MISSISSIPPI GRAIN SORGHUM

VARIETY TRIALS, 2020

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MISSISSIPPI'S OFFICIAL VARIETY TRIALS

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MS AGRICULTURAL AND
FORESTRY EXPERIMENT STATION

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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 page 2 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 page 2.

Mississippi Grain Sorghum Hybrid Trials, 2020

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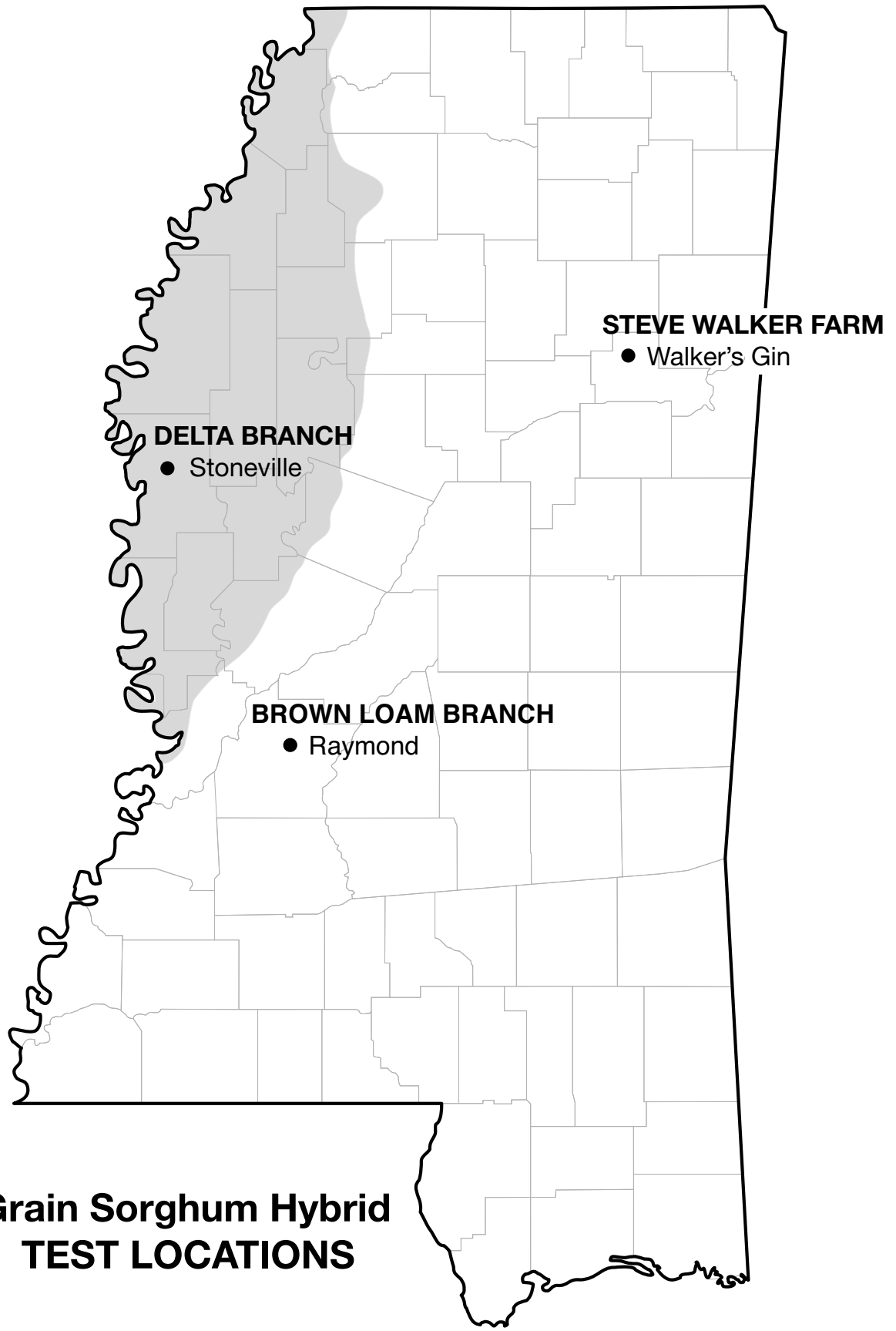
Our website address is ***mafes.msstate.edu/variety-trials***.



Grain Sorghum Hybrid TEST LOCATIONS

Mississippi Grain Sorghum Hybrid Trials, 2020

PROCEDURES

Trials were conducted on Experiment Station land and on grower-cooperator fields in two geographical areas in Mississippi: Area I, located in the hill region of Mississippi; and Area II, located in the Delta region of Mississippi (see map). Commercial seed companies were given the opportunity to enter hybrids in the trial.

Plots consisted of various row patterns, depending on the location. Plot sizes were one of the following: (1) two 40-inch-wide, 16-foot-long rows; or (2) three 19-inch-wide, 16-foot-long rows. These planting patterns were used to accommodate the producer at each location.

Weeds were controlled by cultivation and/or herbicides. Only herbicides currently registered for use on grain sorghum were used in these studies, with strict adherence to all label instructions.

Experimental design was a randomized complete block with four replications at each location.

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.

Grain Sorghum Performance Measurements

Yield: An Almaco plot combine was used to harvest the total area of each plot. Harvested grain was weighed, moisture was determined, and yields were converted to bushels per acre at 14% moisture.

Head Exertion: This measurement is the average distance in inches from the flag leaf to the base of the panicle.

Grain Moisture: This measurement is expressed as a percent moisture of grain at harvest.

Plant Height: This measurement is the average height in inches from the soil surface to the top of the grain head.

Head Compactness: This variable was measured on a 1–5 scale: 1 = head short and oval; 2 = head long and slender; 3 = head elongated and oval; 4 = head elongated and rectangular; and 5 = head elongated and open.

USE OF DATA TABLES AND SUMMARY STATISTICS

The yield potential of a given hybrid cannot be measured with complete accuracy. Consequently, replicate plots of all hybrids are evaluated for yield, and the yield of a given hybrid is estimated as the mean of all replicate plots of that hybrid. Yields vary somewhat from one replicate plot to another, which introduces a certain degree of error to the value. As a result, although the mean yields of some hybrids are numerically different, the two hybrids may not be significantly different from each other within the range of natural variation. That is, the 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 hybrids 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:

Hybrid	Yield
A	90 bu/A
B	85 bu/A
C	81 bu/A
LSD	7 bu/A

The difference between hybrid A and hybrid 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 hybrid A and hybrid B have the same yield potential, since we are unable to say that the observed difference did not occur purely due to chance. However, the difference between hybrid A and hybrid 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 hybrid A is superior to that of hybrid 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 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. Overall, as the CV increases, the precision of a given trial decreases.

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 a better measure of precision than the CV for comparison of different trials.

Table 1. 2020 grain sorghum hybrid trial location summary.

Location	Irrigation	Soil type	Planting date	Harvest date	Row spacing
Raymond, Brown Loam Branch	Not Irrigated	Loring silt loam	5/11	9/9	19”
Stoneville, Delta Branch	Not Irrigated	Bosket very fine sandy loam	5/13	9/10	40’
Walker’s Gin, Steve Walker Farm	Not Irrigated	Mathiston silt loam	5/12	9/8	38”

Table 2. Hybrids entered in the Mississippi grain sorghum hybrid trials, 2020.

Brand	Hybrid[1]	Seed treatment	Plant population (x1000)	Days to maturity
Dekalb	DKS54-07	Concep/ Poncho	120	117
Dekalb	DKS53-53	Concep/ Poncho	120	114
Dekalb	DKS51-01	Concep/ Poncho	120	114
Dekalb	DKS47-07	Concep/ Poncho	120	110
Dyna-Gro Seed	GX20564	Fludioxonil, Metalaxyl, Fluxofenin Chlorpyrios, Deltamethrin, Imidacloprid	85	99
Dyna-Gro Seed	M60GB31	Fludioxonil, Metalaxyl, Fluxofenin Chlorpyrios, Deltamethrin, Imidacloprid	85	98
Dyna-Gro Seed	M60GB88	Fludioxonil, Metalaxyl, Fluxofenin Chlorpyrios, Deltamethrin, Imidacloprid	85	96
Dyna-Gro Seed	M62GB77	Fludioxonil, Metalaxyl, Fluxofenin Chlorpyrios, Deltamethrin, Imidacloprid	85	98
Dyna-Gro Seed	M69GR88	Fludioxonil, Metalaxyl, Fluxofenin Chlorpyrios, Deltamethrin, Imidacloprid	85	113
Dyna-Gro Seed	M71GR91	Fludioxonil, Metalaxyl, Fluxofenin Chlorpyrios, Deltamethrin, Imidacloprid	85	114
Dyna-Gro Seed	M72GB71	Fludioxonil, Metalaxyl, Fluxofenin Chlorpyrios, Deltamethrin, Imidacloprid	85	115
Dyna-Gro Seed	M74GB17	Fludioxonil, Metalaxyl, Fluxofenin Chlorpyrios, Deltamethrin, Imidacloprid	85	117
Dyna-Gro Seed	GX19981	Fludioxonil, Metalaxyl, Fluxofenin Chlorpyrios, Deltamethrin, Imidacloprid	85	113
Gaylon Ward	18102	—	80	—
Gaylon Ward	19001	—	80	—
Gaylon Ward	19016	—	80	—
Gaylon Ward	19017	—	80	—
Gaylon Ward	19152	—	80	—
Gaylon Ward	20313	—	80	—
Local Seed	LGS85B19	Maxim XL/Concep III/NipSit	80	90
Local Seed	LGS99W20	Maxim XL/Concep III/NipSit	80	100
Local Seed	LGS06B19	Maxim XL/Concep III/NipSit	80	105
Local Seed	LGS12R19	Maxim XL/Concep III/NipSit	80	110
Local Seed	LGS05B20	Maxim XL/Concep III/NipSit	80	105
Local Seed	LGS16B20	Maxim XL/Concep III/NipSit	80	115
Local Seed	LGS17B20	Maxim XL/Concep III/NipSit	80	115
Pioneer	83P17	Concept	85	—
Pioneer	84P80	Concept	85	—
Pioneer	83G19	Concept	85	—
Sorghum Partners	SP 68M57	Fludioxonil, Metalaxyl, Fluxofenim, Deltamethrin+S-Methoprene, Clothiandin	90	66-71
Sorghum Partners	SP 74M21	Fludioxonil, Metalaxyl, Fluxofenim, Deltamethrin+S-Methoprene, Clothiandin	90	69-74
Sorghum Partners	SP 74C40	Fludioxonil, Metalaxyl, Fluxofenim, Deltamethrin+S-Methoprene, Clothiandin	90	71-75
Sorghum Partners	SP 7715	Fludioxonil, Metalaxyl, Fluxofenim, Deltamethrin+S-Methoprene, Clothiandin	90	71-75

Italics = Exp. Variety

Table 3. 2020 yield summary of grain sorghum hybrid trials in Mississippi.

Brand	Hybrid	Raymond Hills (loam)	Stoneville Delta (loam)	Walker's Gin Hills (loam)	Overall avg.
		bu/A	*bu/A*	*bu/A*	*bu/A*
Dekalb	DKS47-07	101.3	128.4	84.7	104.8
Dekalb	DKS51-01	116.3	122.9	111.0	116.7
Dekalb	DKS53-53	95.4	129.8	72.5	99.3
Dekalb	DKS54-07	96.7	122.0	87.7	102.2
Dyna-Gro Seed	GX19981	118.0	115.7	94.4	109.4
Dyna-Gro Seed	GX20564	107.7	88.4	91.0	95.7
Dyna-Gro Seed	M60GB31	111.8	113.5	80.6	102.0
Dyna-Gro Seed	M60GB88	100.1	74.6	51.5	75.4
Dyna-Gro Seed	M62GB77	70.3	99.5	75.2	81.7
Dyna-Gro Seed	M69GR88	89.2	116.4	60.6	88.7
Dyna-Gro Seed	M71GR91	109.0	100.7	93.2	101.0
Dyna-Gro Seed	M72GB71	117.9	119.5	101.3	112.9
Dyna-Gro Seed	M74GB17	109.6	114.1	84.1	102.6
Gaylon Ward	18102	105.4	106.4	66.9	92.9
Gaylon Ward	19001	103.2	126.3	62.6	97.4
Gaylon Ward	19016	114.0	114.9	69.1	99.3
Gaylon Ward	19017	83.9	111.7	67.7	87.8
Gaylon Ward	19152	102.1	116.1	68.4	95.5
Gaylon Ward	20313	111.6	131.3	81.9	108.3
Local Seed	LGS05B20	99.6	85.7	96.1	93.8
Local Seed	LGS06B19	106.2	112.6	102.6	107.1
Local Seed	LGS12R19	116.5	117.3	106.6	113.5
Local Seed	LGS16B20	94.0	114.9	79.5	96.1
Local Seed	LGS17B20	100.2	126.6	75.1	100.6
Local Seed	LGS85B19	33.7	23.3	29.6	28.8
Local Seed	LGS99W20	103.3	103.1	81.7	96.0
Pioneer	83G19	111.3	127.3	78.4	105.7
Pioneer	83P17	108.7	131.4	68.3	102.8
Pioneer	84P80	102.8	121.6	96.1	106.8
Sorghum Partners	SP 68M57	102.8	104.0	86.1	97.6
Sorghum Partners	SP 74C40	94.9	110.8	84.0	96.6
Sorghum Partners	SP 74M21	109.7	102.0	80.4	97.4
Sorghum Partners	SP 7715	94.2	114.2	80.3	96.2
Mean		101.3	110.5	80.3	97.4
CV		16.3	12.5	14.9	
R^2		64.0	74.0	70.0	
LSD (0.05)		23.2	19.4	16.8	
Error df		99	99	99	

Table 4. Two-year summary of grain sorghum hybrid trials in Mississippi.

Brand	Hybrid	Raymond Hills (loam)	Stoneville Delta (loam)	Walker's Gin Hills (loam)	Overall avg.
		bu/A	*bu/A*	*bu/A*	*bu/A*
Dekalb	DKS47-07	109.4	132.1	89.6	110.4
Dekalb	DKS51-01	98.9	140.7	102.9	114.2
Dekalb	DKS53-53	110.2	127.8	87.5	108.5
Dyna-Gro Seed	GX19981	117.6	137.6	94.2	116.5
Dyna-Gro Seed	M60GB31	102.9	106.7	93.8	101.1
Dyna-Gro Seed	M62GB77	90.9	110.5	76.3	92.5
Dyna-Gro Seed	M69GR88	80.9	98.2	74.2	84.4
Dyna-Gro Seed	M74GB17	108.2	128.2	77.8	104.7
Pioneer	83P17	105.2	148.6	82.0	112.0
Pioneer	84P80	109.9	124.8	99.5	111.4
Sorghum Partners	SP 68M57	114.7	123.8	76.4	105.0
Sorghum Partners	SP 74C40	89.7	113.2	77.8	93.5
Sorghum Partners	SP 74M21	102.4	111.2	75.3	96.3
Sorghum Partners	SP 7715	107.6	128.1	84.2	106.6
Overall Mean		103.5	123.7	85.1	104.1

Table 5. Three-year average of grain sorghum hybrid trials in Mississippi.

Brand	Hybrid	Raymond Hills (loam)	Stoneville Delta (loam)	Walker's Gin Hills (loam)	Overall avg.
		bu/A	*bu/A*	*bu/A*	*bu/A*
Dekalb	DKS51-01	107.8	126.7	94.7	109.7
Dekalb	DKS53-53	116.9	120.2	78.8	105.3
Dyna-Gro Seed	M60GB31	107.2	99.2	77.1	94.5
Dyna-Gro Seed	M69GR88	94.0	94.7	85.7	91.5
Dyna-Gro Seed	M74GB17	107.6	110.9	79.1	99.2
Pioneer	83P17	113.6	131.6	83.8	109.6
Pioneer	84P80	121.3	114.7	93.3	109.8
Sorghum Partners	SP 68M57	116.3	112.0	62.2	96.9
Sorghum Partners	SP 74C40	96.3	103.7	70.8	90.3
Sorghum Partners	SP 7715	116.4	110.2	81.6	102.7
Overall Mean		109.7	112.4	80.7	100.9

Table 6. 2020 grain sorghum plant heights, head exertion, and head compactness.

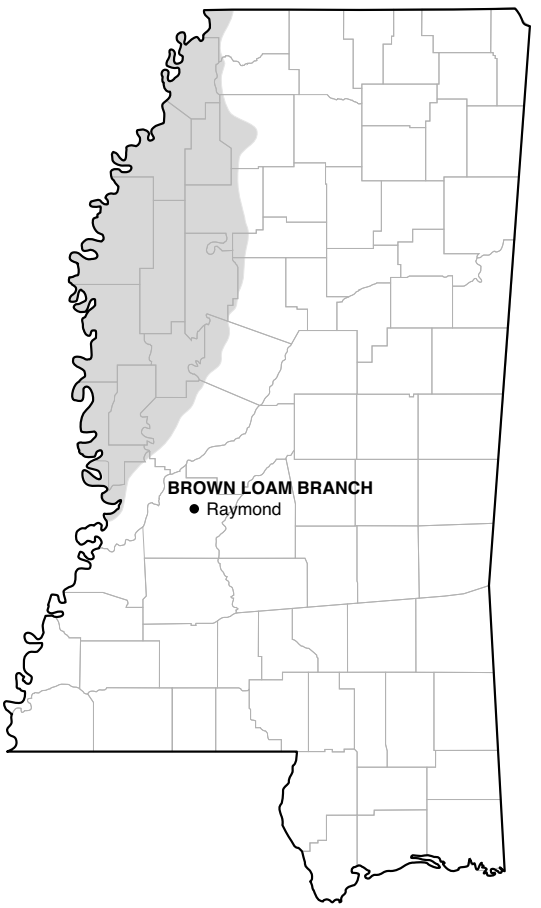
Brand	Variety	Raymond			Stoneville			Walker's Gin		
		Plant height	Head exertion	Head compact.	Plant height	Head exertion	Head compact.	Plant height	Head exertion	Head compact.
Dekalb	DKS47-07	53	6	1	58	9	1	41	2	1
Dekalb	DKS51-01	54	9	1	63	11	2	44	2	3
Dekalb	DKS53-53	55	7	1	54	3	3	47	2	1
Dekalb	DKS54-07	59	8	1	58	7	2	43	2	1
Dyna-Gro Seed	GX19981	50	8	1	55	7	2	48	6	1
Dyna-Gro Seed	GX20564	58	6	2	70	8	3	59	6	2
Dyna-Gro Seed	M60GB31	48	8	2	56	3	3	45	7	3
Dyna-Gro Seed	M60GB88	47	7	3	49	8	2	48	7	3
Dyna-Gro Seed	M62GB77	47	5	2	60	9	2	51	3	1
Dyna-Gro Seed	M69GR88	43	4	2	47	7	2	42	4	2
Dyna-Gro Seed	M71GR91	53	4	1	59	7	2	46	2	1
Dyna-Gro Seed	M72GB71	50	3	2	56	13	2	53	3	4
Dyna-Gro Seed	M74GB17	47	5	1	61	7	2	47	2	3
Gaylon Ward	18102	56	10	2	63	12	3	54	5	1
Gaylon Ward	19001	48	4	5	54	4	3	35	3	4
Gaylon Ward	19016	53	8	1	55	6	2	45	2	1
Gaylon Ward	19017	59	2	3	52	5	3	48	2	2
Gaylon Ward	19152	61	4	4	53	8	1	43	4	2
Gaylon Ward	20313	50	4	4	46	4	3	38	2	3
Local Seed	LGS05B20	64	5	3	69	14	2	60	2	4
Local Seed	LGS06B19	52	8	2	61	7	2	53	3	1
Local Seed	LGS12R19	54	7	1	59	6	2	51	2	1
Local Seed	LGS16B20	69	8	2	76	4	1	47	3	1
Local Seed	LGS17B20	58	4	2	65	13	1	53	8	3
Local Seed	LGS85B19	42	11	3	41	6	1	46	10	4
Local Seed	LGS99W20	52	3	3	49	6	1	51	5	2
Pioneer	83G19	50	4	2	60	6	3	46	6	5
Pioneer	83P17	57	3	1	54	2	2	54	3	3
Pioneer	84P80	57	7	4	57	3	3	46	3	5
Sorghum Partners	SP 68M57	53	9	1	46	6	2	45	2	4
Sorghum Partners	SP 74C40	56	4	1	58	6	1	50	8	2
Sorghum Partners	SP 74M21	52	3	2	61	17	3	49	3	1
Sorghum Partners	SP 7715	52	7	2	55	6	1	47	2	2

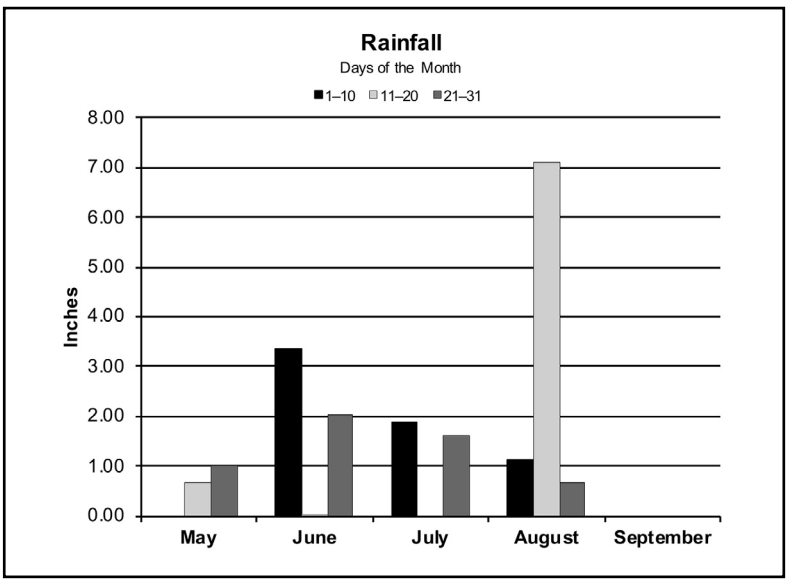
MAFES BROWN LOAM BRANCH, RAYMOND

Crop Summary

The sorghum plots were planted in mid-May into a raised seedbed with adequate soil moisture for germination. All plots emerged to a good stand. Timely rainfall during the growing season allowed for ample soil moisture for the crop to produce good yield potential. The plots were desiccated in early September to facilitate harvest, which was completed in a timely manner.

Planting date . . . .May 11
Harvest date . . . .September 9
Soil type . . . . . .Loring silt loam
Soil pH 6.0
Soil fertility . . . . .P= M, K= M
Fertilizer . . . . . .Preplant — 13-13-13 @ 150 lb/A
Topdress — N @ 115 lb/A (46-0-0) on June 15
Herbicide . . . . . .Preemergence — Lexar @ 1.5 qt/A and Gramoxone @ 1 qt/A on May 11
Postemergence — Atrazine 1 qt/A and Dual II Magnum @ 16 oz/A on June 15
Desiccant — Liberty @ 32 oz/A on September 3
Insecticide . . . . . .Prevathon @ 14 oz/A and Sivanto @ 6 oz/A & Grizzly @ 2.9 oz/A on August 3
Previous crop . . .Corn





Rainfall Summary

	Inches
May	1.70
June	5.38
July	3.49
August	8.92
September	0.00
Total	19.49

Table 7. Performance results of 32 hybrids grown at MAFES Brown Loam Branch, Raymond, 2020.

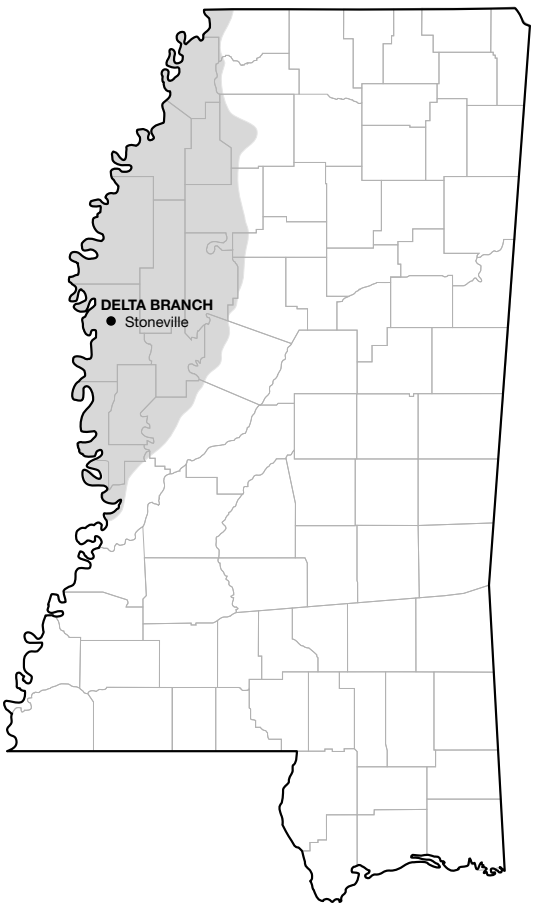
Brand	Hybrid	2020 yield	2-year average	3-year average	Plant height	Head exertion	Head compactness
		bu/A	*bu/A*	*bu/A*	*in*	*in*	*(1-5)*
Dyna-Gro Seed	GX19981	118.0	117.6	—	50	8	1
Dyna-Gro Seed	M72GB71	117.9	—	—	50	3	2
Local Seed	LGS12R19	116.5	—	—	54	7	1
Dekalb	DKS51-01	116.3	98.9	107.8	54	9	1
Gaylon Ward	19016	114.0	—	—	53	8	1
Dyna-Gro Seed	M60GB31	111.8	102.9	107.2	48	8	2
Gaylon Ward	20313	111.6	—	—	50	4	4
Pioneer	83G19	111.3	—	—	50	4	2
Sorghum Partners	SP 74M21	109.7	102.4	—	52	3	2
Dyna-Gro Seed	M74GB17	109.6	108.2	107.6	47	5	1
Dyna-Gro Seed	M71GR91	109.0	—	—	53	4	1
Pioneer	83P17	108.7	105.2	113.6	57	3	1
Dyna-Gro Seed	GX20564	107.7	—	—	58	6	2
Local Seed	LGS06B19	106.2	—	—	52	8	2
Gaylon Ward	18102	105.4	—	—	56	10	2
Local Seed	LGS99W20	103.3	—	—	52	3	3
Gaylon Ward	19001	103.2	—	—	48	4	5
Sorghum Partners	SP 68M57	102.8	114.7	116.3	53	9	1
Pioneer	84P80	102.8	109.9	121.3	57	7	4
Gaylon Ward	19152	102.1	—	—	61	4	4
Dekalb	DKS47-07	101.3	109.4	—	53	6	1
Local Seed	LGS17B20	100.2	—	—	58	4	2
Dyna-Gro Seed	M60GB88	100.1	—	—	47	7	3
Local Seed	LGS05B20	99.6	—	—	64	5	3
Dekalb	DKS54-07	96.7	—	—	59	8	1
Dekalb	DKS53-53	95.4	110.2	116.9	55	7	1
Sorghum Partners	SP 74C40	94.9	89.7	96.3	56	4	1
Sorghum Partners	SP 7715	94.2	107.6	116.4	52	7	2
Local Seed	LGS16B20	94.0	—	—	69	8	2
Dyna-Gro Seed	M69GR88	89.2	80.9	94.0	43	4	2
Gaylon Ward	19017	83.9	—	—	59	2	3
Dyna-Gro Seed	M62GB77	70.3	90.9	—	47	5	2
Local Seed	LGS85B19	33.7	—	—	42	11	3
Mean		101.3					
CV		16.3					
R^2		64.0					
LSD (0.05)		23.2					
Error df		99					

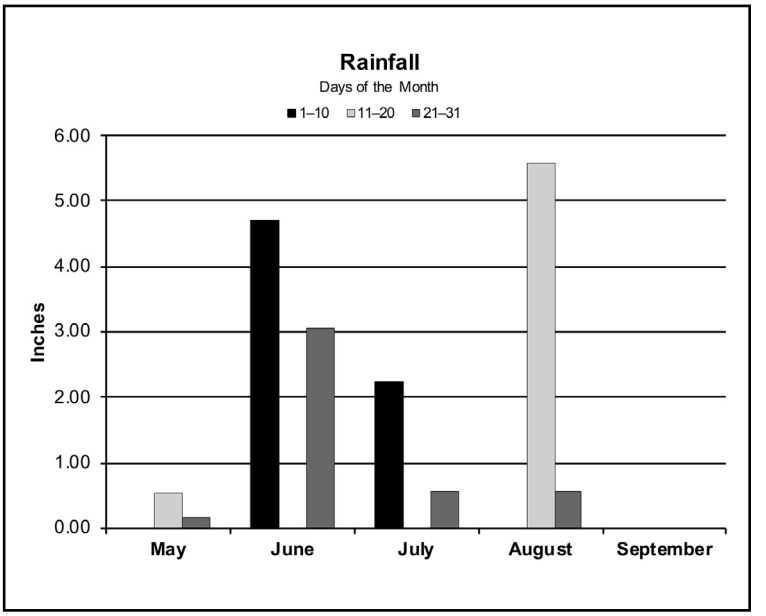
MAFES DELTA BRANCH, STONEVILLE

Crop Summary

The sorghum plots were planted on May 8 into a seedbed that had been harrowed just prior to planting. Soil moisture at planting was ideal for germination and emergence. All plots emerged to a good stand. Timely fertilizer and insecticide applications in combination with ample rainfall throughout the growing season allowed for good yield potential, despite the replant scenario. Harvest was completed in a timely manner without difficulties.

Planting date . . . .May 13
Harvest date . . . .September 10
Soil type . . . . . .Bosket very fine sandy loam
Soil pH 6.7
Soil fertility . . . . .P= H, K= H
Fertilizer . . . . . .N @ 100 lb/A (46-0-0) on June 24
Herbicide . . . . . .Preemergence — Lexar @ 2 qt/A and Roundup PowerMax @ 40 oz/A on May 13
Insecticide . . . . . .Karate Z @ 2 oz/A on July 6; Karate Z @ 2.5 oz/A on July 15; and Sivanto @ 4 oz/A on July 29
Previous crop . . .Cotton





Rainfall Summary

	Inches
May	0.69
June	7.75
July	2.79
August	6.13
September	0.00
Totals	17.36

Table 8. Performance results of 32 hybrids grown at MAFES Delta Branch, Stoneville, 2020.

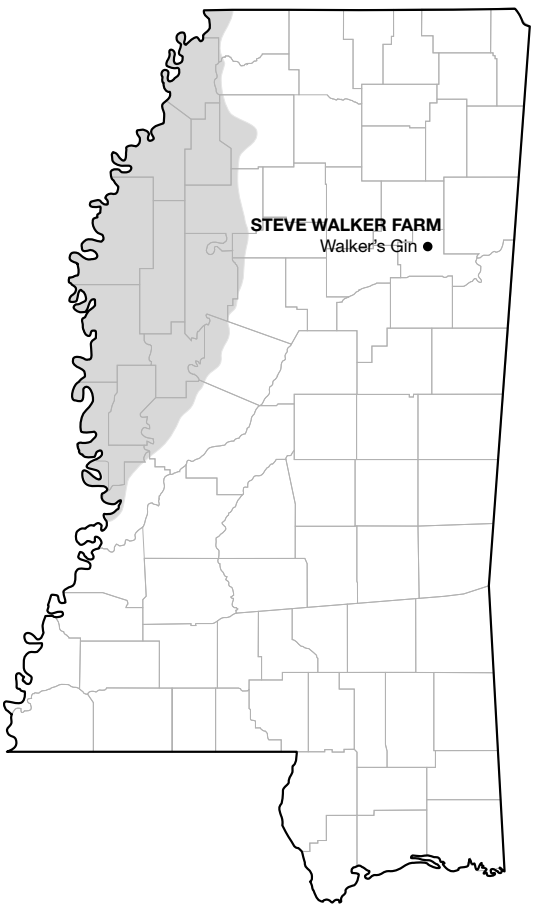
Brand	Hybrid	2020 yield	2-year average	3-year average	Plant height	Head exertion	Head compactness
		bu/A	*bu/A*	*bu/A*	*in*	*in*	*(1-5)*
Pioneer	83P17	131.4	148.6	131.6	54	2	2
Gaylon Ward	20313	131.3	—	—	46	4	3
Dekalb	DKS53-53	129.8	127.8	120.2	54	3	3
Dekalb	DKS47-07	128.4	132.1	—	58	9	1
Pioneer	83G19	127.3	—	—	60	6	3
Local Seed	LGS17B20	126.6	—	—	65	13	1
Gaylon Ward	19001	126.3	—	—	54	4	3
Dekalb	DKS51-01	122.9	140.7	126.7	63	11	2
Dekalb	DKS54-07	122.0	—	—	58	7	2
Pioneer	84P80	121.6	124.8	114.7	57	3	3
Dyna-Gro Seed	M72GB71	119.5	—	—	56	13	2
Local Seed	LGS12R19	117.3	—	—	59	6	2
Dyna-Gro Seed	M69GR88	116.4	98.2	94.7	47	7	2
Gaylon Ward	19152	116.1	—	—	53	8	1
Dyna-Gro Seed	GX19981	115.7	137.6	—	55	7	2
Gaylon Ward	19016	114.9	—	—	55	6	2
Local Seed	LGS16B20	114.9	—	—	76	4	1
Sorghum Partners	SP 7715	114.2	128.1	110.2	55	6	1
Dyna-Gro Seed	M74GB17	114.1	128.2	110.9	61	7	2
Dyna-Gro Seed	M60GB31	113.5	106.7	99.2	56	3	3
Local Seed	LGS06B19	112.6	—	—	61	7	2
Gaylon Ward	19017	111.7	—	—	52	5	3
Sorghum Partners	SP 74C40	110.8	113.2	103.7	58	6	1
Gaylon Ward	18102	106.4	—	—	63	12	3
Sorghum Partners	SP 68M57	104.0	123.8	112.0	46	6	2
Local Seed	LGS99W20	103.1	—	—	49	6	1
Sorghum Partners	SP 74M21	102.0	111.2	—	61	17	3
Dyna-Gro Seed	M71GR91	100.7	—	—	59	7	2
Dyna-Gro Seed	M62GB77	99.5	110.5	—	60	9	2
Dyna-Gro Seed	GX20564	88.4	—	—	70	8	3
Local Seed	LGS05B20	85.7	—	—	69	14	2
Dyna-Gro Seed	M60GB88	74.6	—	—	49	8	2
Local Seed	LGS85B19	23.3	—	—	41	6	1
Mean		110.5					
CV		12.5					
R^2		74.0					
LSD (0.05)		19.4					
Error df		99					

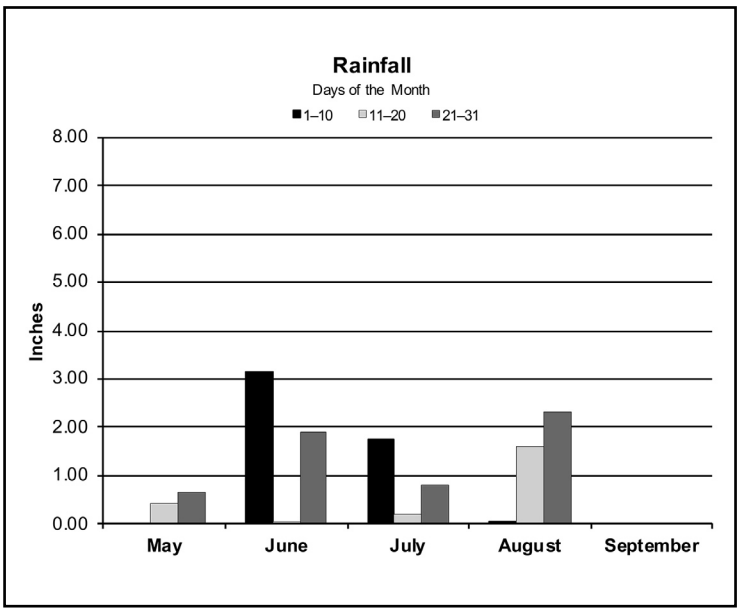
STEVE WALKER FARM, WALKER'S GIN

Crop Summary

The plots were planted no-till into the previous year's sorghum stubble. Soil moisture at planting was adequate for germination. All plots emerged to a good stand. This location experienced extended dry periods at multiple points during the growing season, which possibly reduced the yield potential for this location. All plots were harvested in a timely manner without any difficulties or delays.

Planting date . . .May 12
Harvest date . . . .September 8
Soil type . . . . . .Mathiston silt loam
Soil pH 5.9
Soil fertility . . . . .P= M, K= M
Fertilizer . . . . . .Topdress — 180 lb 0-0-60, 180 lb DAP, and 180 lb 21-0-0-24S on May 22
Sidedress — N @ 105 lb/A (32% UAN) on June 30
Herbicide . . . . . .Preemergence — Lexar @ 2 qt/A and Gramoxone @ 1 qt/A on May 12
Insecticide . . . . . .Sivanto @ 6 oz/A and Mustang Max @ 4 oz/A on July 26
Previous crop . . .Grain Sorghum





Rainfall Summary

	Inches
May	1.06
June	5.09
July	2.75
August	3.95
September	0.00
Total	12.85

Table 9. Performance results of 32 hybrids grown at Steve Walker Farm, Walker's Gin, 2020.

Brand	Hybrid	2020 yield	2-year average	3-year average	Plant height	Head exertion	Head compactness
		bu/A	*bu/A*	*bu/A*	*in*	*in*	*(1-5)*
Dekalb	DKS51-01	111.0	102.9	94.7	44	2	3
Local Seed	LGS12R19	106.6	—	—	51	2	1
Local Seed	LGS06B19	102.6	—	—	53	3	1
Dyna-Gro Seed	M72GB71	101.3	—	—	53	3	4
Local Seed	LGS05B20	96.1	—	—	60	2	4
Pioneer	84P80	96.1	99.5	93.3	46	3	5
Dyna-Gro Seed	GX19981	94.4	94.2	—	48	6	1
Dyna-Gro Seed	M71GR91	93.2	—	—	46	2	1
Dyna-Gro Seed	GX20564	91.0	—	—	59	6	2
Dekalb	DKS54-07	87.7	—	—	43	2	1
Sorghum Partners	SP 68M57	86.1	76.4	62.2	45	2	4
Dekalb	DKS47-07	84.7	89.6	—	41	2	1
Dyna-Gro Seed	M74GB17	84.1	77.8	79.1	47	2	3
Sorghum Partners	SP 74C40	84.0	77.8	70.8	50	8	2
Gaylon Ward	20313	81.9	—	—	38	2	3
Local Seed	LGS99W20	81.7	—	—	51	5	2
Dyna-Gro Seed	M60GB31	80.6	93.8	77.1	45	7	3
Sorghum Partners	SP 74M21	80.4	75.3	—	49	3	1
Sorghum Partners	SP 7715	80.3	84.2	81.6	47	2	2
Local Seed	LGS16B20	79.5	—	—	47	3	1
Pioneer	83G19	78.4	—	—	46	6	5
Dyna-Gro Seed	M62GB77	75.2	76.3	—	51	3	1
Local Seed	LGS17B20	75.1	—	—	53	8	3
Dekalb	DKS53-53	72.5	87.5	78.8	47	2	1
Gaylon Ward	19016	69.1	—	—	45	2	1
Gaylon Ward	19152	68.4	—	—	43	4	2
Pioneer	83P17	68.3	82.0	83.8	54	3	3
Gaylon Ward	19017	67.7	—	—	48	2	2
Gaylon Ward	18102	66.9	—	—	54	5	1
Gaylon Ward	19001	62.6	—	—	35	3	4
Dyna-Gro Seed	M69GR88	60.6	74.2	85.7	42	4	2
Dyna-Gro Seed	M60GB88	51.5	—	—	48	7	3
Local Seed	LGS85B19	29.6	—	—	46	10	4
Mean		80.3					
CV		14.9					
R^2		70.0					
LSD (0.05)		16.8					
Error df		99					

MS AGRICULTURAL AND
FORESTRY EXPERIMENT STATION

The mission of the Mississippi Agricultural and Forestry Experiment Station and the College of Agriculture and Life Sciences is to advance agriculture and natural resources through teaching and learning, research and discovery, service and engagement which will enhance economic prosperity and environmental stewardship, to build stronger communities and improve the health and well-being of families, and to serve people of the state, the region and the world.

Reuben Moore, Interim Director **www.mafes.msstate.edu**