

MISSISSIPPI Corn for Grain *and Grain Sorghum*



HYBRID TRIALS, 2005



Experiment Station
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Mississippi Agricultural & Forestry Experiment Station

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NOTICE TO USER

This Mississippi Agricultural and Forestry Experiment Station information bulletin is a summary of research conducted under project number MIS 1414 at locations shown on the map on the second page. It is intended for colleagues, cooperators, and sponsors. The interpretation of data presented in this report may change after additional experimentation. Information included is not to be construed as a recommendation for use or as an endorsement of a specific product by Mississippi State University or the Mississippi Agricultural and Forestry Experiment Station.

This report contains data generated as part of the Mississippi Agricultural and Forestry Experiment Station research program. Joint sponsorship by the organizations listed on pages 2-4 is gratefully acknowledged.

Trade names of commercial products used in this report are included only for clarity and understanding. All available names (i.e., trade names, chemical names, etc.) of products used in this research project are listed on pages 2-4.

You may visit our Web site at msucares.com/crops/variety/index.html.

Mississippi Corn for Grain and Grain Sorghum Hybrid Trials, 2005

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PROCEDURE

Trials were conducted on Experiment Station land or on grower-cooperator fields in three geographical areas in Mississippi: Area I, located north of Interstate 20 (three dryland locations); Area II, located south of Interstate 20 (two dryland locations); and Area III, located in the Delta region of Mississippi (two irrigated and one non-irrigated location) (see map on page ii). Commercial seed companies were given the opportunity to enter hybrids in Area I, Area II, or Area III.

Plots consisted of two 30-inch rows, 13.33 feet long. Weeds were controlled by cultivation and/or herbicides. Only herbicides currently registered for use on corn were used in these studies, with strict adherence to all label instructions. All hybrids were treated with Poncho 250 or Cruiser for insect control. Experimental design was a randomized complete block with four replications at each location.

Hybrids were separated into two maturity groups based upon relative maturity as specified by the sponsoring companies. Those hybrids with a relative maturity of 115 days or less were considered to be early maturing, while those listed requiring 116 days or more to mature were considered late maturing.

Seed of all entries were supplied by participating companies. All seed were packaged for planting at seeding rates suggested by the participating company and planted with a cone planter. Fertilizer was applied according to soil test recommendations. Plots in Areas I and II were grown in dryland conditions, and plots in Area III were irrigated.

VARIABLES MEASURED IN CORN HYBRID TESTS

Yield: An Almaco SPC 40 plot combine was used to harvest the total area of each plot. Harvested grain was weighed, moisture determined, and yields were converted to bushels per acre at 15.5 percent moisture.

Stalk Lodging: Stalk lodging is the percentage of plants, based on actual counts of all plants in each plot, that were broken below the upper ear-bearing node at harvest.

Ear Height: Ear height is the distance from the soil to the highest ear-bearing node.

Harvest Population: Harvest population is a measure of the number of plants per acre, based on actual stand counts.

USE OF DATA TABLES AND SUMMARY STATISTICS

The yield potential of a given variety cannot be measured with complete accuracy. Consequently, replicate plots of all varieties are evaluated for yield, and the yield of a given variety is estimated as the mean of all replicate plots of that variety. Yields vary somewhat from one replicate plot to another, which introduces a certain degree of error to the estimation of yield potential. As a result, although the mean yields of some varieties are numerically different, the two varieties may not be significantly different from each other within the range of natural variation. That is, an ability to measure yield is not precise enough to determine what the small differences are, other than what might be observed purely by chance.

The least significant difference (LSD) is an estimate of the smallest difference between two varieties that can be declared to be the result of something other than random variation in a particular trial. Consider the following example for a given trial:

Variety	Yield (bu/a)
A.....	90
B.....	85
C.....	81
LSD.....	7

The difference between variety A and variety B is 5 bu/a (i.e. $90 - 85 = 5$). This difference is smaller than the LSD (7 bu/a). Consequently we would conclude that variety A and variety B have the same yield potential, since we are not able to say that the observed difference did not occur purely due to chance. However, the difference between variety A and variety C is 9 bu/a (i.e. $90 - 81 = 9$), which is larger than the LSD (7 bu/a). We would therefore conclude that the yield potential of variety A is superior to that of variety C.

The coefficient of variation (CV) is a measure of the relative precision of a given trial and is used to compare the relative precision of different trials. The CV is generally considered to be an estimate of the amount of unexplained variation in a given trial. This unexplained variation can be the result of variation between plots with respect to soil type, fertility, insects, diseases, moisture stress, etc. In general, the higher the CV the less precise a given trial is.

The coefficient of determination (R^2) is another measure of the level of precision in a trial and is also used to compare the relative precision of different trials. The R^2 is a measure of the amount of variation that is explained, or accounted for, in a given trial. For example, an R^2 value of 90 percent indicates that 90 percent of the observed variation in the trial has been accounted for in the trial, with the remaining 10 percent being unaccounted for. The higher the R^2 value, the more precise the trial. The R^2 is generally considered to be a better measure of precision than the CV for comparison of different trials.

Table 1. Characteristics provided by sponsoring companies for corn hybrids entered in the 2005 Mississippi variety trials

<u>Company</u>	<u>Hybrid</u>	<u>Trait¹</u>	<u>Planting rate (X 1000)</u>	<u>Days to maturity</u>
Adler Seeds 6085 West 550 North Sharpsville IN 46068 800-536-2676	6400 YGCB	YG	28	113
	7400 YGCB	YG	28	114
Belle Southern Hybrids P O Box 9 Waldenburg AR 72475 870-579-2286	Belle 1824R	RR	28/32	114
	Belle 1515C		28/32	115
	Belle 1525R	RR	28/32	115
	Belle 1533Y	YG	28/32	115
	Belle 1545RY	RR/YG	28/32	115
	Belle 1830Y	YG	28/32	118
	Belle BEX RY455 (E)	RR/YG	28/32	114
Croplan Genetics 60020 Pinewood Dr. Amory, MS 38821 662-305-5312	631 RR/Bt	RR/Bt	32	110
	691Bt/LL	Bt/LL	32	112
	818RR/Bt	RR/Bt	36	117
	822RR/Bt	RR/Bt	32	117
	851RR/Bt	RR/Bt	30	117
FFR Seed 969 Cloverleaf Drive Southaven, MS 38671 901-652-0903	746RRBT	RR/Bt	32	115
	835BT	Bt	28	117
	886RR	RR	28	119
	900BT	Bt	28/32	119
Garst Seed Co. 2369 330 th St P O Box 500 Slater Iowa 50244 318-396-7037	8200YG1	Bt	28	119
	8213RR	RR	28	120
	8225YG1/RR	RR/YG	28	117
	8287RR	RR	28	116-
	8288		28	116
	8295YG1/IT	RR/YG	28	118
	8364YG1/RR	RR/YG	28	116
	8451RR	RR	28	111
	8454YG1	YG	28	112
Golden Acres Genetics P O Box 579 Buchanan Dam, TX 78609 512-793-5205	GA 2831RRB	RR/Bt	32	115
	GA 2841RRB	RR/Bt	32	117
	GA 2842RRBW	RR/Bt	32	117
	GA 2995RR	RR	28	120
	GA X-6420Bt (E)	Bt	32	118
	GA X-6501Bt (E)	Bt	28	120
	GA X-6511LLHx (E)	LL	28	120

Table 1. (Continued)

<u>Company</u>	<u>Hybrid</u>	<u>Trait¹</u>	<u>Planting rate (X 1000)</u>	<u>Days to maturity</u>
Monsanto Company 800 N. Lindbergh Blvd. St. Louis, MO 63167 314-694-1000	DKC60-19	RR/YG	28/32	110
	DKC61-45	RR/YG	28/32	111
	DKC61-72	RR	28/32	111
	DKC63-62	RR	28/32	113
	DKC63-81	RR/YG	28/32	113
	DKC66-21	YG	28/32	116
	DKC69-71	RR/YG	28/32	119
	DKC69-72	RR	28/32	119
	NC6702 (E)		28/32	117
	NC6704NRR1 (E)	RR	28/32	117
	NC6901 (E)		28/32	119
Pioneer Hi-Bred Intl 7501 Memorial Pky. SW Suite 205 Huntsville, AL 35802 256-650-4223	31G66		28	118
	31G68	YG	28	118
	31G97	RR	28	117
	31R87	RR	24	120
	32D99		28	118
	32R25		28	116
	32T22	RR	28	116
	33H25		28/32	114
	33M54		28/32	114
	33N56		28/32	112
	33V15		28/32	114
	Royster-Clark, Inc. 717 Robinson Rd SE Washington C.H., OH 43160 740-869-2181	V56Y51	YG	28/32
V58YR2		RR/YG	28/32	117
V59YR52		RR/YG	28	119
V62R66		RR	28/32	121
Syngenta Seeds 32 Summertree Place Hattiesburg, MS 39402 601-264-2878	N65-C5		28/32	108
	N76-D3		28/32	114
	N82-A7		28/32	118
	N83-Z8	Bt	28/32	118
Terral Seed Inc. P O Box 826 Lake Providence, LA 71254 318-559-2840	TV23R31	RR	32	113
	TV25BR23	RR/Bt	32	115
	TV25R31	RR	30	113
	TV26B23	Bt	30	116
	TV26B34	Bt	30	115
	TV26B82	Bt	30	115
	TV26BR10n	RR/Bt	32	115
	TV26BR41	RR/Bt	30	114
	TV27C48		30	115
	TVX25R501 (E)	RR	32	115
Triumph Seed Co Inc P O Box 1050 Ralls, TX 79357 800-530-4789	1536CBRR	RR/Bt	32	115
	1866Bt	Bt	32	118

Table 1. (Continued)

<u>Company</u>	<u>Hybrid</u>	<u>Trait¹</u>	<u>Planting rate (X 1000)</u>	<u>Days to maturity</u>
United Agri Products-Delta 57 Germantown Court Suite 200 Cordova, TN 38018 901-755-7566	DG5515		32	117
	DG5528Bt	YG	32	115
	DG5545Bt	YG	32	116
	DG57F87	YG	32	115
	DG57K66	RR	32	115
	DG57P35	RR/YG	32	115
	DG58K15	RR/YG	32	117
	DG58K22	RR	32	118
	DG58P59	RR/YG	32	116
	DG CX03118 (E)	RR/YG	32	116
	DG CX05218 (E)	RR/YG	32	116
DG CX05516 (E)		32	116	
UniSouth Genetics Inc 2640-C Nolensville Rd Nashville, TN 37211 800-505-3133	BG RRCB1163	RR/Bt	24/32	116
	FB 812		24/32	116
	FB 812CB	Bt	24/32	116
	FB 814CB	Bt	24/32	116
	FB 904		24/32	116
	FB 909		24/32	116

¹RR = Incorporates Roundup Ready Technology; IT, CL, IMI = Incorporates CLEARFIELD Technology; Bt, YG = Corn Borer Protection Technology

Table 2. Average grain production, by areas, for early-maturing corn hybrids grown in Mississippi, 2005

Brand name	Hybrid number	Area I		
		2005 ¹ yield	2-yr ¹ avg	3-yr ¹ avg
Belle	Belle 1824R	103.6	-	
Belle	Belle 1515C	112.2	127.1	
Belle	Belle 1525R	98.8	139.3	
Belle	Belle 1533Y	127.5	147.6	
Belle	Belle 1545RY	122.7	156.3	
Belle	Belle BEX RY455 (E)	142.1	-	
Croplan Genetics	631 RR/Bt	105.4	135.3	
Croplan Genetics	691 Bt/LL	111.2	137.1	
DEKALB	DKC60-19	102.9	134.9	
DEKALB	DKC61-45	119.7	145.7	
DEKALB	DKC61-72	105.9	-	
DEKALB	DKC63-62	122.5	-	
DEKALB	DKC63-81	107.8	141.6	
Dyna Gro	DG5528Bt	120.5	135.2	148.5
Dyna Gro	DG57F87	140.4	-	
Dyna Gro	DG57K66	106.7	131.8	147.9
Dyna Gro	DG57P35	98.6	138.1	151.9
FFR	746RRBT	116.3	-	
Garst	8451RR	105.2	-	
Golden Acres	GA 2831RRB	89.4	138.7	
NK Brand	N65-C5	129.5	-	
NK Brand	N76-D3	100.7	-	
Pioneer	33H25	105.7	-	
Pioneer	33M54	143.6	155.5	167.2
Pioneer	33N56	104.2	-	
Pioneer	33V15	107.2	127.1	142.3
Terral	TV23R31	80.9	120.8	
Terral	TV25BR23	113.5	140.0	155.5
Terral	TV25R31	122.8	157.0	
Terral	TV26B34	126.2	-	
Terral	TV26B82	113.5	144.0	
Terral	TV26BR10n	91.4	130.5	149.0
Terral	TV26BR41	128.4	144.4	
Terral	TV27C48	103.1	-	
Terral	TVX25R501 (E)	102.4	-	
Vigoro	V56Y51	101.8	-	
Overall Mean		112.2	139.5	151.9
LSD (.10)		16.9	13.8	10.6
Error degrees of freedom		207	231	105
CV (%)		18.2	16.8	14.5
R ² (%)		53	75	80

¹ Averages of Brooksville and Hernando.

Table 3. Average grain production, by areas, for late-maturing corn hybrids grown in Mississippi, 2005

Brand name	Hybrid number	Area I		
		2005 ¹ yield	2-yr ¹ avg	3-yr ¹ avg
Belle	Belle 1830Y	109.4		
Bio Gene	BG RRCB1163	122.7		
FB	FB 812	108.7		
FB	FB 812CB	111.8		
FB	FB 814CB	96.4		
FB	FB 904	115.8		
FB	FB 909	89.0		
Croplan Genetics	818RR/Bt	110.6	148.0	
Croplan Genetics	822RR/Bt	112.6		
Croplan Genetics	851RR/Bt	118.3		
DEKALB	DKC66-21	123.6	154.7	
DEKALB	DKC69-71	96.3	138.8	153.3
DEKALB	DKC69-72	109.5	152.0	159.8
Dyna Gro	DG5515	106.4		
Dyna Gro	DG5545Bt	105.5		
Dyna Gro	DG58K15	104.3		
Dyna Gro	DG58K22	119.5		
Dyna Gro	DG58P59	127.8	156.8	
Dyna Gro	DG CX03118 (E)	105.7	148.8	
Dyna Gro	DG CX05218 (E)	127.8		
Dyna Gro	DG CX05516 (E)	127.9		
FFR	835BT	130.0	154.9	
FFR	886RR	101.8		
FFR	900BT	118.3	145.8	158.8
Garst	8200YG1	112.0	136.6	149.3
Garst	8225YG1/RR	121.2		
Garst	8287RR	113.6		
Garst	8288	133.6		
Garst	8295YG1/IT	143.8		
Garst	8364YG1/RR	114.3		
Golden Acres	GA 2841RRB	116.5	151.0	
Golden Acres	GA 2842RRBW	117.8		
Golden Acres	GA 2995RR	89.5		
Golden Acres	GA X-6420Bt (E)	113.3	148.7	
Golden Acres	GA X-6501Bt (E)	92.9		

(continued)

Table 3 (continued). Average grain production, by areas, for late-maturing corn hybrids grown in Mississippi, 2005

Brand name	Hybrid number	Area I		
		2005 ¹ yield	2-yr ¹ avg	3-yr ¹ avg
Golden Acres	GA X-6511LLHx (E)	97.8		
Monsanto	NC6702 (E)	116.0		
Monsanto	NC6704NRR1 (E)	118.4		
Monsanto	NC6901 (E)	119.8		
NK Brand	N82-A7	112.8	145.5	
NK Brand	N83-Z8	108.1	135.7	150.2
Pioneer	31G66	118.1	140.9	155.3
Pioneer	31G68	128.6		
Pioneer	31G97	127.1	154.3	
Pioneer	31R87	129.6	154.0	
Pioneer	32D99	118.5	143.0	153.4
Pioneer	32R25	111.4	147.7	162.5
Pioneer	32T22	109.1		
Terral	TV26B23	104.9	136.6	150.3
Vigoro	V58YR2	141.3		
Vigoro	V59YR52	112.9		
Vigoro	V62R66	121.6		
Overall Mean		114.7	146.8	154.8
SD (.10)		17.5	12.9	11.7
Error degrees of freedom		300	208	139
CV (%)		18.3	14.8	15.6
R ² (%)		46	79	77

¹ Averages of Brooksville and Hernando.

Table 4. Results from 36 early-maturing corn hybrids grown without irrigation on a Collins silt loam soil near Hernando, Desoto County, 2005.¹

Brand name	Hybrid number	2005 yield	2-year avg	3-year avg	Moisture content	Harvested stand (x1000)
		bu/a	bu/a	bu/a	%	
Belle	Belle BEX RY455	160.0	-	-	14.3	29
Dyna-Gro	57F87	146.7	-	-	16.2	31
Terral	TV26B34	140.5	-	-	16.5	31
FFR	746RRBT	139.7	-	-	16.3	32
NK Brand	N65-C5	131.4	-	-	13.9	29
Pioneer	33M54	129.4	153.5	167.8	16.5	28
DEKALB	DKC61-45	126.9	146.8	-	14.4	29
Croplan Genetics	691 BT/LL	126.4	148.5	-	14.5	33
Belle	Belle 1533Y	124.7	148.2	-	14.9	30
Dyna-Gro	5528BT	123.9	141.4	150.3	15.5	32
Terral	TV26BR41	123.3	146.5	-	15.6	30
Croplan Genetics	631 RR/BT	122.0	147.2	-	14.8	32
Belle	Belle 1545RY	119.0	148.3	-	15.8	30
DEKALB	DKC63-62	117.6	-	-	15.4	29
Terral	TV25R31	117.1	150.8	-	16.9	31
Vigoro	V56Y51	114.9	-	-	14.8	29
Dyna-Gro	DG57K66	112.5	147.0	161.7	15.4	33
DEKALB	DKC60-19	112.2	137.0	-	13.8	30
Terral	TV26B82	111.3	142.9	-	19.7	31
Terral	TV25BR23	111.0	125.1	144.7	15.0	33
DEKALB	DKC63-81	110.3	145.5	-	14.6	29
Pioneer	33N56	109.6	-	-	15.2	29
NK Brand	N76-D3	109.3	-	-	15.6	28
Terral	TV25R501	107.0	-	-	15.4	33
Garst	8451RR	103.4	-	-	13.7	29
Belle	Belle 1824R	103.2	-	-	16.0	28
Terral	TV26BR10n	103.2	137.2	158.2	15.0	31
Dyna-Gro	DG57P35	102.1	138.8	156.4	14.6	33
DEKALB	DKC61-72	102.1	-	-	14.0	29
Belle	Belle 1515C	101.2	131.2	-	16.0	27
Terral	TV27C48	99.2	-	-	16.6	32
Pioneer	33H25	97.8	-	-	14.1	29
Pioneer	33V15	95.4	127.2	141.2	15.6	26
Golden Acres	2831RRB	91.0	140.8	-	16.3	29
Belle	Belle 1525R	82.2	127.1	-	15.8	26
Terral	TV23R31	74.1	113.9	-	16.5	33
Overall mean		114.2	140.1	154.2		
LSD (.10)		25.9	18.9	13.7		
Error degrees of freedom		102	114	52		
CV (%)		19.1	15.9	12.8		
R² (%)		53	76	83		

¹Planted March 5; harvested September 12.

Table 5. Results from 52 late-maturing corn hybrids grown without irrigation on a Collins silt loam soil near Hernando, Desoto County, 2005.¹

Brand name	Hybrid number	2005 yield	2-year avg	3-year avg	Moisture content	Harvested stand (x1000)
		bu/a	bu/a	bu/a	%	
Garst	8295YG1/RR	159.0	-	-	16.9	29
Dyna-Gro	DG CXO5218	152.7	-	-	17.0	30
Vigoro	V58YR2	146.6	-	-	15.5	28
Pioneer	31R87	140.8	153.9	-	16.1	29
Pioneer	31G97	139.5	160.8	-	15.5	29
Garst	8364YG1/RR	137.4	-	-	15.2	29
Golden Acres	GA 2841RRB	136.1	160.0	-	15.7	32
Dyna-Gro	58P59	132.5	164.0	-	15.4	33
FFR	900BT	130.6	155.3	170.0	14.8	28
Dyna-Gro	DG CXO5516	130.3	-	-	15.1	32
FB	FB 812CB	130.2	-	-	14.8	21
Vigoro	V62R66	130.0	-	-	15.8	27
Vigoro	V59YR52	129.9	-	-	15.2	28
Pioneer	31G68	128.8	-	-	15.2	22
DEKALB	DKC66-21	128.7	153.9	-	16.4	30
FFR	835BT	128.4	157.7	-	15.5	27
Dyna-Gro	DG58K22	127.8	-	-	15.3	32
Garst	8225YG1/RR	126.7	-	-	15.2	30
Pioneer	32D99	126.6	150.2	161.7	17.2	22
Terral	TV26B23	126.6	151.8	162.3	16.6	29
Garst	8288	125.8	-	-	16.5	30
FFR	886RR	124.5	-	-	16.6	24
FB	FB 904	124.5	-	-	15.1	30
Monsanto	NC6704NRR1	124.4	-	-	15.0	28
Pioneer	31G66	124.0	148.1	161.5	14.8	29
Monsanto	NC6901	124.0	-	-	15.3	29
Garst	8287RR	123.6	-	-	15.9	30
Golden Acres	2842RRBW	123.0	-	-	15.0	34
Croplan Genetics	851RR/Bt	122.7	-	-	15.8	32
Croplan Genetics	822RR/Bt	120.0	-	-	17.2	32
Pioneer	32R25	119.2	150.9	166.5	15.1	30
Belle	Belle 1830Y	118.9	-	-	17.3	28
DEKALB	DKC69-72 (RR2)	118.4	158.1	164.1	18.0	29
Dyna Gro	CX03118	117.8	164.3	-	15.4	32
Monsanto	NC6702	117.2	-	-	15.5	28
NK Brand	N82-A7	117.0	154.1	-	17.0	29
NK Brand	N83-Z8	114.0	150.2	162.0	16.6	22
Garst	8200YG1	113.8	141.9	157.4	17.5	27
Golden Acres	X6420BT	113.7	141.5	-	16.5	29
Pioneer	32T22	112.7	-	-	14.8	31
FB	FB 812	111.4	-	-	13.7	27
Dyna-Gro	5515	110.5	-	-	14.8	32
FB	FB 814CB	109.0	-	-	14.6	29
Dyna-Gro	58K15	108.7	-	-	14.1	33
Golden Acres	X-6501Bt	108.7	-	-	17.4	27
DEKALB	DKC69-71 (RR2/YGCB)	108.1	139.4	160.1	16.8	30
BioGene	BG RRCB1163	103.7	-	-	15.7	34
Croplan Genetics	818 RR/Bt	99.6	137.4	-	17.8	33

(continued)

Table 5 (continued). Results from 52 late-maturing corn hybrids grown without irrigation on a Collins silt loam soil near Hernando, Desoto County, 2005.¹

Brand name	Hybrid number	2005 yield	2-year avg	3-year avg	Moisture content	Harvested stand (x1000)
		bu/a	bu/a	bu/a	%	
Golden Acres	2995RR	95.2	-	-	16.2	28
Dyna Gro	5545Bt	95.0	-	-	14.1	30
FB	FB 909	89.1	-	-	15.1	20
Golden Acres	X-6511LLHx	88.6	-	-	23.0	29
Overall mean		121.5	151.5	162.8		
LSD (.10)		28.2	17.2	15.4		
Error degrees of freedom		147	106	71		
CV (%)		19.4	13.6	13.8		
R² (%)		36	77	76		
¹ Planted April 5; harvested September 12.						

Table 6. Results from 36 early-maturing corn hybrids grown without irrigation on a Brooksville silty clay soil in Brooksville, Noxubee County, 2005.¹

Brand name	Hybrid number	2005 yield	2-year avg	3-year avg	Moisture content	Harvested stand (x1000)
		bu/a	bu/a	bu/a	%	
Pioneer	33M54	157.8	157.5	166.5	14.4	29
Dyna-Gro	57F87	134.1	-	-	12.8	33
Terral	TV26BR41	133.5	142.5	-	13.2	30
Belle	Belle 1533Y	130.3	146.9	-	13.0	30
Terral	TV25R31	128.5	163.2	-	13.5	31
NK Brand	N65-C5	127.6	-	-	12.8	30
DEKALB	DKC63-62	127.4	-	-	13.4	30
Belle	Belle 1545RY	126.3	164.2	-	13.2	30
Belle	Belle BEX RY455	124.2	-	-	12.8	30
Belle	Belle 1515C	123.3	123.0	-	14.4	29
Pioneer	33V15	118.9	126.9	143.5	13.9	30
Dyna-Gro	5528BT	117.1	129.0	146.7	12.8	31
Terral	TV25BR23	116.1	154.8	166.3	13.3	33
Terral	TV26B82	115.7	145.1	-	14.3	33
Belle	Belle 1525R	115.4	151.4	-	13.9	28
DEKALB	DKC61-45	112.4	144.6	-	12.8	29
Terral	TV26B34	111.9	-	-	12.9	31
Pioneer	33H25	111.7	-	-	13.0	30
DEKALB	DKC61-72	109.8	-	-	12.9	30
Garst	8451RR	107.1	-	-	12.6	29
Terral	TV27C48	107.0	-	-	13.7	30
DEKALB	DKC63-81	105.1	137.7	-	12.7	29
Belle	Belle 1824R	103.9	-	-	13.1	28
Dyna-Gro	DG57K66	102.4	117.3	135.3	13.3	33
Pioneer	33N56	98.7	-	-	13.5	29
Terral	TV25R501	97.9	-	-	13.4	33
Croplan Genetics	691 BT/LL	96.0	125.7	-	12.7	32
Dyna-Gro	DG57P35	95.1	137.3	147.3	13.2	33
DEKALB	DKC60-19	93.6	132.8	-	12.8	30
FFR	746RRBT	92.8	-	-	13.2	31
NK Brand	N76-D3	92.0	-	-	12.9	30
Croplan Genetics	631 RR/BT	88.8	121.6	-	12.9	32
Vigoro	V56Y51	88.8	-	-	12.9	29
Golden Acres	2831RRB	88.2	137.1	-	13.0	32
Terral	TV23R31	87.8	127.6	-	14.0	33
Terral	TV26BR10n	79.6	124.6	140.6	13.1	25
Overall mean		110.2	138.9	149.5		
LSD (.10)		22.2	20.4	16.5		
Error degrees of freedom		105	117	53		
CV (%)		17.1	17.5	16.0		
R² (%)		53	74	77		

¹Planted April 19; harvested September 13.

Table 7. Results from 52 late-maturing corn hybrids grown without irrigation on a Brooksville silty clay soil in Brooksville, Noxubee County, 2005.¹

Brand name	Hybrid number	2005 yield	2-year avg	3-year avg	Moisture content	Harvested stand (x1000)
		bu/a	bu/a	bu/a	%	
Garst	8288	141.4	-	-	15.7	27
BioGene	BG RRCB1163	136.9	-	-	13.4	33
Vigoro	V58YR2	136.0	-	-	13.7	29
FFR	835BT	131.7	152.1	-	13.8	28
Garst	8295YG1/RR	128.5	-	-	15.0	28
Pioneer	31G68	128.5	-	-	13.9	28
Dyna-Gro	DG CXO5516	126.1	-	-	14.1	33
Dyna-Gro	58P59	123.2	149.7	-	13.2	33
Croplan Genetics	818 RR/Bt	121.5	158.6	-	15.3	32
DEKALB	DKC66-21	118.4	155.4	-	13.7	29
Pioneer	31R87	118.4	154.2	-	14.7	29
Dyna Gro	5545Bt	116.1	-	-	13.0	31
Garst	8225YG1/RR	115.7	-	-	13.5	30
Monsanto	NC6901	115.7	-	-	14.5	29
Monsanto	NC6702	114.9	-	-	15.0	29
Pioneer	31G97	114.7	146.9	-	13.7	29
Croplan Genetics	851RR/Bt	113.9	-	-	13.2	32
Vigoro	V62R66	113.1	-	-	15.1	28
Golden Acres	X6420BT	112.9	156.0	-	15.0	32
Golden Acres	2842RRBW	112.6	-	-	13.3	33
Monsanto	NC6704NRR1	112.4	-	-	15.0	28
Pioneer	31G66	112.3	133.8	149.1	14.2	29
Dyna-Gro	DG58K22	111.2	-	-	14.2	33
Pioneer	32D99	110.4	134.9	144.4	15.3	28
Garst	8200YG1	110.2	131.4	141.1	15.3	29
NK Brand	N82-A7	109.6	136.8	-	14.2	30
FB	FB 904	107.2	-	-	13.6	27
Golden Acres	X-6511LLHx	107.1	-	-	17.4	28
FFR	900BT	106.0	134.9	146.7	13.8	27
FB	FB 812	106.0	-	-	13.2	27
Pioneer	32T22	105.5	-	-	13.5	28
Croplan Genetics	822RR/Bt	105.3	-	-	14.0	31
Pioneer	32R25	103.7	144.6	158.6	13.9	28
Garst	8287RR	103.6	-	-	15.5	27
Dyna-Gro	DG CXO5218	103.0	-	-	14.4	32
Belle	Belle 1830Y	102.3	-	-	15.0	27
Dyna-Gro	5515	102.2	-	-	13.9	32
NK Brand	N83-Z8	102.1	119.2	138.5	14.3	28
DEKALB	DKC69-72 (RR2)	100.6	145.9	155.6	14.4	28
Dyna-Gro	58K15	99.8	-	-	14.2	33
Golden Acres	GA 2841RRB	96.9	141.9	-	13.4	31
Dyna Gro	CX03118	96.6	135.2	-	14.3	27
Vigoro	V59YR52	95.9	-	-	13.9	28
FB	FB 812CB	93.5	-	-	13.2	29

(continued)

Table 7 (continued). Results from 52 late-maturing corn hybrids grown without irrigation on a Brooksville silty clay soil in Brooksville, Noxubee County, 2005.¹

Brand name	Hybrid number	2005 yield	2-year avg	3-year avg	Moisture content	Harvested stand (x1000)
		bu/a	bu/a	bu/a	%	
Garst	8364YG1/RR	91.2	-	-	14.0	29
FB	FB 909	88.9	-	-	14.4	28
FFR	886RR	84.8	-	-	15.7	24
DEKALB	DKC69-71 (RR2/Y	84.5	138.2	146.5	14.2	29
Golden Acres	2995RR	83.8	-	-	14.1	28
FB	FB 814CB	83.8	-	-	13.6	28
Terral	TV26B23	83.3	119.1	137.1	15.2	29
Golden Acres	X-6501Bt	77.1	-	-	15.3	28
Overall mean		108.1	141.9	146.6		
LSD (.10)		21.3	19.4	18.0		
Error degrees of freedom		153	102	68		
CV (%)		16.9	16.1	17.6		
R² (%)		49	80	76		

¹Planted April 19; harvested September 13.

Table 8. Results from 39 early-maturing corn hybrids grown with irrigation on a Forestdale silty clay soil in Clarksdale, Coahoma County, 2005.¹

Brand name	Hybrid number	2005 yield	2-year avg	3-year avg	Moisture content	Harvested stand (x1000)
		bu/a	bu/a	bu/a	%	
Dyna-Gro	DG57K66	167.8	164.6	141.3	17.5	29
Dyna-Gro	DG57P35	163.4	164.2	160.2	16.5	25
Garst	8454YG1	162.0	-	-	15.9	26
Croplan Genetics	631 RR/BT	158.1	169.0	-	16.5	26
DEKALB	DKC61-72	157.1	-	-	16.0	32
Terral	TV27C48	156.5	-	-	15.5	22
Terral	TV25BR23	156.4	166.4	160.2	15.3	25
Terral	TV23R31	155.2	162.1	-	15.9	26
Pioneer	33M54	153.9	170.3	168.0	15.4	26
DEKALB	DKC61-45	152.3	166.4	-	14.7	28
Terral	TV26BR10n	151.2	168.4	145.6	15.4	23
Adler	8015YGCB/RR	149.7	-	-	16.8	21
Belle	Belle BEX RY455	149.7	-	-	16.6	27
Belle	Belle 1545RY	149.6	161.5	-	15.4	30
Belle	Belle 1525R	149.4	156.9	-	15.8	25
Vigoro	V56Y51	147.2	165.1	-	16.7	29
FFR	746RRBT	145.1	-	-	15.6	26
Terral	TV25R31	143.4	157.6	-	15.7	22
NK Brand	N76-D3	142.9	-	-	15.0	25
Terral	TV26B82	142.7	162.7	-	17.4	26
Golden Acres	2831RRB	142.1	158.2	-	15.9	29
Belle	Belle 1824R	142.0	-	-	15.3	25
Triumph	1536CBRR	141.5	-	-	15.0	25
Dyna-Gro	5528BT	141.0	174.2	147.1	16.6	25
Pioneer	33H25	138.8	-	-	15.2	28
Pioneer	33N56	138.6	-	-	15.9	28
Terral	TV26BR41	138.5	151.6	-	15.3	23
Dyna-Gro	57F87	138.5	-	-	15.4	28
Belle	Belle 1515C	138.5	155.2	-	17.0	26
Croplan Genetics	691 BT/LL	138.2	158.8	-	17.2	25
DEKALB	DKC63-81	137.1	161.6	-	15.8	30
Terral	TV25R501	134.5	-	-	17.4	27
Pioneer	33V15	133.6	157.7	-	16.3	15
Terral	TV26B34	133.1	-	-	15.8	25
DEKALB	DKC63-62	130.5	-	-	16.5	29
Belle	Belle 1533Y	126.3	154.5	-	15.4	27
DEKALB	DKC60-19	125.2	150.4	-	15.6	29
NK Brand	N65-C5	114.6	-	-	15.7	30
Adler	8210YGCB	114.0	-	-	16.3	24
Overall mean		143.6	161.7	153.7		
LSD (.10)		27.5	19.8	16.4		
Error degrees of freedom		114	126	45		
CV (%)		16.3	14.8	15.6		
R² (%)		46	54	73		

¹Planted April 4; harvested September 8.

Table 9. Results from 54 late-maturing corn hybrids grown with irrigation on a Forestdale silty clay soil in Clarksdale, Coahoma County, 2005.¹

Brand name	Hybrid number	2005 yield	2-year avg	3-year avg	Moisture content	Harvested stand (x1000)
		bu/a	bu/a	bu/a	%	
Croplan Genetics	818 RR/Bt	186.3	185.6	-	18.2	31
BioGene	BG RRCB1163	185.2	-	-	17.4	31
Dyna-Gro	58P59	184.0	172.4	153.6	16.2	30
Golden Acres	GA 2841RRB	183.1	182.4	164.6	17.6	31
Golden Acres	2842RRBW	181.7	-	-	16.3	30
Pioneer	31G97	179.2	196.3	-	15.8	29
Pioneer	32T22	175.4	-	-	15.8	29
Pioneer	32R25	175.3	182.5	152.3	16.0	29
Pioneer	32D99	174.6	179.7	148.9	18.2	29
Dyna-Gro	DG CXO5218	174.3	-	-	18.9	24
Pioneer	31G68	173.9	-	-	16.2	27
Dyna-Gro	58K15	172.6	172.6	152.5	15.3	28
Croplan Genetics	851RR/Bt	172.5	-	-	16.4	28
DEKALB	DKC66-21	170.3	180.2	-	19.0	28
Vigoro	V59YR52	167.4	-	-	15.4	25
Garst	8295YG1/RR	167.3	-	-	17.4	26
Monsanto	NC6704NRR1	166.3	-	-	16.1	27
DEKALB	DKC69-71 (RR2/Y	164.9	181.6	162.0	19.3	31
Dyna-Gro	5515	163.6	164.4	141.9	15.9	25
Monsanto	NC6901	163.0	-	-	16.8	31
Triumph	1866Bt	162.9	165.4	152.8	16.8	27
NK Brand	N82-A7	162.2	187.9	-	18.7	28
Vigoro	V62R66	161.9	-	-	16.8	26
NK Brand	N83-Z8	161.7	164.2	152.3	17.5	28
Dyna-Gro	DG58K22	161.7	-	-	16.7	25
Vigoro	V58YR2	157.0	207.2	-	17.7	26
FB	FB 814CB	156.5	-	-	17.4	25
DEKALB	DKC69-72 (RR2)	156.3	172.4	149.9	18.5	30
Garst	8225YG1/RR	156.1	-	-	17.1	26
Pioneer	31G66	155.2	165.5	141.4	17.8	27
Garst	8364YG1/RR	153.5	-	-	15.9	23
Dyna Gro	5545Bt	153.2	-	-	15.1	24
Croplan Genetics	822RR/Bt	152.4	-	-	20.2	26
FB	FB 812CB	152.3	-	-	16.3	24
Monsanto	NC6702	151.1	-	-	16.7	28
Belle	Belle 1830Y	150.9	-	-	22.2	25
Golden Acres	2995RR	149.4	-	-	21.0	25
Garst	8287RR	147.4	-	-	17.1	23
Garst	8288	146.0	168.5	146.1	18.1	24
Dyna-Gro	DG CXO5516	145.6	-	-	15.8	28
Pioneer	31R87	143.7	158.9	-	17.6	25
FFR	835BT	143.3	171.1	-	17.1	19
FB	FB 909	142.2	-	-	17.2	25
FFR	886RR	142.0	-	-	19.4	22
Golden Acres	X6420BT	141.3	195.4	-	19.8	25
Dyna Gro	CX03118	141.0	143.4	-	17.6	21
FB	FB 904	138.3	-	-	17.0	23
FB	FB 812	137.1	-	-	15.4	23
FFR	900BT	130.4	162.8	140.6	16.9	19

(continued)

Table 9 (continued). Results from 54 late-maturing corn hybrids grown with irrigation on a Forestdale silty clay soil in Clarksdale, Coahoma County, 2005.¹

Brand name	Hybrid number	2005 yield	2-year avg	3-year avg	Moisture content	Harvested stand (x1000)
		bu/a	bu/a	bu/a	%	
Terral	TV26B23	130.4	187.0	166.5	16.2	22
Golden Acres	X-6501Bt	126.0	-	-	20.5	18
Garst	8200YG1	119.5	164.0	157.2	21.2	25
Golden Acres	X-6511LLHx	118.4	-	-	28.4	24
Garst	8213RR	116.1	-	-	18.8	21
Overall mean		156.4	175.5	152.2		
LSD (.10)		17.8	18.5	15.2		
Error degrees of freedom		159	137	125		
CV (%)		9.7	12.7	14.8		
R² (%)		70	72	81		
¹ Planted April 4; harvested September 8.						

Table 10. Results from grain sorghum grown on a Sharkey clay soil at the MAFES Delta Branch, Stoneville, 2005.¹

Brand name	Hybrid number	2005 yield	2-year avg	3-year avg	Head ³ exertion	Plant ⁴ height	Moisture content
		bu/a	bu/a	bu/a	in	in	%
Terral	TVX95S25	119.2	114.5	114.0	2	12.5	15.1
Pioneer	83G66	118.5	112.4	113.6	1	14.0	14.8
Golden Acres	GA3552	118.0	104.1	-	1	14.5	14.7
Pioneer	83G15	117.3	103.6	107.6	1	13.5	14.8
Dyna Gro	DG X1743	115.2	-	-	1	11.5	14.3
Terral	TVX95B304	114.7	104.8	-	2	13.0	15.0
Dyna-Gro	DG 751B	112.4	111.9	-	2	12.5	14.6
Pioneer	84G62	111.2	109.4	116.9	1	13.3	14.9
Terral	TV93S72	110.2	113.3	109.7	1	12.8	14.4
Dyna Gro	DG X1785	109.2	-	-	2	11.5	15.0
Asgrow	A571	108.5	-	-	2	14.5	14.8
Dyna Gro	DG X1755	108.3	95.4	-	1	12.5	14.8
Golden Acres	GA3827	107.8	104.9	-	1	12.8	15.2
Terral	TV96H81	105.6	110.8	104.8	1	12.5	14.9
Dyna Gro	DG X1742	103.9	-	-	2	13.0	14.5
Terral	TV9421	103.7	103.8	106.1	1	13.3	14.4
Dyna-Gro	DG 780B	102.7	-	-	1	13.0	15.0
Golden Acres	GA3694	101.6	92.6	98.8	1	12.8	14.7
Terral	TVX94A415	101.2	-	-	3	13.0	14.6
Dyna Gro	DG X1759	101.2	-	-	0	13.0	15.2
Dyna Gro	DG X1758	101.1	-	-	2	12.8	14.9
Dyna Gro	DG X1756	101.0	-	-	1	11.0	14.6
Asgrow	A567	100.9	80.4	-	1	14.8	15.0
Garst	Garst 5401	99.3	-	-	2	13.5	15.1
Terral	TV1050	98.3	98.5	103.8	1	13.0	14.6
DEKALB	DKS 54-00	96.9	66.0	-	2	13.3	15.2
Golden Acres	GA444E	95.5	95.3	103.7	1	12.5	14.7
Dyna Gro	DG X1784	94.6	-	-	1	14.0	15.1
Triumph	TRX44537	90.3	-	-	0	11.3	14.7
Terral	TVX95B324	87.5	-	-	1	13.5	14.8
Dyna-Gro	DG 762B	86.2	-	-	1	11.3	14.9
DEKALB	DKS53-11	85.0	-	-	1	14.5	15.1
Monsanto	MSC 531	82.2	-	-	2	12.0	14.7
Terral	TVX94A427	81.2	-	-	2	16.0	14.5
Monsanto	MSC 332	72.2	-	-	2	13.0	14.8
Terral	TVX96A317	53.6	-	-	2	12.5	15.7
Overall mean		100.5	101.3	107.9			
LSD (.10)		15.4	15.3	9.7			
Error degrees of freedom		105	96	81			
CV (%)		13.0	18.1	13.3			
R ² (%)		63	56	48			

¹Planted April 27; harvested September 14.

Herbicide: Preemergence - Bicep II @ 2 qt/A.

Fertilizer added: Sidedress - N @ 100 lb/A .

³Head Exertion = Distance in inches from the flag leaf to base of panicle.

⁴Plant Height = Height in inches from the soil surface to the top of the grain head.

Participating Companies & Hybrids for Grain Sorghum

Garst Seed Company 761 Walnut Knoll Lane Suite 200 Cordova, TN 38018	5440 5515 N3401 (Exp.)
Golden Acres Genetics P O Box 579 Buchanan Dam, TX 78609	GA3694 GA3827 GA444E GA3552
Monsanto Co RR 3 BOX 119 Plainview TX 79072	A567 A603 DKS 54-00 X304 (Exp.) X204 (Exp.)
Pioneer Hi-Bred Int. Inc 7501 Memorial Pky. SE, Ste 205 Huntsville, AL 35802	83G66 83G15 84G62
Southern States Coop P O Box 26234 Richmond, VA 23260	SS650 SS800
Terral Seed Inc. P O Box 826 Lake Providence, LA 71254	TV9421 TV1050 TV93S72 TV96H81 TVX93S16 (Exp.) TVX94S34 (Exp.) TVX95B303 (Exp.) TVX95B304 (Exp.) TVX95B319 (Exp.) TVX95S25 (Exp.)
Triumph Seed Co Inc P O Box 1050 Ralls TX 79357	TR 82-G TR461
UAP MidSouth 57 Germantown Court Suite 200 Cordova TN 38018	DG X1753 (Exp.) DG X1755 (Exp.) DG X1781 (Exp.) DG X1782 (Exp.) DG X751B

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