAYLOR-EVANS T-E	Y-75, 76, 77-E, X490, DINERO	TAYLOR-EVANS SEED COMPANY, BOX 68, TULIA, TX 79088
TRIUMPH	TWO 64yG, TWO 66yG, TR 74CR	TRIUMPH SEED COMPANY, INC., BOX 1050, RALLS, TX 79357
WARNER	W-744DR, W-917-E	GEORGE WARNER SEED CO. INC, BOX 1448, HERFORD, TX 79045

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