

*Performance of Grain Sorghum
Hybrids in Louisiana 2013*



**LAES Research
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Performance of Grain Sorghum Hybrids in Louisiana, 2013

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Performance of grain sorghum hybrids is annually evaluated by Louisiana Agricultural Experiment Station (LAES) researchers in Official Variety Trials (OVT’s). The purpose of these trials is to provide to Louisiana growers, seedsmen, county agents of the Louisiana Cooperative Extension Service (LCES), and other interested individuals and organizations with unbiased performance data for commercial grain sorghum hybrids submitted for evaluation by private agencies.

The cooperating LAES units in 2013 were: Rice Research Station, Crowley; Central research Station, Baton Rouge; Dean Lee Research Station, Alexandria; Red River Research Station, Bossier City; Northeast Research Station, St. Joseph; and Macon Ridge Research Station, Winnsboro.

The LCES also conducted Core Block Trials in 2013 evaluating hybrids on farms around the state. The results from these trials and the OVT’s provides information to the grower to help in hybrid selection for their farm.

Procedures

Official Variety Trials: In 2013, 24 grain sorghum hybrids were entered in the LAES yield trials. Soil type, cultural practices, location summaries, and weather graphs are listed prior to data tables for each location. In weather graphs, maximum and minimum temperatures are weekly averages and rainfall weekly totals. Multiple planting dates were conducted at Alexandria, Crowley and St. Joseph. None of the trials were furrow-irrigated.

The experimental design at each location was a randomized complete block design with four or five replications. Traits measured and rating scales are listed in Table 1. Analysis of variance and least significant differences (LSD) were computed using SAS (Statistical Analysis System). We used the protected F-test, which means LSD’s were calculated only if differences among hybrids existed at the 90% confidence level. If

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differences were significant, an LSD at the 10% probability level was calculated. If the LSD (0.10) for yield in a trial is 400 lb/acre, there is a 10% chance that two hybrids with a reported yield difference of 400 lb/acre are genetically equal and a 90% probability they have differences in genetic potential in that particular environment. LSD values are influenced by how well soil fertility, stand establishment, plot length, harvest efficiency, and other variables are controlled and by number of replications for each hybrid. The letters NS are used in the text and tables to indicate lack of significance (**not significantly different**) at the 10% probability level. The coefficient of variation (CV) reflects the magnitude of experimental error (random variation not accounted for by hybrids and replications) in relation to the trial mean. A high CV means that relative differences among hybrids were not consistent among replications, which reduces the precision of a test.

Table 1. Traits and rating scales for LAES grain sorghum official variety trials.		
Trait	Abbreviation	Description
Yield	Yield	Grain yield @ 14.0% harvest grain moisture, lb/a (2013)
2-year yield average	2- yr avg	Average grain yield for 2012 and 2013, lb/a
Grain moisture	Gr Mo	Grain moisture at harvest, %
Test weight	Test wt	Volume weight of grain, lb/bu
Heading date	Mid-head	Date of head emergence in 50% of plants, days after planting (DAP)
Plant height	Plt ht	Height from ground to flag leaf, inches (in)
Head type	Head type	Head type is a measure of head architecture, with ratings of 1-5; 1-compact, 3-intermediate, and 5-open
Head exertion	Head exert	Distance from flag leaf to base of head, in
Disease	Dis	Rating of disease symptoms on foliage and stems, where a '1' indicates none and a '10' indicates 100% affected.
Bird damage	Bird	Average percent of head damaged, %

Core Blocks Trials: Core block trials were conducted in St. Joseph and Bossier City. Eleven hybrids were evaluated in these trials.

Results

Official Variety Trials: A summary of yield performance for 24 hybrids at six locations is presented in Table 2. Yield data for 2013 and two-year averages (2012 and 2013) and other agronomic data for each location are presented in Tables 4-9. The Baton Rouge

location is not reported due to very low yield and excessive variability among plots. Yields for the hybrids in the highest-yielding group for 2013 (yields falling within one LSD value) are in bold print. Hybrids in bold print with a single asterisk are in the highest-yielding group for both years, 2012 and 2013. A location summary, soil type, cultural practices, and weather information are listed prior to data tables for each location. In Table 10, participating seed companies are listed. There were six seed companies that participated in the 2013 grain sorghum official variety trials.

Core Blocks Trials: Yield data for the Core Block Trials is presented in Table 3. Yields averaged 103 bu/acre at St. Joseph and 80 bu/acre at Bossier City.

For additional information on corn trials, please contact Dr. Rick Mascagni, Northeast Research Station, P.O. Box 438, St. Joseph, LA 71366 (Ph: 318-766-3769; Fax: 318-766-4278; e-mail: hmascagni@agcenter.lsu.edu); Dr. Josh Lofton, Macon Ridge Research Station, 212A Macon Ridge Rd, Winnsboro, LA 71295 (Ph: 318-435-2157; Fax: 318-435-2133; e-mail: jlofton@agcenter.lsu.edu);

Table 2. Summary of yield performance of grain sorghum hybrids at six locations in the 2013 LAES official variety trials.

Brand/Hybrid	Alex ¹	BC	CR ¹	St. Joseph		WN	Avg
				Com sil ¹	Shar cl ¹		
Pioneer 83P17	6,616	7,982	6,033	6,631	6,076	5,355	6,449
Pioneer 84G62	6,993	7,221	5,807	6,377	7,299	6,122	6,637
Pioneer 84P80	6,469	7,617	5,721	6,478	6,572	6,078	6,489
Golden Acres 5613	5,858	6,963	5,112	5,714	6,392	5,306	5,891
DEKALB DKS51-01	6,661	7,381	5,835	6,370	6,458	5,903	6,435
DEKALB DKS53-67	6,000	6,819	5,981	5,286	6,991	6,361	6,240
Dyna-Gro 765B	6,624	7,931	5,561	5,634	6,480	5,705	6,323
Dyna-Gro 766B	6,084	6,819	4,969	5,596	6,208	4,861	5,756
Dyna-Gro 771B	6,004	7,039	5,277	6,287	5,799	6,084	6,082
Dyna-Gro M77GB52	5,781	6,345	5,695	5,119	5,803	5,476	5,703
Dyna-Gro M75GB39	5,940	7,049	5,426	6,370	6,711	4,871	6,061
REV®RV9562™	5,881	7,239	5,394	6,409	6,833	4,873	6,105
REV®RV9782™	6,092	6,903	6,142	6,519	6,835	5,816	6,385
REV®RV9794™	6,192	7,344	5,019	5,176	6,282	4,690	5,784
REV®RV9803™	5,000	7,228	5,211	5,227	5,597	5,576	5,640
REV®RV9823™	6,046	7,348	5,513	6,260	6,154	4,210	5,922
REV®RV9883™	6,068	7,472	5,414	5,629	6,318	5,351	6,042
REV®RV9924™	6,548	7,414	5,691	6,312	6,707	5,282	6,326
REV®RV9973™	5,252	6,151	6,111	5,672	6,069	3,801	5,509
NK6638	5,302	6,634	5,777	4,750	6,136	5,558	5,693
SP7868	6,004	6,973	5,615	4,740	6,447	5,337	5,853
NK8416	5,226	5,791	4,969	5,121	5,370	5,022	5,250
NKX865	5,835	7,532	5,319	5,011	6,061	4,750	5,751
NKX840	6,061	6,697	4,849	4,546	5,858	5,182	5,532
Average	6,022	7,079	5,518	5,718	6,311	5,319	

¹Average yields across planting dates.

Yield data for the 2013 grain sorghum core block trials.

Hybrid	Saint Joseph	Bossier City	State Averages
	Yield (bu/ac)		
Dyna-Gro 780B	123	106	114
Dyna-Gro 778B	106	84	95
Dyna-Gro 771B	114	99	106
Dyna-Gro M75G1339	101	65	83
Dyna-Gro M77GB52	106	102	104
Dyna-Gro 766B	98	92	95
Dekalb DKS 5400	92	59	76
Dyna-Gro 765B	93	60	77
Pioneer 84G77	93	55	74
Terral Rev 9782	109	66	88
Terral Rev 9562	105	77	91
Location average	103	79	92

Grain Sorghum Hybrid Performance Trial at the Dean Lee Research Station – Alexandria

Location Summary

Rainfall was below normal in April and July (see below). Average yields for the April 9 and April 29 planting dates were 6,445 and 5,589 lb/a, respectively (Table 3). There were 10 hybrids with two-year averages. In the highest-yielding group in 2013, there was one hybrid (Pioneer 84G62) for the April 9 date and eleven hybrids for the April 29 date. Pioneer 84G62 was in the highest-yielding group for both years, 2012 and 2013, and both plantings. There was a moderate level of leaf disease (Anthracnose) in both plantings.

Soil type	Latanier silty clay loam
Row spacing	38 inches
Seeding rate	7 seed/ft
Previous crop	Soybean
Planting date	April 9 and 29
Fertilization	<i>Sidedress</i> : 150 lb N/acre (30-0-0-2) both plantings (5/9)
Pesticides	<i>Preemerge</i> : 1 pt Charger Max and 1.5 qt Atrazine (4L)/a (4/9 and 4/29); 3 oz Grizzly Z (7/3 and 7/23, both plantings) and 2.8 oz Leverage, 2 oz/a Belt + 1% COC (9/13, both plantings)
Harvest date	August 6 and August 19

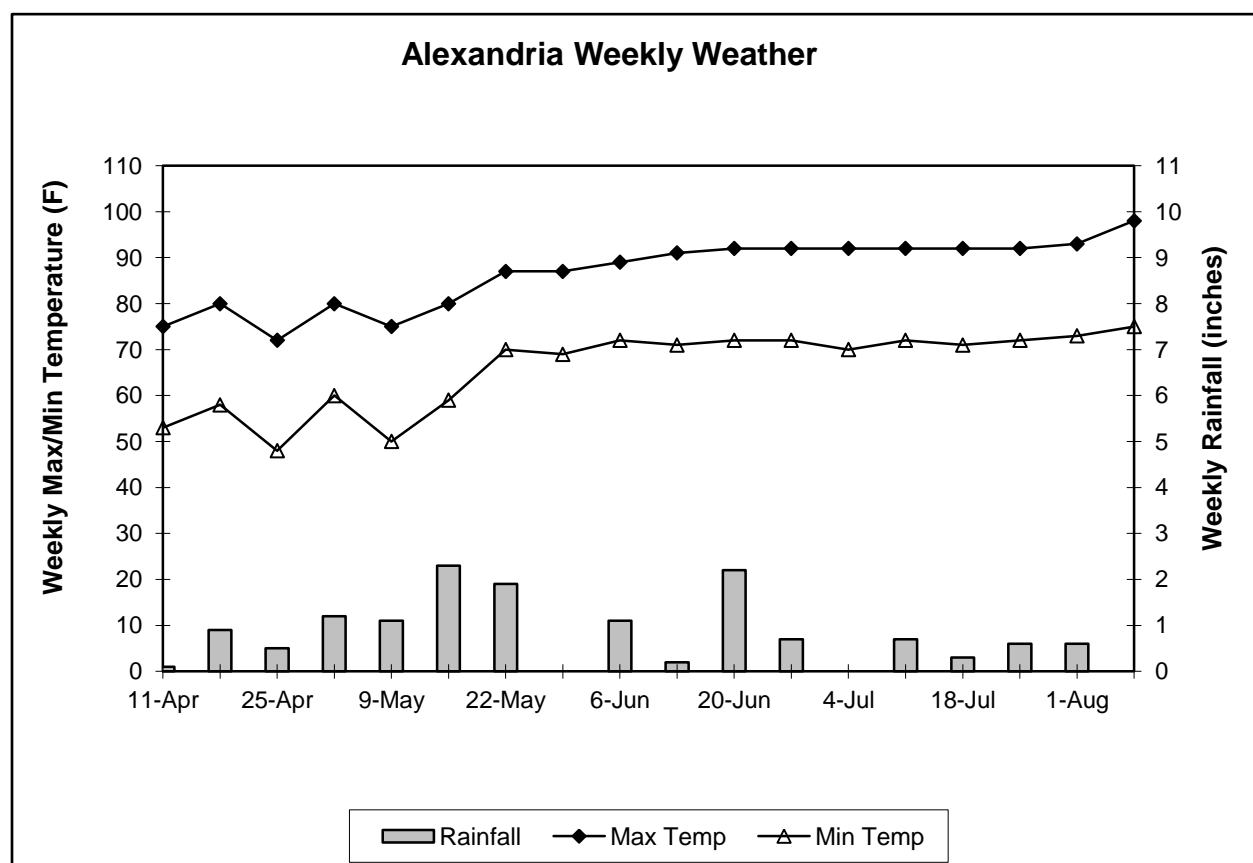


Table 4. Performance of grain sorghum hybrids at Alexandria, 2013.

Brand/hybrid	2013 Yield ¹ lb/a	2-yr avg ² lb/a	Gr mo %	Test wt lb/bu	Mid- head DAP	Plt ht in	Head exert in	Head type 1-5	Midge %	Bird %	Dis 1-10
April 9 Planting Date											
Pioneer 84G62*	7,884	8,950	16.5	62.5	72	59	3	3	5	5	5
Pioneer 84P80	6,978	7,937	16.3	60.9	71	64	10	3	5	5	4
Dyna-Gro 765B	6,913	-	17.8	61.0	73	69	0	1	5	5	2
DEKALB DKS51-01	6,849	8,152	17.0	61.9	71	66	4	4	10	5	4
SP7868	6,758	-	17.1	61.4	72	60	8	1	5	5	2
Pioneer 83P17	6,725	-	20.0	59.1	73	64	4	3	5	5	3
REV®RV9924™	6,723	-	15.6	62.3	72	65	5	3	10	10	3
NKX840	6,709	-	16.8	61.9	72	76	3	1	5	5	3
Dyna-Gro 766B	6,681	-	15.6	60.7	71	62	10	5	5	0	3
REV®RV9782™	6,664	8,159	15.7	60.9	71	60	6	2	5	5	5
NKX865	6,546	-	16.0	60.8	72	64	3	1	5	0	3
Golden Acres 5613	6,509	-	15.1	61.5	70	62	6	4	15	5	4
REV®RV9883™	6,504	7,836	16.9	61.5	70	64	6	4	10	5	3
Dyna-Gro M75GB39	6,445	-	16.5	61.1	70	60	6	4	10	5	5
DEKALB DKS53-67	6,428	8,333	17.0	62.5	72	58	6	2	10	0	3
NK8416	6,382	-	16.6	62.0	72	69	4	1	5	5	3
REV®RV9794™	6,348	-	16.5	61.3	72	62	8	4	5	0	3
NK6638	6,138	-	16.4	62.0	71	60	5	5	10	5	3
Dyna-Gro M77GB52	6,116	-	16.5	61.3	70	61	6	4	10	5	2
Dyna-Gro 771B	6,059	7,412	16.2	60.1	70	56	0	2	10	5	2
REV®RV9973™	6,006	6,928	19.6	60.4	74	57	14	3	5	5	3
REV®RV9823™	5,913	7,229	18.7	60.4	72	61	9	2	5	5	4
REV®RV9562™	5,627	-	14.6	62.4	70	63	8	3	20	10	4
REV®RV9803™	5,027	6,753	16.6	60.7	71	58	7	2	5	5	4
Average	6,445		16.7	61.3	71	63	6	3	5	5	3
CV, %	9		8	2	1	3	78	34	55	88	30
LSD (0.10)	701		1.6	1.3	1	3	NS³	2	6	NS	NS
April 29 Planting Date											
Pioneer 83P17	6,507	-	20.3	50.7	60	66	5	3	0	0	3
DEKALB DKS51-01	6,473	7,964	20.1	50.4	59	54	8	3	0	0	3
REV®RV9924™	6,374	-	17.1	53.8	58	61	4	2	0	0	3
Dyna-Gro 765B	6,334	-	18.0	51.9	60	65	5	1	0	0	2
REV®RV9823™	6,179	7,362	17.5	54.8	59	57	4	3	0	0	2
REV®RV9562™	6,134	-	17.7	55.5	59	60	4	3	0	0	3
Pioneer 84G62*	6,102	8,059	18.6	55.4	59	60	2	3	0	0	3
REV®RV9794™	6,036	-	17.3	53.8	60	65	4	3	0	0	1
Pioneer 84P80	5,960	7,428	18.0	55.3	58	58	4	3	0	0	3
Dyna-Gro 771B	5,948	7,357	17.3	51.3	59	51	4	4	0	0	3
REV®RV9883™	5,631	7,400	19.1	52.5	56	60	7	3	0	0	2
DEKALB DKS53-67	5,572	7,905	20.7	53.7	58	62	7	2	0	0	1
REV®RV9782™	5,520	7,587	16.4	55.0	58	65	2	2	0	0	2
Dyna-Gro 766B	5,487	-	18.0	51.1	59	62	6	5	0	0	2
Dyna-Gro M77GB52	5,445	-	18.3	55.5	59	60	8	4	0	0	3

Dyna-Gro M75GB39	5,435	-	19.2	55.1	57	63	5	3	0	0	3
NKX840	5,412	-	21.6	54.1	60	67	5	1	0	0	3
SP7868	5,250	-	20.0	54.4	61	58	5	1	0	0	1
Golden Acres 5613	5,207	-	18.0	51.2	58	65	7	4	0	0	3
NKX865	5,123	-	21.8	52.5	61	58	5	1	0	0	2
REV®RV9803™	4,972	6,725	21.3	50.1	58	58	5	5	0	0	3
REV®RV9973™	4,497	6,174	18.5	53.9	61	59	5	3	0	0	2
NK6638	4,466	-	22.1	50.0	59	59	4	2	0	0	3
NK8416	4,070	-	19.4	53.1	60	61	5	1	0	0	2
Average	5,589		19.0	53.1	59	61	5	3	0	0	2
CV, %	14		14	6	2	8	51	29	267	166	29
LSD (0.10)	909		3.0	3.6	2	NS	NS	1	NS	1	1

¹Yields in bold denote hybrids that were in the highest-yielding group in 2013 for each planting date.

²Hybrids in bold with an asterisk (*) were in the highest-yielding group both years, 2012 and 2013, for each planting date.

³NS = Non-significant at the 0.10 probability level

Grain Sorghum Hybrid Performance Trial at the Red River Research Station – Bossier City

Location Summary

Rainfall was low in April, May and July (see below). Yields were excellent, ranging from 5,791 to 7,982 lb /a (Table 4). Fourteen hybrids had yields greater than 7,000 lb/a. There were ten hybrids with two-year averages. Three hybrids were in the highest-yielding group for 2013. Test weights were good in this trial, with no midge damage and very little bird damage.

Soil type	Moreland silty clay loam
Row spacing	40 inches
Seeding rate	7 seed/ft
Previous crop	Corn
Planting date	April 22
Fertilization	<i>Sidedress</i> : 150 lb N/acre (30-0-0-2)
Pesticides	<i>Preemerge</i> : 1.5 qt Atrazine and 1.5 pt Dual/a; <i>Postemerge</i> : 1.5 pt Gramoxone/a; Karate @ 1.5/oz a (7/1) and @ 1.9 oz/a (7/8);
Harvest date	August 7/8

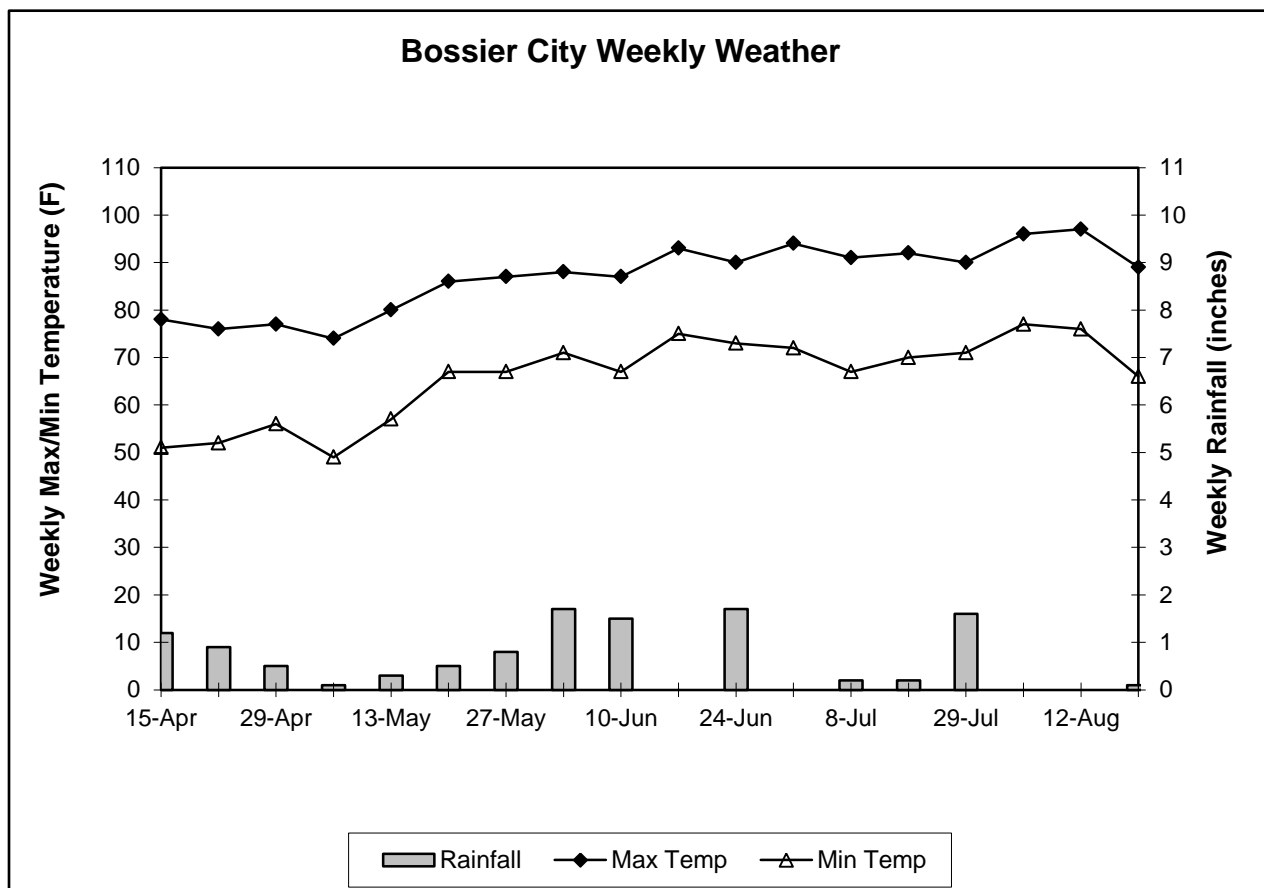


Table 5. Performance of grain sorghum hybrids at Bossier City, 2013.

Brand/hybrid	2013 Yield¹	2-yr avg	Gr mo	Test wt	Mid-head	Plt ht	Head exert	Head type	Bird
	lb/a	lb/a	%	lb/bu	DAP	in	in	1-5	%
Pioneer 83P17	7,982	-	17.2	56.8	62	61	3	2	5
Dyna-Gro 765B	7,931	-	14.8	58.5	62	65	5	2	5
Pioneer 84P80	7,617	5,263	14.6	57.1	61	58	3	3	0
NKX865	7,532	-	15.9	57.8	61	59	3	1	0
REV®RV9883™	7,472	6,021	14.5	57.8	61	60	6	3	0
REV®RV9924™	7,414	-	13.7	55.6	61	62	5	2	5
DEKALB DKS51-01	7,381	5,456	14.0	58.1	60	62	6	3	5
REV®RV9823™	7,348	6,216	14.3	59.0	61	60	7	2	0
REV®RV9794™	7,344	-	15.8	57.2	62	60	7	2	0
REV®RV9562™	7,239	-	13.3	58.7	59	59	7	3	5
REV®RV9803™	7,228	6,074	14.8	57.5	59	56	9	3	0
Pioneer 84G62	7,221	5,225	13.7	57.8	61	56	2	3	5
Dyna-Gro M75GB39	7,049	-	14.5	57.9	59	53	7	3	5
Dyna-Gro 771B	7,039	5,848	13.0	57.3	59	58	5	3	10
SP7868	6,973	-	14.2	58.1	61	58	8	2	0
Golden Acres 5613	6,963	-	13.5	57.9	58	57	6	4	5
REV®RV9782™	6,903	5,135	13.9	58.8	59	58	6	2	5
DEKALB DKS53-67	6,819	5,560	14.8	57.8	61	56	7	2	0
Dyna-Gro 766B	6,819	-	14.5	57.4	59	57	6	4	5
NKX840	6,697	-	13.7	57.0	64	71	5	1	0
NK6638	6,634	-	13.9	58.1	60	59	7	4	5
Dyna-Gro M77GB52	6,345	-	13.7	57.9	60	56	8	3	5
REV®RV9973™	6,151	5,672	13.9	56.5	63	57	5	2	0
NK8416	5,791	-	13.7	56.7	62	66	5	1	0
Average	7,078		14.3	57.6	61	59	6	3	5
CV, %	6		6	2	1	3	35	20	107
LSD (0.10)	415		1.0	1.3	1	2	2	1	5

¹ Yields in bold denote hybrids that were in the highest-yielding group in 2013 for each planting date.

² There were no hybrids in the highest-yielding group for both years, 2012 and 2013.

Grain Sorghum Hybrid Performance Trial at the Rice Research Station – Crowley

Location Summary

Rainfall was well distributed, but low in June and July (see below). Average yields for the March and April planting dates were 5,409 and 5,627 lb/a, respectively (Table 5). For the highest-yielding group in 2013, there were four hybrids for the March planting and fifteen hybrids for the April planting. There were three hybrids in the early planting and six hybrids in the later planting that fell within the highest-yielding group both years, 2012 and 2013. Leaf disease ratings were low to moderate for each date. Head disease/bird damage ratings were variable among hybrids and particularly high for the April planting, averaging 15% for March planting and 25% for April planting.

Soil type	Crowley silt loam
Row spacing	30 inches
Seeding rate	5 seed/ft
Previous crop	Grain Sorghum
Planting date	March 21 and April 23
Fertilization	230 lb/a of 0-24-24-2.8 (May 8, both plantings); 120 lb N/a (May 8 in March planting and May 24 in April planting)
Pesticides	1.5 pt Charger Max and 4 pt/a Atrazine (4L)/a (Mar 22); 1.5 pt Charger Max and 3.2 pt Atrazine (5L)/a (May 8); 1.25 pt Charger Max, 1.6 pt Atrazine (5L), 0.75 oz Permit and 1 qt Facet/a (May 24); Above pesticides for both plantings.
Harvest date	July 29 and August 23

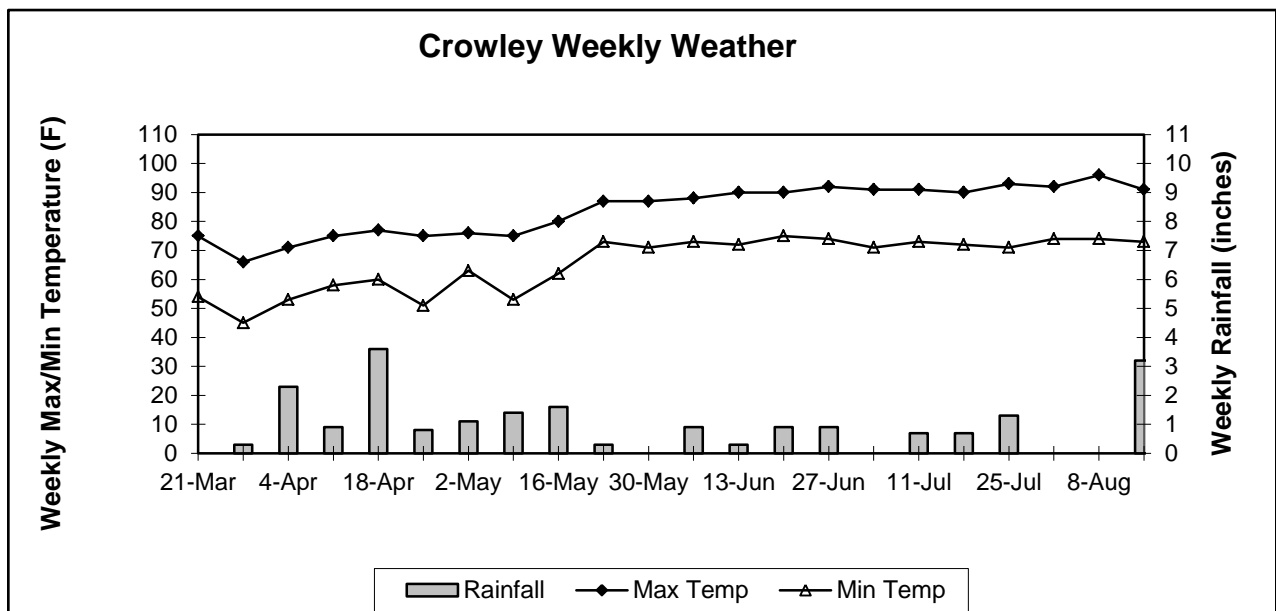


Table 6. Performance of grain sorghum hybrids at Crowley, 2013.

Brand/hybrid	2013 Yield¹	2-yr avg²	Gr mo	Test wt	Mid-head	Plt ht	Head exert	Head type	Leaf dis	Hd dis/bird³
	lb/a	lb/a	%	lb/bu	DAP	in	in	1-5	1-10	%
March 21 Planting Date										
Pioneer 83P17	6,657	-	21.1	56.2	90	60	4	4	1	5
REV®RV9973™*	6,623	5,596	19.8	57.4	88	56	5	3	2	5
REV®RV9782™*	6,227	5,663	18.6	58.5	85	51	5	2	2	10
DEKALB DKS51-01*	6,187	5,416	19.2	58.1	88	59	6	4	1	10
Dyna-Gro 765B	5,898	-	21.6	56.0	93	66	5	3	1	0
Dyna-Gro M77GB52	5,795	-	19.2	57.8	88	55	6	5	1	10
DEKALB DKS53-67	5,736	4,959	18.0	59.0	87	50	4	2	3	10
NK6638	5,719	-	18.9	58.3	88	56	5	5	2	5
SP7868	5,716	-	16.7	60.1	84	52	7	2	2	10
Pioneer 84G62	5,660	5,193	17.4	59.5	86	50	4	3	4	15
Dyna-Gro 771B	5,564	5,349	16.3	60.2	85	52	5	3	4	20
REV®RV9823™	5,418	4,284	18.0	59.0	85	54	6	2	2	5
Pioneer 84P80	5,310	5,242	16.7	60.1	85	42	5	3	4	15
NKX865	5,220	-	17.7	59.1	84	56	6	2	2	10
REV®RV9924™	5,188	-	17.3	59.5	84	57	7	2	4	15
REV®RV9562™	5,141	-	16.3	60.3	85	50	7	3	6	15
NKX840	5,129	-	17.4	59.4	85	65	10	1	1	5
REV®RV9883™	4,938	4,813	17.7	59.2	84	54	5	3	4	15
Dyna-Gro M75GB39	4,924	-	16.7	60.2	83	46	6	2	6	15
REV®RV9794™	4,882	-	17.3	59.5	84	53	6	3	4	20
Dyna-Gro 766B	4,596	-	17.2	59.6	85	53	8	3	2	35
REV®RV9803™	4,528	4,420	16.2	60.6	83	48	6	3	2	20
NK8416	4,507	-	17.3	59.6	84	59	7	1	2	15
Golden Acres 5613	4,252	-	17.2	59.4	84	52	7	4	2	40
Average	5,409		17.9	59.0	85	54	6	3	3	15
CV, %	8		5	1	1	8	31	18	30	60
LSD (0.10)	502		1.1	1.0	1	5	2	1	1	10
April 23 Planting Date										
DEKALB DKS53-67	6,226	5,204	17.2	55.5	77	48	2	2	4	25
REV®RV9924™	6,193	-	15.6	56.8	75	52	3	3	5	20
Pioneer 84P80*	6,132	5,653	15.4	57.0	77	49	1	4	4	35
REV®RV9782™*	6,056	5,577	17.5	55.3	75	48	2	2	2	20
Golden Acres 5613	5,971	-	16.7	55.4	77	49	3	5	4	40
Pioneer 84G62*	5,954	5,340	15.3	57.0	77	45	0	4	5	35
Dyna-Gro M75GB39	5,928	-	18.5	54.2	78	48	4	3	5	30
REV®RV9803™*	5,893	5,103	17.0	55.7	78	47	2	3	4	30
REV®RV9883™*	5,889	5,288	16.9	55.7	76	53	3	3	5	20
NK6638	5,834	-	17.1	55.6	79	49	2	4	3	30
REV®RV9562™	5,647	-	16.4	55.9	78	48	2	4	5	35
REV®RV9823™	5,608	4,379	17.3	55.4	73	50	3	2	2	25
REV®RV9973™*	5,598	5,083	18.8	54.1	80	51	2	3	3	15
Dyna-Gro M77GB52	5,595	-	16.9	55.7	79	46	4	4	3	30
SP7868	5,513	-	19.3	53.6	82	54	5	1	2	20
DEKALB DKS51-01	5,482	5,063	17.6	55.3	79	52	2	2	3	30

NK8416	5,430	-	19.2	53.8	81	59	2	1	2	10
NKX865	5,417	-	18.9	54.1	79	54	3	1	2	15
Pioneer 83P17	5,408	-	20.1	52.7	81	55	2	2	2	25
Dyna-Gro 766B	5,342	-	18.0	54.3	77	48	2	4	4	45
Dyna-Gro 765B	5,223	-	20.8	52.2	83	61	3	1	2	20
REV®RV9794™	5,155	-	17.9	54.8	79	53	2	3	4	25
Dyna-Gro 771B	4,989	5,062	14.8	57.2	71	46	2	3	4	45
NKX840	4,568	-	19.6	53.5	83	58	5	1	2	15
Average	5,627		17.6	55.0	78	51	2	3	3	25
CV, %	11		5	2	1	5	67	18	27	30
LSD (0.10)	714		1.1	1.1	2	3	2	1	1	10

¹Yields in bold denote hybrids that were in the highest-yielding group in 2013 for each planting date.

²Hybrids in bold with an asterisk (*) were in the highest-yielding group both years, 2012 and 2013, for each planting date.

³Hd dis/bird, percentage of head affected by head diseases and bird damage (%).

Grain Sorghum Hybrid Performance Trial on Commerce silt loam at the Northeast Research Station – St. Joseph

Location Summary

Rainfall was very low in June (see below). Average yields were 6,087 and 4,377 lb/a, respectively, for the April and May planting dates (Table 6). For the highest-yielding group in 2013, there were two hybrids for the April date and nine hybrids for the May date. There was little or no midge damage for the early planting, but midge damage was severe for the late date. Generally as damage increased, yields decreased and hybrid maturity increased (i.e., late heading hybrids were not protected from midge). If you delete yields for hybrids with 30% or greater midge damage in the May planting, average yield across hybrids increased from 4,377 to 5,501 lb/a.

Soil type	Commerce silt loam
Row spacing	40 inches
Seeding rate	7 seed/ft
Previous crop	Soybean
Planting date	Apr 18 and May 14 (replant)
Fertilization	<i>Sidedress:</i> 150 lb N/a (30-0-0-2) (5/7 and 5/27)
Pesticides	<i>Preemergence:</i> 1.5 qt Atrazine and 1 pt Dual/a (4/2); 1.5 qt Atrazine, 1 pt Dual and 1 qt Roundup/a (4/18); <i>Postemergence:</i> 1 qt Atrazine, 0.5 oz Halomax/a and 1% COC (5/21, both plantings); 2 oz Baythroid/a – 6/22, 6/27, 7/5 (1 st planting) 2 oz Baythroid/a – 6/22, 7/5 (2 nd planting);
Harvest date	August 8 and August 18-19

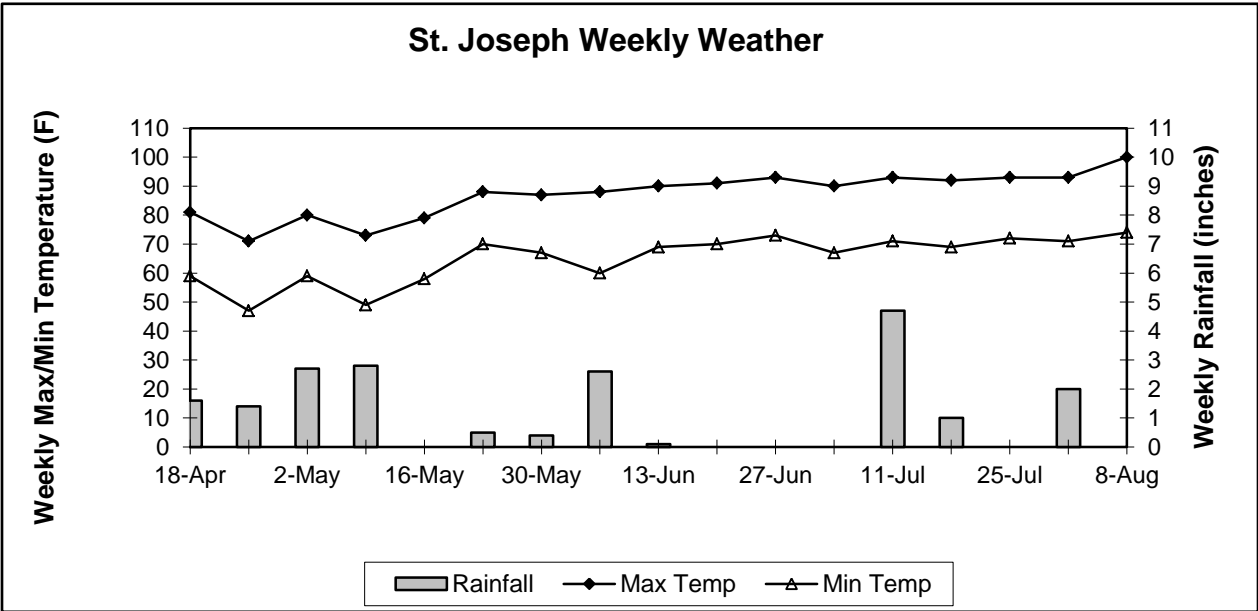


Table 7. Performance of grain sorghum hybrids for two planting dates on Commerce silt loam at St. Joseph, 2013.

Brand/hybrid	2013 Yield¹	Gr mo	Test wt	Mid-head	Plt ht	Head exert	Head type	Midge	Bird
	lb/a	%	lb/bu	DAP	in	in	1-5	%	%
April 18 Planting Date									
Pioneer 84P80	7,357	21.6	56.5	70	50	2	4	0	0
REV®RV9562™	7,197	18.0	58.1	68	50	4	4	0	10
DEKALB DKS53-67	6,806	24.2	57.4	70	52	4	3	0	5
REV®RV9782™	6,773	20.6	55.7	69	49	4	3	0	5
Pioneer 83P17	6,631	27.2	55.5	72	52	2	3	0	5
Pioneer 84G62	6,593	24.8	56.8	70	47	2	4	0	5
REV®RV9924™	6,517	20.2	56.8	69	55	4	3	0	10
Dyna-Gro 771B	6,478	20.7	53.1	69	49	3	4	0	10
Dyna-Gro M75GB39	6,462	20.6	57.5	68	45	5	5	0	5
DEKALB DKS51-01	6,370	28.0	55.6	72	56	4	3	0	5
REV®RV9823™	6,290	19.1	56.7	69	47	2	3	0	0
Golden Acres GA5613	6,207	18.9	56.5	69	47	3	5	0	0
REV®RV9794™	6,180	24.0	54.7	70	49	2	4	0	5
Dyna-Gro 766B	6,124	21.3	55.2	71	49	3	5	0	5
NKX865	5,700	20.7	56.5	71	52	3	2	0	5
REV®RV9973™	5,672	23.3	56.2	73	46	1	4	0	5
Dyna-Gro M77GB52	5,661	25.0	54.6	73	46	2	5	0	5
Dyna-Gro 765B	5,634	26.8	54.9	75	52	2	3	0	5
REV®RV9883™	5,634	21.3	55.3	69	48	2	3	0	5
NK6638	5,564	21.5	56.5	70	47	4	5	0	5
SP7868	5,285	26.8	55.3	72	50	6	2	0	0
REV®RV9803™	5,277	17.8	56.8	68	47	3	4	0	5
NK8416	5,121	27.8	54.9	75	57	6	2	0	5
NKX840	4,546	26.3	54.8	78	55	3	2	0	5
Average	6,087	22.8	55.9	71	50	3	3	-	5
CV, %	7	6	2	2	104	50	13	-	137
LSD (0.10)	491	1.6	1.5	2	NS²	NS	1	-	5
May 14 Planting Date									
Dyna-Gro M75GB39	6,277	22.8	58.8	57	57	4	4	5	0
REV®RV9782™	6,264	23.7	56.6	56	59	5	3	5	10
REV®RV9823™	6,230	21.7	56.1	55	62	6	2	5	5
Pioneer 84G62	6,160	23.5	58.2	58	56	2	4	5	5
REV®RV9924™	6,107	20.1	57.5	56	64	4	2	5	15
Dyna-Gro 771B	6,095	24.0	54.7	57	62	4	3	0	10
REV®RV9883™	5,623	22.6	56.1	57	60	4	4	5	10
REV®RV9562™	5,621	21.2	58.1	58	62	4	4	5	10
Pioneer 84P80	5,599	23.4	59.0	56	65	3	3	0	10
Golden Acres 5613	5,221	21.3	56.2	57	62	8	5	5	5
REV®RV9803™	5,177	19.4	57.8	55	58	4	3	5	5
Dyna-Gro 766B	5,067	22.3	-	59	62	4	5	20	0

Dyna-Gro M77GB52	4,575	24.9	51.1	58	65	5	4	15	0
NKX865	4,322	25.4	52.1	59	64	4	1	5	5
SP7868	4,195	26.7	-	62	61	8	1	40	0
REV®RV9794™	4,172	24.9	54.3	58	63	4	3	20	5
NK6638	3,935	23.6	-	57	57	4	4	30	0
DEKALB DKS53-67	3,138	23.8	55.2	58	60	3	3	25	5
Dyna-Gro 765B	3,004	26.3	52.9	61	70	8	2	35	0
DEKALB DKS51-01	2,722	23.8	53.1	58	66	6	3	40	5
NK8416	1,780	25.5	56.1	62	69	5	1	60	0
REV®RV9973™	1,445	25.2	54.2	62	56	1	3	70	0
Pioneer 83P17	1,408	26.6	-	61	68	5	3	80	0
NKX840	1,052	25.3	53.6	63	75	6	2	80	0
Average	4,377	23.7	55.8	58	63	4	3	20	5
CV, %³	18	2	-	2	-	-	-	66	115
LSD (0.10)³	917	0.6	-	1	-	-	-	20	5

¹Yields in bold denote hybrids that were in the highest-yielding group in 2013 for each planting date. No two-year average, since this was the first year trial was conducted on the Commerce silt loam soil.

²NS = Non-significant at the 0.10 probability level.

³There were no statistics (CV and LSD) available for test weight, plant height, head exertion and head type, because only one rep available for these traits.

Grain Sorghum Hybrid Performance Trial on Sharkey clay at the Northeast Research Station – St. Joseph

Location Summary

Rainfall was very low in June (see below). Average yields were 6,628 and 5,822 lb/a for the April and May planting dates, respectively (Table 7). For the highest-yielding group in 2013, there were two hybrids for the April planting and eight hybrids for the May planting. For the May planting date, there were two hybrids in the highest-yielding group for both years, 2012 and 2013. Midge damage was relatively low, except for two hybrids (NKX840 and NK8416), in the mid-May planting.

Soil type	Sharkey clay
Row spacing	40 inches
Seeding rate	7 seed/ft
Previous crop	Soybean
Planting date	April 9 and May 17
Fertilization	150 lb N/a (30-0-0-2) (5/15 and 5/27)
Pesticides	<i>Premeerge:</i> 1.5 qt Atrazine and 1.5 pt Dual/a (4/9 and 5/17); <i>Postemerge:</i> 1 qt Atrazine, 1 pt Linuron/a and 1% COC; 2 oz Baythroid/a – 6/22, 6/27, 7/5 (first planting); 2 oz Baythroid/a – 7/5 (second planting);
Harvest date	Aug 2 and 5 (first planting) August 19 (second planting)

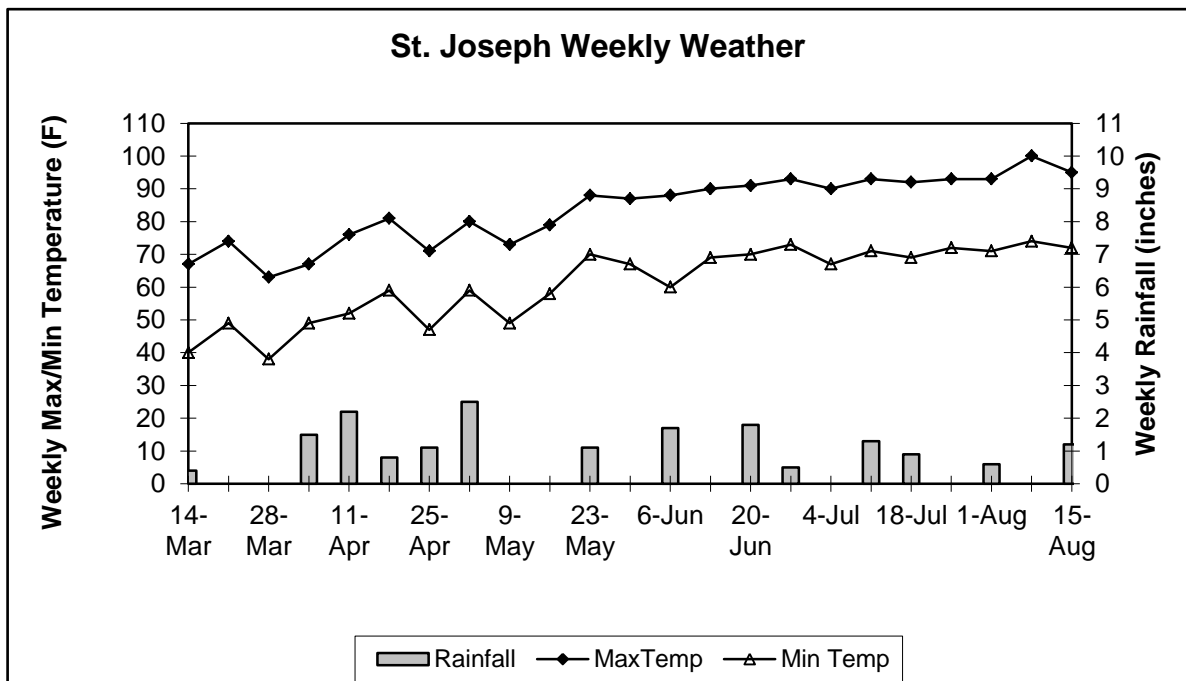


Table 8. Performance of grain sorghum hybrids on Sharkey clay at St. Joseph, 2013.

Brand/hybrid	2013 Yield¹	2-yr avg²	Gr mo	Test wt	Mid-head	Plt ht	Head exert	Head type	Midge	Bird
	lb/a	lb/a	%	lb/bu	DAP	in	in	1-5	%	%
April 9 Planting Date										
Pioneer 84G62	7,719	7,921	21.5	59.2	72	55	2	3	0	5
DEKALB DKS51-01	7,257	7,700	22.4	58.8	72	60	7	3	0	10
Pioneer 83P17	7,179	-	18.9	59.2	74	62	4	3	0	10
Pioneer 84P80	7,165	7,984	17.2	60.4	73	59	3	4	0	5
Dyna-Gro 765B	7,147	-	20.4	59.1	73	63	5	3	0	10
REV®RV9782™	7,045	7,725	18.2	59.1	70	56	3	2	0	5
REV®RV9924™	6,936	-	18.5	58.9	73	61	3	3	0	10
REV®RV9973™	6,875	7,077	19.6	58.8	75	56	3	4	0	5
REV®RV9562™	6,863	-	15.5	59.9	70	57	5	3	0	10
DEKALB DKS53-67	6,848	7,676	21.0	60.0	71	53	3	3	0	5
Dyna-Gro M75GB39	6,710	-	19.1	58.9	70	53	5	4	0	10
REV®RV9794™	6,696	-	19.6	57.0	72	60	5	4	0	5
SP7868	6,626	-	18.3	60.1	71	57	7	1	0	5
REV®RV9883™	6,584	7,444	17.6	59.2	72	57	4	3	0	10
Dyna-Gro 771B	6,510	7,354	20.2	58.6	70	53	2	3	0	15
NK6638	6,470	-	14.8	59.3	71	59	7	5	0	10
Golden Acres GA5613	6,384	-	16.9	58.2	70	54	2	5	0	10
REV®RV9823™	6,358	7,021	21.6	58.0	72	59	6	2	0	15
Dyna-Gro 766B	6,330	-	15.7	58.5	69	55	6	5	0	10
Dyna-Gro M77GB52	6,219	-	17.9	59.4	71	55	4	5	0	5
NKX865	6,179	-	17.3	59.7	73	56	2	2	0	10
NKX840	5,858	-	18.5	59.2	73	70	7	2	0	15
REV®RV9803™	5,741	6,588	16.1	59.4	70	53	4	4	0	5
NK8416	5,370	-	16.2	60.3	72	65	7	1	0	10
Average	6,628		18.4	59.1	72	58	4	3	-	10
CV, %	6		10	2	2	2	34	12	-	86
LSD (0.10)	464		2.2	NS³	1	2	3	1	-	NS
May 17 Planting Date										
DEKALB DKS53-67*	7,133	7,818	20.4	58.8	52	55	4	3	0	5
Pioneer 84G62	6,878	7,501	20.3	59.0	52	55	1	3	0	10
REV®RV9562™	6,802	-	18.0	60.4	51	58	4	3	0	10
Dyna-Gro M75GB39	6,712	-	24.1	57.3	52	53	4	4	5	0
REV®RV9782™*	6,625	7,515	20.3	58.4	51	57	5	3	0	15
REV®RV9924™	6,478	-	19.3	58.2	53	61	5	3	0	10
Golden Acres GA5613	6,400	-	19.7	57.2	53	57	5	5	0	5
SP7868	6,267	-	22.1	58.7	55	59	6	2	5	5
Dyna-Gro 766B	6,085	-	20.3	57.3	53	59	3	5	0	5
REV®RV9883™	6,051	7,178	20.7	57.5	53	55	3	4	0	5
Pioneer 84P80	5,978	7,391	19.9	57.6	52	55	3	3	5	10
REV®RV9823™	5,949	6,817	21.2	58.5	53	61	5	2	5	5
NKX865	5,942	-	20.7	57.8	56	62	2	2	0	5
REV®RV9794™	5,867	-	21.4	57.6	54	58	7	4	0	5
Dyna-Gro 765B	5,812	-	21.1	58.6	54	60	2	3	0	5

NK6638	5,801	-	19.8	58.2	53	59	7	4	10	5
DEKALB DKS51-01	5,658	6,901	23.3	57.0	54	56	6	3	5	10
REV®RV9803™	5,452	6,443	19.1	58.2	51	55	10	4	0	10
Dyna-Gro M77GB52	5,387	-	19.9	57.5	53	60	6	4	5	5
REV®RV9973™	5,263	6,271	22.9	56.9	54	52	7	3	5	5
Dyna-Gro 771B	5,088	6,643	18.7	56.5	51	55	5	3	5	15
Pioneer 83P17	4,972	-	22.0	56.7	54	59	4	3	10	5
NKX840	3,582	-	24.0	-	59	69	7	1	35	5
NK8416	3,097	-	22.9	56.1	57	65	5	1	25	0
Average	5,822		20.9	57.8	53	58	5	3	5	5
CV, %⁴	14		3	-	2	-	-	-	217	85
LSD (0.10)⁴	944		0.8	-	1	-	-	-	10	5

¹Yields in bold denote hybrids that were in the highest-yielding group in 2013 for each planting date.

²Hybrids in bold with an asterisk (*) were in the highest-yielding group both years, 2012 and 2013, for each planting date.

³NS = Non-significant at the 0.10 probability level.

⁴There were no statistics (CV and LSD) available for test weight, plant height, head exertion and head type, because there was only one rep available for these traits.

Grain Sorghum Hybrid Performance Trial at the Macon Ridge Research Station – Winnsboro

Location Summary

Rainfall was relatively low, but well distributed during the growing season (see below). Average yield for the trial was 5,319 lb/a (Table 8). Four hybrids had yields greater than 6,000 lb/a on this drought-proned Macon Ridge soil. There were ten hybrids in the highest-yielding group in 2013. Test weights were excellent, ranging from 57.2 to 61.6 lb/bu with a trial average of 60.0 lb/bu. There was little or no midge damage in this trial.

Soil type	Gigger silt loam
Row spacing	40 inches
Seeding rate	7 seed/ft
Previous crop	Cotton
Planting date	April 17
Fertilization	<i>Sidedress</i> : 120 lb N/acre (30-0-0-2)
Pesticides	<i>Burndown</i> : 1 qt Round-up, 1.5 oz Valor and 24 oz 2,4-D/a (3/4); 1.5 pt/acre of 2,4-D (LV4) <i>Preemerg</i> : 1 qt Atrazine and 1 pt Dual/a; <i>Postemerg</i> : 1 qt Atrazine and 1 pt Gramoxone/a;
Harvest date	August 22

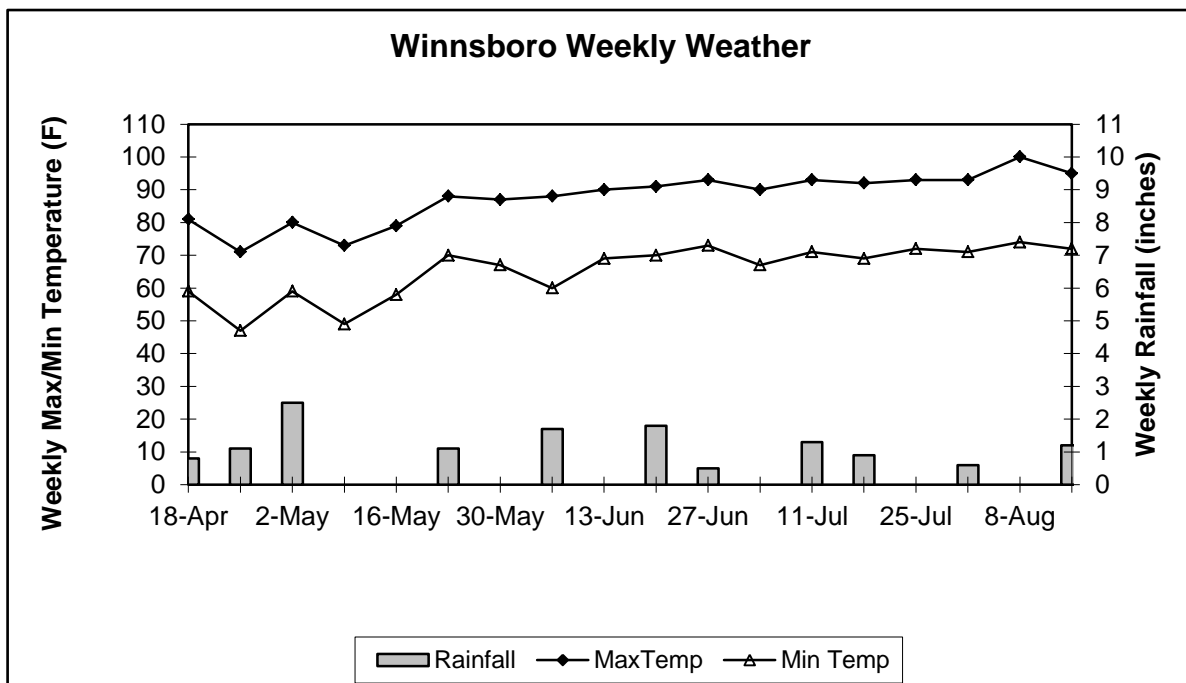


Table 9. Performance of grain sorghum hybrids at Winnsboro, 2013.

Brand/hybrid	2013 Yield¹	Gr mo	Test wt	Plt ht	Head exert	Head type
	lb/a	%	lb/bu	in	in	1-5
DEKALB DKS53-67	6,361	14.9	61.4	45	1	3
Pioneer 84G62	6,122	14.3	60.4	42	2	5
Dyna-Gro 771B	6,084	14.9	59.6	43	0	4
Pioneer 84P80	6,078	14.4	60.7	42	1	4
DEKALB DKS51-01	5,903	14.3	61.6	49	1	2
REV®RV9782™	5,816	14.6	60.4	44	2	4
Dyna-Gro 765B	5,705	15.1	60.4	46	2	3
REV®RV9803™	5,576	14.3	61.4	45	2	4
NK6638	5,558	14.4	60.6	44	2	3
Dyna-Gro M77GB52	5,476	14.4	60.2	43	1	4
Pioneer 83P17	5,355	16.1	57.9	46	0	4
REV®RV9883™	5,351	14.9	60.2	44	2	2
SP7868	5,337	14.4	59.9	43	2	3
Golden Acres 5613	5,306	14.3	59.8	43	1	5
REV®RV9924™	5,282	14.3	59.5	44	1	2
NKX840	5,182	15.4	59.9	48	2	2
NK8416	5,022	14.8	59.4	47	1	2
REV®RV9562™	4,873	13.7	60.0	38	0	4
Dyna-Gro M75GB39	4,871	14.3	60.5	37	1	5
Dyna-Gro 766B	4,861	14.4	59.4	39	0	3
NKX865	4,750	14.8	59.5	42	0	2
REV®RV9794™	4,690	15.5	59.6	45	1	3
REV®RV9823™	4,210	14.7	60.1	39	0	4
REV®RV9973™	3,801	16.0	57.2	48	2	2
Average	5,319	14.7	60.0	43	1	3
CV, %	17	3	2	11	134	42
LSD (0.10)	927	0.5	1.3	NS²	NS	NS

¹Yields in bold denote hybrids that were in the highest-yielding group in 2013 for each planting date. No two-year yield data is available because the 2012 data was not reported due to extreme variability.

²NS = Non-significant at the 0.10 probability level

Table 10. List of participating seed companies and hybrids tested in the LAES 2013 grain sorghum official variety trials.

Company	Brand/Hybrid
Crop Production Services/Dyna-Gro Seed 11 Gin Rd Rayville, LA 71269	Dyna-Gro 765B, Dyna-Gro 76B, Dyan-Gro 771B, Dyna-Gro M77GB52, Dyna-Gro M75GB39
Dupont/Pioneer 700 Boulevard South SW Suite 302 Huntsville, AL 35802	Pioneer 83P17, Pioneer 84G62, Pioneer 84P80
Golden Acres Genetics, Ltd. P.O. Box 20787 Waco, TX 76702	Golden Acres 5613
Monsanto/Dekalb 982 US Hwy 77 Bishop, TX 98343	DEKALB DKS51-01, DEKALB DKS53-67
Sorghum Partners, LLC 403 South Monroe New Deal, TX 79350	NK6638, SP7868, NK8416, NKX865, NKX840
Terral Seed, Inc. 111 Ellington Dr. Rayville, LA 71269	REV®RV9562™, REV®RV9782™, REV®RV9794™, REV®RV9803™, REV®RV9823™, REV®RV9883™, REV®RV9924™, REV®RV9973™