



# Current Report

**EXTENSION**

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## 2024 Grain Sorghum Performance Trials

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### Trial Objectives and Procedures:

Performance trials for hybrid grain sorghum are conducted by Oklahoma State University Extension each year. These trials provide producers, Extension educators, industry representatives and researchers with information about grain sorghum hybrids marketed in Oklahoma. Performance trials were planted at eight locations in 2024. All emerged and had decent early season growth. However, due to dry conditions at planting, the Homestead location was terminated. Trials at Chickasha, McCaull and Goodwell were irrigated using overhead sprinkler irrigation. Yields presented in this document are for the early, medium and late-maturity hybrids for all locations. Most cultivars were grown at all locations. The location at Fairfax was conducted with a cooperator who had previously grown wheat, and the sorghum trial was planted as a double-crop system.

Grain sorghum hybrid trial entries were assigned by companies to their respective maturity groups: early represented less than 60 days to mid-bloom (DMB), medium was 60 to 70 DMB, and late was > than 70 DMB). If a cultivar was exactly 60 or 70 DMB, previous years' data was used to determine which maturity the cultivar fell into. Companies designated all hybrid characteristics, which are presented in Table 1. This information was not determined or verified by Oklahoma State University. Company participation was voluntary, so not all hybrids marketed in Oklahoma were included in the trials.

In 2024, 35 hybrids were entered by five seed companies. For the hybrid performance trials, each maturity group was tested independently with individual hybrids being arranged in a randomized complete block design and having a minimum of four replications. All locations were two row plots with 30-inch spacing and 35 feet in length. Plots were trimmed to 25 feet prior to harvest. Tractor-powered cone planters were used to plant all trials with seeding rates

adjusted for the trial location. Trials were harvested with a Kincaid model 8XP plot combine.

Planting densities, cooperating producers, cultural practices, soil series, herbicides and insecticides used in all trials are listed individually in result tables. Rainfall data from the nearest Mesonet sites are also listed. Some trials are long distances from the nearest Mesonet site; therefore, rainfall could be greater or less than reported.

Soil fertility practices will be discussed for each individual location following their yield tables. All applications were made in accordance with OSU Extension's Service best management practices. Soil samples were collected in the winter and early spring prior to planting and submitted to submitted to OSU's Soil, Water and Forage Analytical Laboratory for analysis. All N, P and K applications were made based on these results. Nitrogen applications were made based on a 120 bu/ac yield goal with the exception of Goodwell and McCaull, which were made based on a 150 bu/ac yield goal. At all research station sites, soil pH is managed to be suitable for grain sorghum production. Locations on grower's fields are not as controlled; however, all locations this season were within reasonable limits (5.5-7.5).

Due to the degree of variability between the sites in the study and grower's fields around the state, discussions regarding the growing conditions will be made prior to each individual location.

### Results

Grain yields are reported in pounds per acre and bushels per acre of threshed grain, adjusted to a moisture content of 14% (Tables 2 through 21). Test weight is also reported in pounds per bushel. Different plant populations at each location prevent accurate comparison between locations. Also, comparisons across maturity

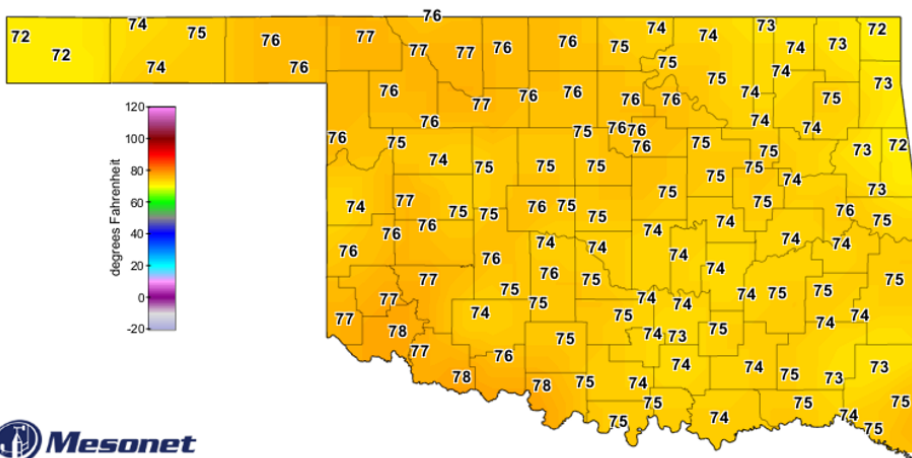
were not conducted as they were treated as independent trials. Producers should note that late-maturing hybrids, due to longer periods of vegetative and early reproductive growth, will generally yield more than early and medium maturity hybrids. However, the availability of moisture at critical crop development stages often influences yield more than the yield differences associated with maturity groups. When choosing a maturity group, the type of cropping system, planting date, planting rate and potential moisture should be taken into consideration. For more information, consult Fact Sheet PSS-2034 Grain Sorghum Planting Rates and Dates and Fact Sheet PSS-2113 Grain Sorghum Production Calendar.

Least significant difference (LSD) is a statistical test of yield differences and is shown at the bottom of each table. Unless two hybrids differ by at least the LSD shown, little confidence can be placed in one hybrid being superior to another, and the difference is probably not real.

The Coefficient of Variation (CV) is provided as an estimate of the precision of the data with respect to the mean for that location and maturity group. To provide some indication of yield stability, multi-year means for yields and test weights are provided where trials have been conducted for more than one year with more than three entries per maturity group. Producers interested in comparing hybrids for consistency of yield in a specific area should consult these entries. Models with CV's greater than 25 have not been included in this report.

## **Acknowledgements**

The financial support of the participating companies and the Oklahoma Sorghum Commission is gratefully acknowledged, as well as the efforts and resources provided by producer cooperators Brook Strader and Brandon Keeler. The authors are also grateful for research support from Michael Pettijohn of SCREC, Mike Schulz of SWREC, Cameron Murley of OPREC, Ted Newell of MVRS and Kenneth Watkins of CVRS. We are also grateful for the help of County Agricultural Educators: Martha Keasler (Tillman County), Shelby Robertson (Major County), Hannah Hough (Tulsa County) and Kelly Burrows (Grady County), who gave generously of their time to this project in 2024.

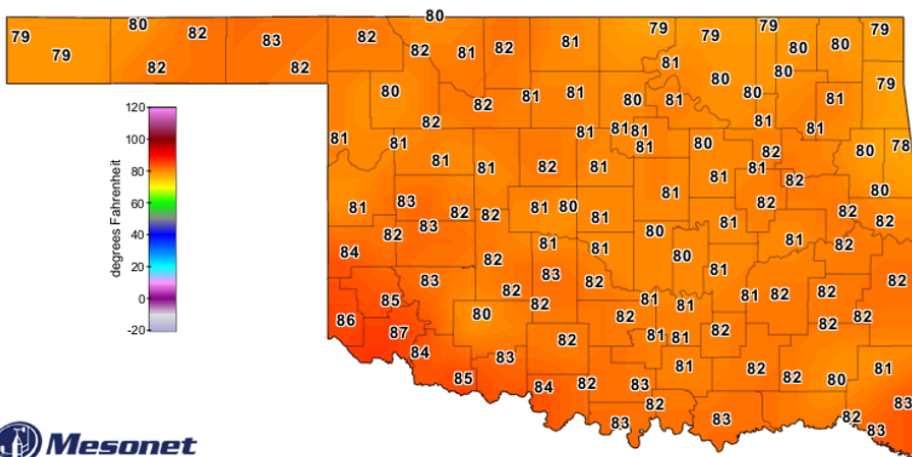


**Average Maximum Air Temperature**

April 2024

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Figure 1: Average maximum air temperature for April 2024.

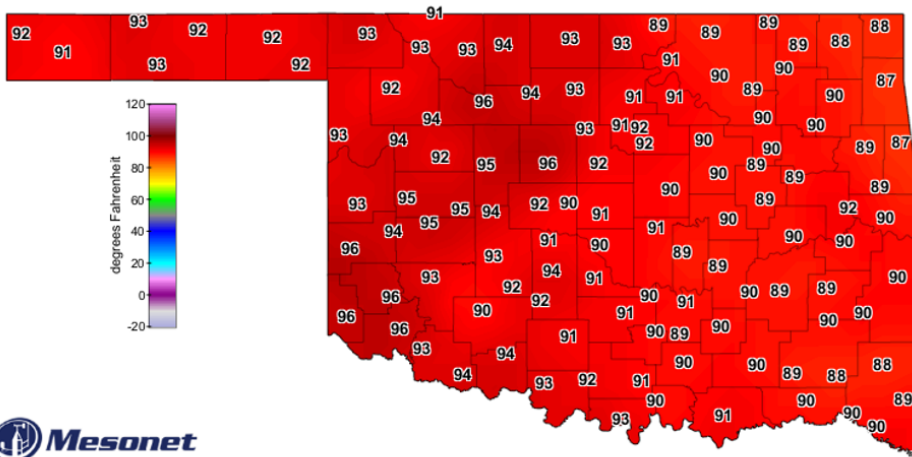


**Average Maximum Air Temperature**

May 2024

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Figure 2: Average maximum air temperature for May 2024.

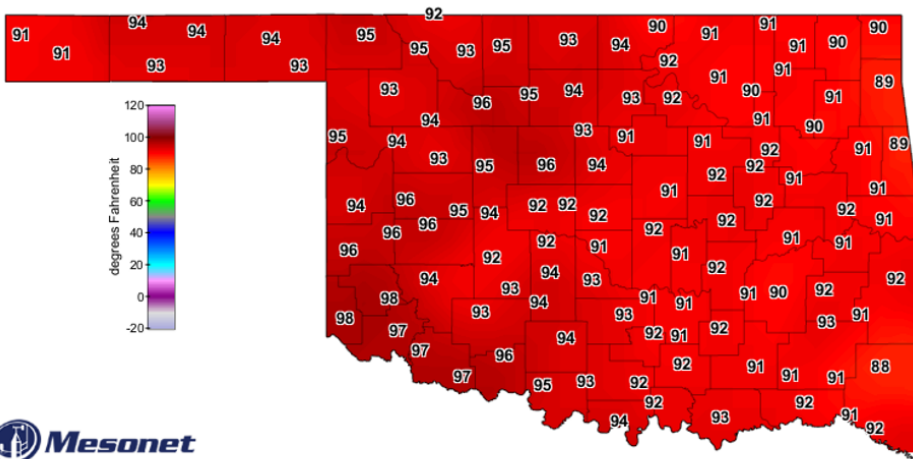


**Average Maximum Air Temperature**

June 2024

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Figure 3: Average maximum air temperature for June 2024.

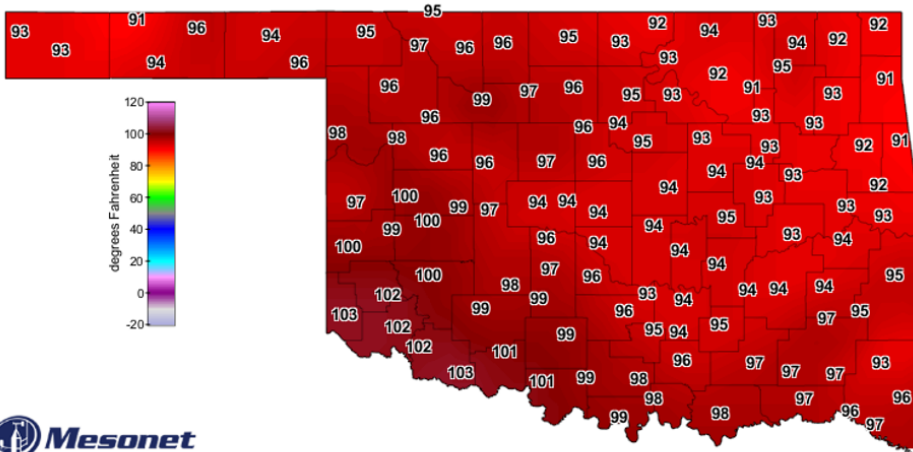


Average Maximum Air Temperature

July 2024

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Figure 4: Average maximum air temperature for July 2024.

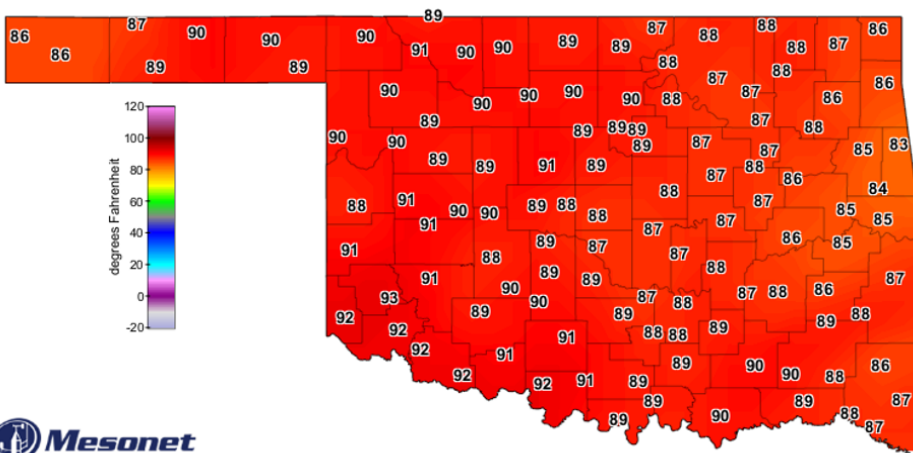


Average Maximum Air Temperature

August 2024

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Figure 5: Average maximum air temperature for August 2024.

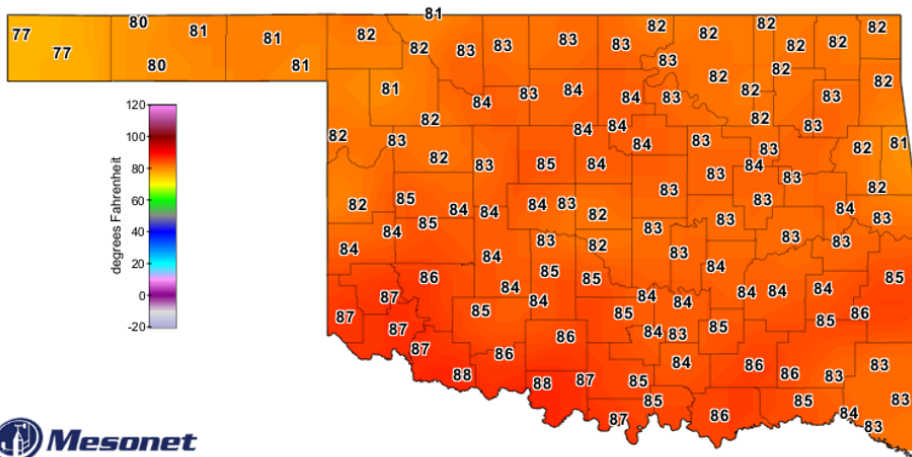


Average Maximum Air Temperature

September 2024

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Figure 6: Average maximum air temperature for September 2024.

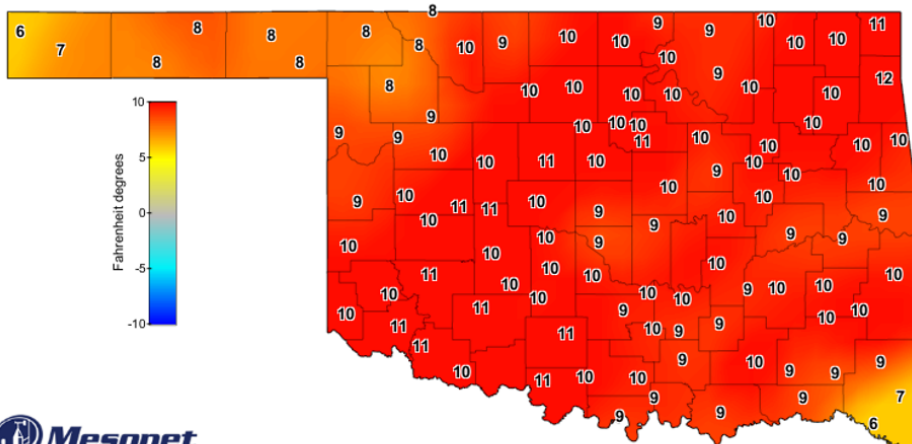


Average Maximum Air Temperature

October 2024

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Figure 7: Average maximum air temperature for October 2024.

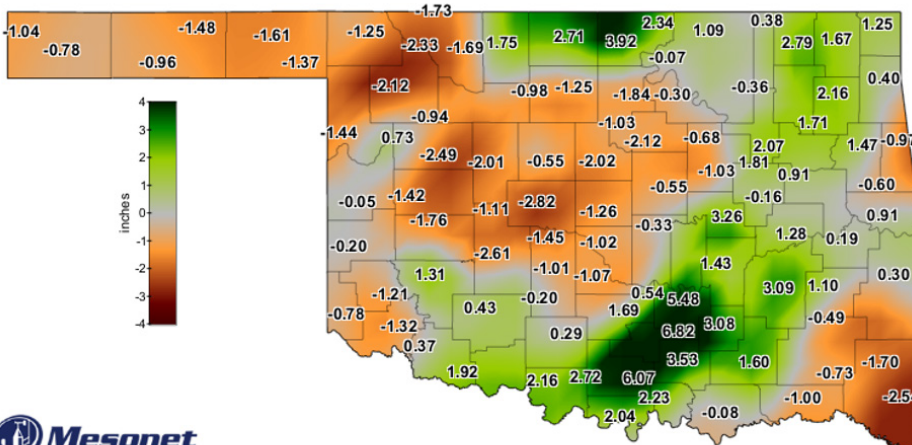


Average Maximum Air Temperature

Departure from Average, October 2024

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Figure 8: Departure from average maximum air temperature for October 2024.



Total Rainfall

Departure from Average, April 2024

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Figure 9: Departure for average rainfall from April 2024.



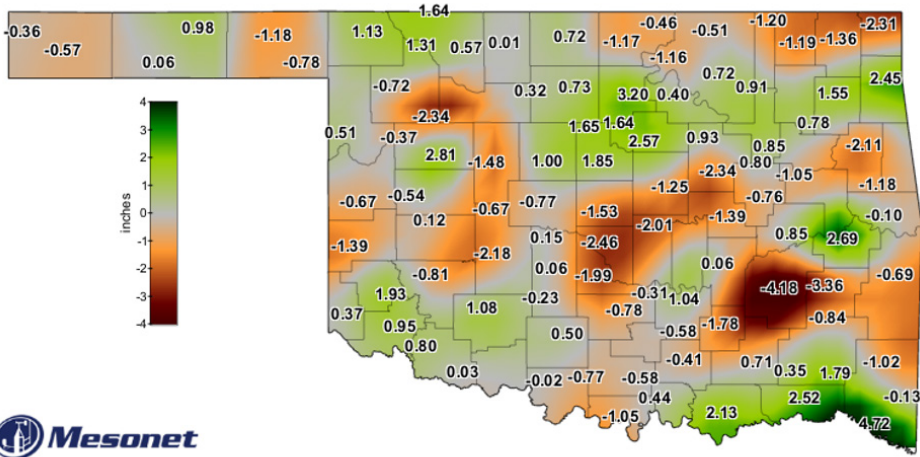


Figure 10: Departure for average rainfall from May 2024.

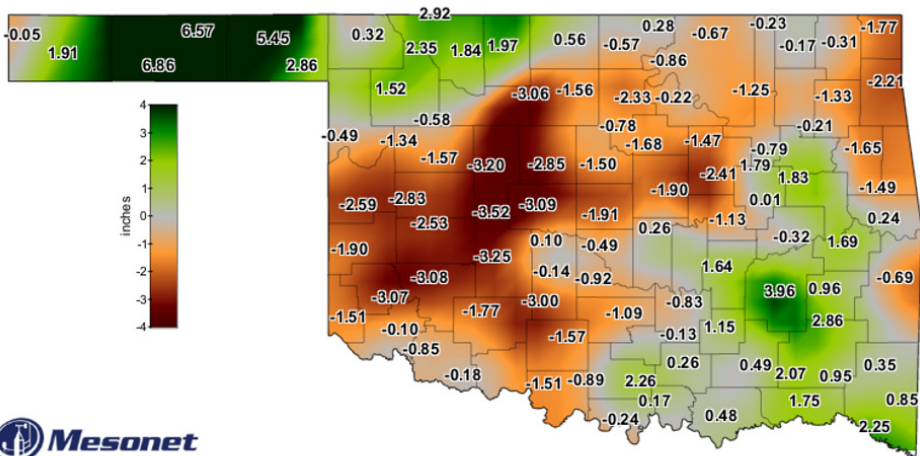


Figure 11: Departure from average rainfall for June 2024.

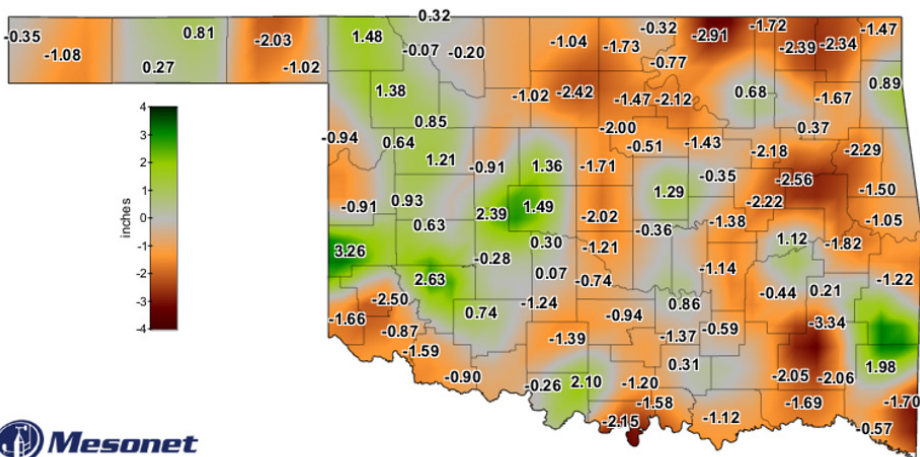


Figure 12: Departure from average rainfall for July 2024.

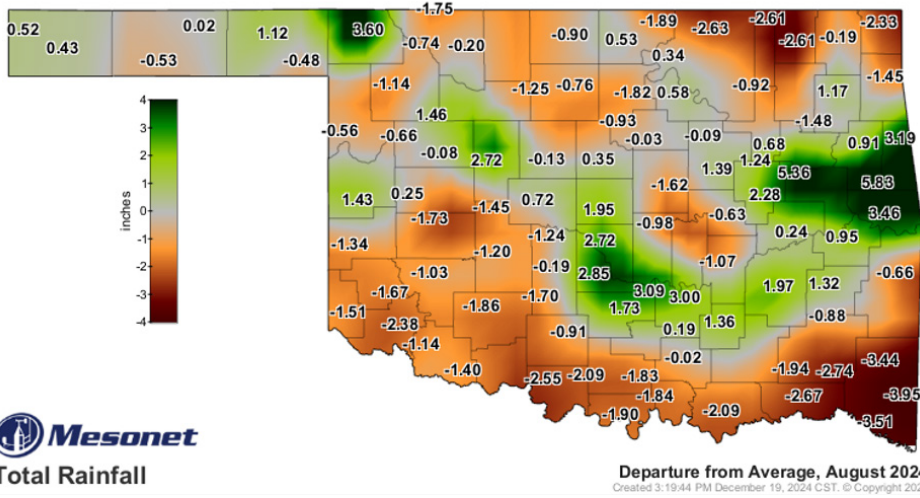


Figure 13: Departure from average rainfall for August 2024.

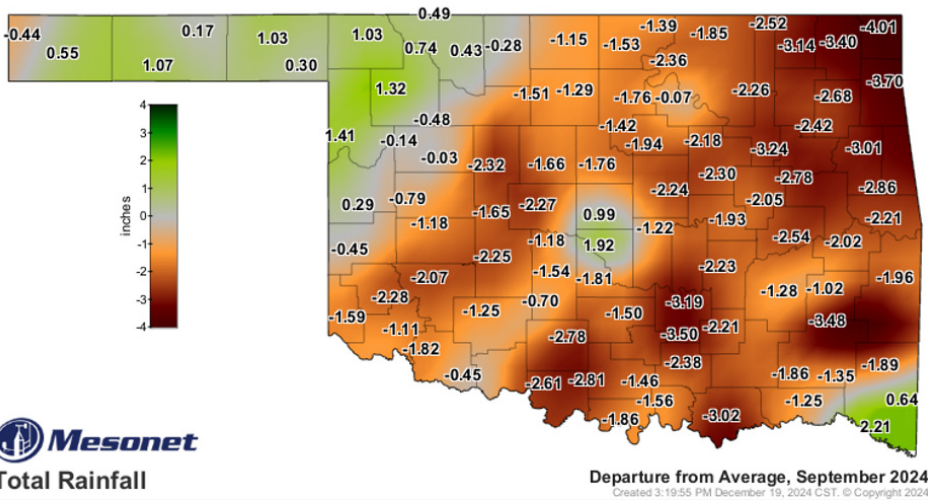


Figure 14: Departure from average rainfall for September 2024.

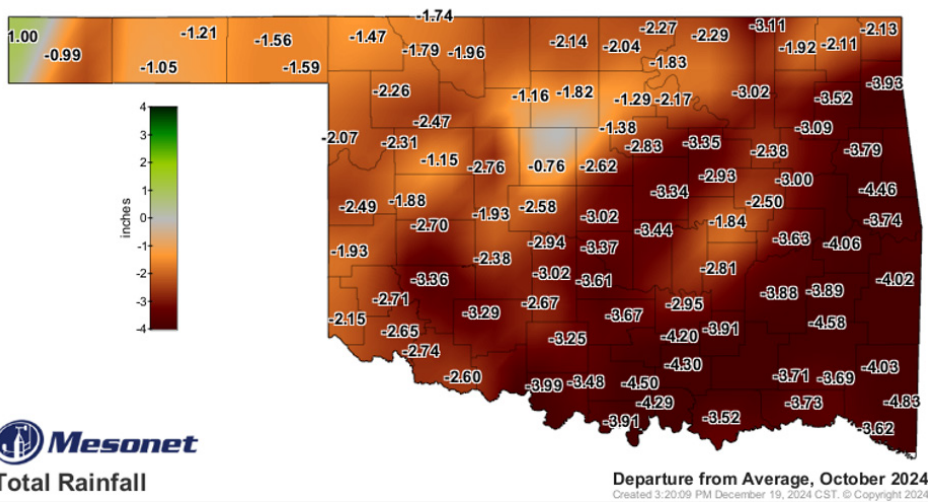


Figure 15: Departure from average rainfall for October 2024.

**Table 1 :** Sorghum cultivars used in the 2024 Oklahoma sorghum performance trials along with associated company and agronomic information.

<b>Company</b>	<b>Hybrid</b>	<b>Maturity</b>	<b>Seed Color</b>	<b>Days to mid-bloom</b>
Advanta	ADV G1329	Early	Cream	58
Advanta	ADV G2106	Medium	Red	62
Advanta	ADV G2168IG	Medium	Red	66
Advanta	ADV G 2193IG	Medium	Red	68
Advanta	ADV G 3127	Medium	Red	68
Dekalb	DKS 28-07	Early	Bronze	57
Dekalb	DKS 33-07	Medium	Bronze	62
Dekalb	DKS 36-07	Medium	Bronze	62
Dekalb	DKS 44-07	Medium	Red	67
Dekalb	DKS 50-07	Medium	Red	69
Dekalb	DKS 54-07	Late	Red	72
Kauffman Seed	5563	Early	Bronze	56
Kauffman Seed	5583	Early	Bronze	58
Kauffman Seed	5482	Early	Bronze	58
Kauffman Seed	5603	Medium	Red	60
Kauffman Seed	5643	Medium	Bronze	64
Kauffman Seed	5710	Medium	Bronze	64
Kauffman Seed	5653IG	Medium	Red	65
Kauffman Seed	5730	Medium	Red	69
Kauffman Seed	GS203X	Medium	Red	69
Dyna-Gro	M54GR24	Early	Red	54
Dyna-Gro	M59GB57	Early	Bronze	59
Dyna-Gro	M59GB94	Early	Bronze	59
Dyna-Gro	GX24991	Early	Red	59
Dyna-Gro	M60GB31	Medium	Bronze	60
Dyna-Gro	M60GB88	Medium	Bronze	60
Dyna-Gro	M63GB78	Medium	Bronze	63
Dyna-Gro	M67GB87	Medium	Bronze	67
Dyna-Gro	M66GR32	Medium	Red	66
Dyna-Gro	M62GC36	Medium	Bronze	62
Dyna-Gro	M62GC23	Medium	Cream	62
Dyna-Gro	M71GR91	Late	Red	71
Dyna-Gro	M72GB71	Late	Bronze	72
Dyna-Gro	M70GR37	Late	Red	70
Sorghum Partners	SP 43M80	Early	Bronze	60
Sorghum Partners	SP 66M16	Medium	Bronze	66
Sorghum Partners	SP7715	Late	Bronze	70



## Chickasha:

The Chickasha location experienced a relatively normal year. Early excessive moisture did not allow for tilling and smoothing of the field until much later than intended. The trial was planted well outside the typical planting period for either early season or late season production. A flush of weeds during the late vegetative period through the early reproductive period did require addressing. Since there were primarily grasses, they have to be physically removed through hand weeding. Compared to normal years, the incidents of wildlife (both deer and bird) damage was relatively low, which resulted in better yields and more consistent yields throughout the trial. Additionally, no further insect pests were noted throughout the year, so no insecticides were applied this season. Above average heat and continued dry conditions led to a more rapid dry-down than normal, which resulted in a week or two earlier harvest than expected. It was thought that this might have decreased yields, but yields were still average to above-average for this location. A decrease in test weight was seen, especially for the early and several of the medium cultivars. While the later hybrids also had lower test weights than we would like to see, they were consistently higher than either the early or medium maturity cultivars.

**Cooperator:** Michael Pettijohn

**Tillage Practice:** Conventional tilled

**Soil Series:** Dale Silt Loam

**Seeding rate:** 55,000 seeds/ac

**Herbicide:** Preemergence 1.6 qt/ac Charger Max ATZ + 32oz glyphosate/ac

**Fertilizer:** N- 140 lbs/ac

**Planting Date:** May 24

**Harvest Date:** Sept. 9

**Table 2:** Early maturity sorghum hybrids (<60 days until mid-bloom) at the South Central Research Station near Chickasha location in 2024.

Company	Cultivar	Yield		Moisture	Test Weight
		lbs/ac	% of trial average	%	lbs/bu
Advanta	ADV G1329	5401	97.7	10.4	51.5
Dekalb	DKS 28-07	6768	122.4	9.9	50.8
Kauffman Seeds	5563	5928	107.2	10.9	52.4
Kauffman Seeds	5583	4600	83.2	10.4	52.2
Dyna-Gro	M54GR24	5238	94.8	11.0	52.2
Dyna-Gro	M59GB57	5876	106.3	10.6	51.7
Dyna-Gro	M59GB94	5085	92.0	10.8	54.4
Dyna-Gro	GX24991	5461	98.8	10.5	52.2
Sorghum Partners	SP 43M80	5389	97.5	11.5	53.7
<b>Mean</b>		5527.2		10.7	52.4
<b>CV</b>		12.4			
<b>LSD</b>		704.8			

**Table 3:** Medium maturity sorghum hybrids (60-70 days until mid-bloom) at the South Central Research Station near Chickasha location in 2024.

Company	Cultivar	Yield		Moisture	Test Weight
		lbs/ac	% of trial average	%	lbs/bu
Advanta	ADV G2106	4610	93.5	12.7	52.4
Advanta	ADV G2168IG	5465	110.8	12.8	59.9
Advanta	ADV G2193IG	4586	93.0	12.9	62.0
Advanta	ADV G3127	5434	110.1	13.6	55.1
Dekalb	DKS 33-07	4614	93.5	13.2	56.4
Dekalb	DKS 36-07	4273	86.6	12.6	57.4
Dekalb	DKS 44-07	4843	98.2	13.0	56.7
Dekalb	DKS 50-07	5450	110.5	13.5	55.6
Kauffman Seed	5603	4509	91.4	14.1	53.1
Kauffman Seed	5643	5060	102.6	13.0	59.9
Kauffman Seed	5710	5804	117.6	12.5	52.7
Kauffman Seed	5653IG	4447	90.1	13.4	52.9
Kauffman Seed	GS203X	5608	113.7	12.4	56.1
Dyna-Gro	M60GB31	5219	105.8	13.0	54.8
Dyna-Gro	M60GB88	4389	89.0	12.9	52.9
Dyna-Gro	M63GB78	5199	105.4	13.0	54.7
Dyna-Gro	M67GB87	4864	98.6	13.2	50.2
Dyna-Gro	M66GR32	4506	91.3	13.7	52.9
Dyna-Gro	M62GC36	4665	94.6	12.6	54.7
Dyna-Gro	M62GC23	4650	94.3	11.9	52.2
Sorghum Partners	SP 66M16	5404	109.5	13.2	53.8
<b>Mean</b>		4933.1		13.0	55.1
<b>CV</b>		15.4			
<b>LSD</b>		409.2			

**Table 4:** Late maturity sorghum hybrids (>70 days until mid-bloom) at the South Central Research Station near Chickasha location in 2024.

Company	Cultivar	Yield		Moisture	Test Weight
		lbs/ac	% of trial average	%	lbs/bu
Dekalb	DKS 54-07	6960	100.1	12.1	57.3
Dyna-Gro	M71GR91	7400	106.5	9.1	55.8
Dyna-Gro	M72GB71	6945	99.9	11.7	55.6
Dyna-Gro	M70GR37	6923	99.6	11.9	55.1
Sorghum Partners	SP7715	6520	93.8	11.4	61.0
<b>Mean</b>		6949.6		11.3	56.9
<b>CV</b>		6.7			
<b>LSD</b>		592.3			

## Tipton:

This trial was planted into terminated wheat residue; therefore, a slight delay was experienced compared to other growers in the area. Between the pre-plant herbicide program and the wheat residue, very few weeds were present early on. Additionally, due to higher moisture and wheat residue, early growth was slower and more delayed than normal. Smaller broadleaves and some sandburs were present later in the season; however, this was beyond typical herbicide application windows, so these were managed with hand weeding. There was virtually no impact from insects throughout the season, so no insecticides were applied. Because of earlier planting and higher than normal temperatures, harvest was earlier than normal (one to two weeks earlier than expected). Due to the dryland system and relatively delayed early-season growth, yields were much lower than typical for this location. However, these yields were not lower than the average yields experienced by dryland producers in the region.

**Cooperator:** Mike Schultz

**Tillage Practice:** No-till into wheat residue

**Soil Series:** Tipton Loam

**Seeding rate:** 55,000 seeds/ac

**Herbicide:** Preemergence 1.6 qt/ac Charger Max ATZ + 32oz glyphosate/ac

**Fertilizer:** N- 140 lbs/ac

**Planting Date:** April 22

**Harvest Date:** Aug. 13

**Table 5:** Early maturity sorghum hybrids (<60 days until mid-bloom) at the Tipton Valley Research Station near Tipton location in 2024.

Company	Cultivar	Yield		Moisture	Test Weight
		lbs/ac	% of trial average	%	lbs/bu
Advanta	ADV G1329	2834	116.0	13.1	52.4
Dekalb	DKS 28-07	2458	100.6	11.1	56.5
Kauffman Seeds	5563	2708	110.8	11.9	56.5
Kauffman Seeds	5583	2541	104.0	12.5	57.5
Dyna-Gro	M54GR24	2110	86.4	10.8	57.4
Dyna-Gro	M59GB57	2575	105.4	10.8	56.9
Dyna-Gro	M59GB94	2124	86.9	16.2	58.0
Dyna-Gro	GX24991	2566	105.0	12.1	59.2
Sorghum Partners	SP 43M80	2073	84.8	15.5	60.1
<b>Mean</b>		2443.1		12.7	57.2
<b>CV</b>		10.7			
<b>LSD</b>		374.8			



**Table 6:** Medium maturity sorghum hybrids (60-70 days until mid-bloom) at the Tipton Valley Research Station near Tipton location in 2024.

Company	Cultivar	Yield		Moisture	Test Weight
		lbs/ac	% of trial average	%	lbs/bu
Advanta	ADV G2106	1959	111.5	10.4	50.7
Advanta	ADV G2168IG	2145	122.1	9.7	42.7
Advanta	ADV G 2193IG	2366	134.7	11.9	44.3
Advanta	ADV G 3127	1686	96.0	12.6	45.4
Dekalb	DKS 33-07	2726	155.2	11.4	52.3
Dekalb	DKS 36-07	1936	110.2	13.6	46.7
Dekalb	DKS 44-07	1513	86.1	16.4	43.1
Dekalb	DKS 50-07	1484	84.4	12.7	46.5
Kauffman Seed	5603	2296	130.7	12.1	51.9
Kauffman Seed	5643	1713	97.5	12.9	50.4
Kauffman Seed	5710	1348	76.7	13.5	51.0
Kauffman Seed	5653IG	2051	116.7	9.3	46.2
Kauffman Seed	GS203X	659	37.5	17.1	43.7
Dyna-Gro	M60GB31	1734	98.7	11.5	56.1
Dyna-Gro	M60GB88	2081	118.5	10.9	44.3
Dyna-Gro	M63GB78	2086	118.7	14.8	49.3
Dyna-Gro	M67GB87	1521	86.6	14.6	48.6
Dyna-Gro	M66GR32	1119	63.7	14.9	43.1
Dyna-Gro	M62GC36	1421	80.9	12.1	46.1
Dyna-Gro	M62GC23	2079	118.3	10.6	54.0
Sorghum Partners	SP 66M16	978	55.6	14.9	47.5
<b>Mean</b>		1757		12.8	47.8
<b>CV</b>		19.8			
<b>LSD</b>		645.9			

**Table 7:** Late maturity sorghum hybrids (>70 days until mid-bloom) at the Tipton Valley Research Station near Tipton location in 2024.

Company	Cultivar	Yield		Moisture	Test Weight
		lbs/ac	% of trial average	%	lbs/bu
Dekalb	DKS 54-07	504	42.9	11.1	44.8
Dyna-Gro	M71GR91	1318	112.2	12.7	54.2
Dyna-Gro	M72GB71	1023	87.1	11.5	48.9
Dyna-Gro	M70GR37	1181	100.6	12.7	57.4
Sorghum Partners	SP7715	1846	157.3	9.8	60.7
<b>Mean</b>		1174		11.6	53.2
<b>CV</b>		27.4			
<b>LSD</b>		301.7			

**Perkins:**

The Perkins location was at the Cimarron Valley Research Station near Perkins, Oklahoma. The previous crop was a mix of soybean agronomic trials from the previous year; however, none had a significant impact on trial variability. The trial was planted into a tilled field. The field was tilled the previous winter, which allowed the crop to be planted early. Drier conditions following planting resulted in the pre-plant herbicide program not activating efficiently, which resulted in several weeds early in the production season. These were a mix of broadleaf and grassy weeds; therefore, they were managed twice in-season by hand weeding practices. A small flare up of sorghum aphids were noted, but this population crashed prior to an insecticide application. A larger outbreak of chinch bugs was experienced during post flowering through early grain fill. Unlike normal, these were not present in lower canopy or collar regions but on the flag leaf and in the panicle. These were managed through a Lambda-cyhalothrin application (as Besiege®). Similar to other locations, dry late-season conditions resulted in quicker dry-down conditions. This can be seen by the lower-than-average test weight.

**Cooperator:** Kenneth Watkins  
**Tillage Practice:** Conventional  
**Soil Series:** Teller Fine Sandy Loam  
**Seeding rate:** 55,000 seeds/ac  
**Herbicide:** Preemergence 1.6 qt/ac Charger Max ATZ + 32oz glyphosate/ac  
**Insecticide:** 10 oz/ac Besiege applied post-flowering for chinch bugs in the head and upper canopy  
**Fertilizer:** N- 140 lbs/ac; P- 60 lbs/ac; K- 60 lbs/ac  
**Planting Date:** May 3  
**Harvest Date:** Sept. 8

**Table 8:** Early maturity sorghum hybrids (<60 days until mid-bloom) at the Cimarron Research Station near Perkins location in 2024.

Company	Cultivar	Yield		Moisture	Test Weight
		lbs/ac	% of trial average	%	lbs/bu
Advanta	ADV G1329	4143	88.9	12.1	54.2
Dekalb	DKS 28-07	5055	108.5	12.7	56.0
Kauffman Seeds	5563	4119	88.4	11.7	51.2
Kauffman Seeds	5583	4546	97.5	12.9	56.3
Dyna-Gro	M54GR24	4098	87.9	13.7	60.1
Dyna-Gro	M59GB57	4318	92.6	12.0	53.5
Dyna-Gro	M59GB94	5803	124.5	15.8	62.3
Dyna-Gro	GX24991	5039	108.1	12.7	56.0
Sorghum Partners	SP 43M80	4825	103.5	14.8	60.2
<b>Mean</b>		4660.6		13.1	56.6
<b>CV</b>		16.1			
<b>LSD</b>		675.8			

**Table 9:** Medium maturity sorghum hybrids (60-70 days until mid-bloom) at the Cimarron Research Station near Perkins location in 2024.

Company	Cultivar	Yield		Moisture	Test Weight
		lbs/ac	% of trial average	%	lbs/bu
Advanta	ADV G2106	4602.0	88.7	12.5	51.1
Advanta	ADV G2168IG	4458.8	85.9	12.6	49.7
Advanta	ADV G 2193IG	4046.3	78.0	13.0	47.9
Advanta	ADV G 3127	5270.0	101.5	13.6	52.7
Dekalb	DKS 33-07	4597.5	88.6	14.7	51.7
Dekalb	DKS 36-07	5343.8	103.0	14.5	54.7
Dekalb	DKS 44-07	6422.5	123.7	14.6	53.6
Dekalb	DKS 50-07	5955.0	114.7	14.7	55.5
Kauffman Seed	5603	4597.5	88.6	11.7	51.1
Kauffman Seed	5643	5788.8	111.5	14.3	53.4
Kauffman Seed	5710	6021.3	116.0	12.5	52.8
Kauffman Seed	5653IG	5038.8	97.1	12.6	52.4
Kauffman Seed	GS203X	6267.5	120.8	15.1	54.5
Dyna-Gro	M60GB31	4896.3	94.3	12.7	53.4
Dyna-Gro	M60GB88	4528.8	87.3	12.9	51.5
Dyna-Gro	M63GB78	4820.0	92.9	13.8	53.3
Dyna-Gro	M67GB87	5240.0	101.0	14.9	52.4
Dyna-Gro	M66GR32	6065.0	116.9	15.3	55.2
Dyna-Gro	M62GC36	5316.3	102.4	14.1	53.9
Dyna-Gro	M62GC23	5078.8	97.9	13.0	51.0
Sorghum Partners	SP 66M16	4636.3	89.3	14.1	53.7
<b>Mean</b>		5190.0		13.7	52.6
<b>CV</b>		12.8			
<b>LSD</b>		471.5			



**Table 10:** Late maturity sorghum hybrids (>70 days until mid-bloom) at the Cimarron Research Station near Perkins location in 2024.

Company	Cultivar	Yield		Moisture	Test Weight
		lbs/ac	% of trial average	%	lbs/bu
Dekalb	DKS 54-07	6314	100.5	14.1	56.6
Dyna-Gro	M71GR91	6538	104.1	14.4	56.3
Dyna-Gro	M72GB71	6128	97.6	13.8	56.7
Dyna-Gro	M70GR37	6713	106.9	14.1	55.7
Sorghum Partners	SP7715	5713	91.0	12.5	51.4
<b>Mean</b>		6280.9		13.8	55.3
<b>CV</b>		12.2			
<b>LSD</b>		714.7			

## Bixby:

The Bixby location is the program's only eastern Oklahoma location, which often has more stable temperatures and consistent rainfall patterns. This allows for a different look at cultivar performance under these conditions. In 2024, Bixby was not exempt from hot and dry conditions; however, the location experienced substantially higher temperatures and lower in-season precipitation than normal for this location. Early excessive moisture early lead to limited ability to till the ground early and apply a preplant herbicide program. Therefore, this was applied at planting. The dry conditions that followed limited efficacy of this program. This location is noted for having heavy pigweed and grass pressure. Grasses were not an issue throughout the growing season with only minor issues of a patch of Bermudagrass located in the early maturing cultivars in the third replication. This was managed through physical removal but did cause slight reductions in yields and increased variability. However, since the pressure was consistent across the early cultivars, this replication was maintained for analysis. The major weed of the location was pigweed. These were managed with an application of Huskie and physical removal.

No major insect issues were noted during the course of the season. While this location can be irrigated, no irrigation was applied due to mechanical issues with the irrigation pump; therefore, this should be considered a completely dryland trial in 2024. No significant diseases were present throughout the season. Recent research has also shown that N applications do not have to be as high at this location as it often follows several years of soybean.

**Cooperator:** Ted Newell

**Tillage Practice:** Conventional

**Soil Series:** Wynona Silty Clay Loam

**Seeding rate:** 55,000 seeds/ac

**Herbicide:** Preemergence 1.6 qt/ac Charger  
Max ATZ + 32oz glyphosate/ac 16 oz/ac Huskie at 5-leaf stage

**Fertilizer:** N/A

**Planting Date:** May 29

**Harvest Date:** Sept. 26

**Table 11:** Early maturity sorghum hybrids (<60 days until mid-bloom) at the Mingo Valley Research Station near the Bixby location in 2024.

Company	Cultivar	Yield		Moisture	Test Weight
		lbs/ac	% of trial average	%	lbs/bu
Advanta	ADV G1329	4008	94.9	14.2	53.2
Dekalb	DKS 28-07	4639	109.9	12.5	49.1
Kauffman Seeds	5563	3971	94.0	13.2	52.5
Kauffman Seeds	5583	3838	90.9	14.1	53.6
Dyna-Gro	M54GR24	4660	110.3	16.2	52.1
Dyna-Gro	M59GB57	4251	100.7	15.4	49.5
Dyna-Gro	M59GB94	4234	100.3	16.7	49.8
Dyna-Gro	GX24991	3744	88.7	14.9	47.2
Sorghum Partners	SP 43M80	4665	110.5	18.1	50.0
<b>Mean</b>	Mean	4223		15.0	50.8
<b>CV</b>	CV	8.6			
<b>LSD</b>	LSD	493			

**Table 12:** Medium maturity sorghum hybrids (60-70 days until mid-bloom) at the Mingo Valley Research Station near the Bixby location in 2024.

Company	Cultivar	Yield		Moisture	Test Weight
		lbs/ac	% of trial average	%	lbs/bu
Advanta	ADV G2106	5320	86.3	13.1	51.5
Advanta	ADV G2168IG	5794	94.0	13.7	54.0
Advanta	ADV G 2193IG	5981	97.1	13.1	53.5
Advanta	ADV G 3127	4998	81.1	14.8	47.1
Dekalb	DKS 33-07	5000	81.2	12.7	54.6
Dekalb	DKS 36-07	6299	102.2	13.4	53.4
Dekalb	DKS 44-07	7729	125.5	13.6	57.5
Dekalb	DKS 50-07	7576	123.0	14.3	58.6
Kauffman Seed	5603	4396	71.4	11.5	52.3
Kauffman Seed	5643	6909	112.1	13.9	54.8
Kauffman Seed	5710	7761	126.0	12.3	53.6
Kauffman Seed	5653IG	5599	90.9	13.5	53.2
Kauffman Seed	GS203X	7989	129.7	15.1	57.9
Dyna-Gro	M60GB31	5914	96.0	13.3	55.6
Dyna-Gro	M60GB88	6061	98.4	12.3	53.1
Dyna-Gro	M63GB78	5790	94.0	14.4	54.1
Dyna-Gro	M67GB87	6499	105.5	14.3	54.8
Dyna-Gro	M66GR32	7795	126.5	14.8	58.4
Dyna-Gro	M62GC36	6091	98.9	14.5	56.0
Dyna-Gro	M62GC23	5060	82.1	11.5	50.4
Sorghum Partners	SP 66M16	4821	78.3	16.6	54.0
<b>Mean</b>	Mean	6161		13.6	54.2
<b>CV</b>	CV	15.7			
<b>LSD</b>	LSD	993			

**Table 13:** Late maturity sorghum hybrids (>70 days until mid-bloom) at the Mingo Valley Research Station near the Bixby location in 2024.

Company	Cultivar	Yield		Moisture	Test Weight
		lbs/ac	% of trial average	%	lbs/bu
Dekalb	DKS 54-07	5879	102.5	17.4	56.7
Dyna-Gro	M71GR91	5573	97.2	16.0	56.2
Dyna-Gro	M72GB71	5588	97.5	16.9	56.0
Dyna-Gro	M70GR37	6490	113.2	16.3	56.7
Sorghum Partners	SP7715	5141	89.7	13.9	54.4
<b>Mean</b>	Mean	5734		16.1	56.0
<b>CV</b>	CV	10.4			
<b>LSD</b>	LSD	668			



## Fairfax:

This trial was on a grower field (Brandon Keeler) north of Fairfax. This trial was planted following wheat harvest, making it a double-cropping system. A traditional preplant herbicide system was sprayed. A rainfall within a week after application and planting resulted in high efficacy of the program. Weeds were not a problem in the trial throughout the season. Pressure from both sorghum aphid and chinch bugs were present during the growing season but did not persist long enough for an application to be made for either. This location was the most impacted by the hot and dry conditions during the late-summer and early-fall period. Harvest of the crop was nearly one month earlier than it should have been. While yields were not much lower than to be expected with double-crop production in dryland systems, yields were lower than expected in-season as well as lower test weights. Statistical analysis was not conducted on the medium-maturity cultivars due to the high amount of variability associated with the trial. This was primarily due to deer predation on the fourth replication of the trial.

**Cooperator:** Brandon Keeler

**Tillage Practice:** No-till behind wheat (double-crop)

**Soil Series:** Norge silt loam/Wynona silty clay loam

**Seeding rate:** 55,000 seeds/ac

**Herbicide:** Preemergence: 1.6 qt/ac Charger Max ATZ+32 oz/ac glyphosate

**Fertilizer:** N/A

**Planting Date:** June 12

**Harvest Date:** Oct. 10

**Table 14:** Early maturity sorghum hybrids (<60 days until mid-bloom) near the Fairfax location 2024.

Company	Cultivar	Yield		Moisture	Test Weight
		lbs/ac	% of trial average	%	lbs/bu
Advanta	ADV G1329	879	75.6	11.3	53.3
Dekalb	DKS 28-07	1761	151.6	11.2	51.3
Kauffman Seeds	5563	1145	98.5	10.7	50.5
Kauffman Seeds	5583	1093	94.0	11.6	46.3
Dyna-Gro	M54GR24	1050	90.4	11.4	50.5
Dyna-Gro	M59GB57	1468	126.3	11.2	50.8
Dyna-Gro	M59GB94	1145	98.5	12.9	48.7
Dyna-Gro	GX24991	1168	100.5	12.4	44.2
Sorghum Partners	SP 43M80	750	64.5	12.1	51.4
<b>Mean</b>		1161.9		11.6	49.7
<b>CV</b>		17.4			
<b>LSD</b>		487.9			

**Table 15:** Medium maturity sorghum hybrids (60-70 days until mid-bloom) near the Fairfax location 2024.

Company	Cultivar	Yield		Moisture	Test Weight
		lbs/ac	% of trial average	%	lbs/bu
Advanta	ADV G2106	959	51.5	11.3	49.2
Advanta	ADV G2168IG	438	23.5	8.7	49.9
Advanta	ADV G 2193IG	969	52.1	9.4	55.4
Advanta	ADV G 3127	1051	56.5	10.8	54.2
Dekalb	DKS 33-07	1180	63.4	8.3	57.8
Dekalb	DKS 36-07	1355	72.8	15.9	52.2
Dekalb	DKS 44-07	2230	119.9	13.4	56.2
Dekalb	DKS 50-07	3021	162.4	13.4	58.1
Kauffman Seed	5603	1428	76.7	14.3	53.7
Kauffman Seed	5643	2493	134.0	11.7	48.1
Kauffman Seed	5710	3841	206.5	13.8	50.1
Kauffman Seed	5653IG	1720	92.5	13.8	45.0
Kauffman Seed	GS203X	3006	161.6	14.0	52.8
Dyna-Gro	M60GB31	3413	183.4	12.4	56.8
Dyna-Gro	M60GB88	1913	102.8	13.7	54.5
Dyna-Gro	M63GB78	1953	105.0	12.5	53.8
Dyna-Gro	M67GB87	2354	126.5	13.0	52.8
Dyna-Gro	M66GR32	1825	98.1	17.0	49.4
Dyna-Gro	M62GC36	1888	101.5	13.5	57.6
Dyna-Gro	M62GC23	1354	72.8	9.0	52.8
Sorghum Partners	SP 66M16	681	36.6	13.0	43.1
Mean		1860.4		12.5	52.5
CV		29.7			
LSD		Not shown due to high amount of variability			

**Table 16:** Late maturity sorghum hybrids (>70 days until mid-bloom) near the Fairfax location 2024.

Company	Cultivar	Yield		Moisture	Test Weight
		lbs/ac	% of trial average	%	lbs/bu
Dekalb	DKS 54-07	1606	80.8	17.2	48.8
Dyna-Gro	M71GR91	2521	126.8	14.3	55.5
Dyna-Gro	M72GB71	1969	99.0	14.5	47.8
Dyna-Gro	M70GR37	2285	114.9	13.3	54.2
Sorghum Partners	SP7715	1561	78.5	15.6	53.3
<b>Mean</b>		1988.5		15.0	51.9
<b>CV</b>		12.4			
<b>LSD</b>		301.7			

## Goodwell:

The Goodwell location was at the Oklahoma Panhandle Research and Extension Center and was under an overhead sprinkler irrigation system. The trial was strip tilled into the previous year's wheat crop. The trial was fertilized through the strip-till unit. The location had adequate moisture before planting as well as good moisture following; therefore, emergence was not an issue, and an adequate stand was achieved. A major storm hit the trial at the early vegetative stage. The primary issues with this storm were excess rainfall and hail. This did damage to the plants, but they fully recovered prior to the grand growth period. Adequate weed control was done throughout the season using hand-weeding techniques. A minor sorghum aphid outbreak occurred in the sorghum surrounding the trial but was never in the trial. Therefore, no insecticide applications were applied. The two panhandle locations were the only trials that did not suffer the impacts of the hot and dry conditions. This was primarily due to the abundance of moisture experienced throughout the primary production season. Harvest was several weeks earlier than expected, primarily due to hotter-than-average conditions through late September and most of October. However, compared to the other downstate locations, these conditions did not seem to negatively impact yields or test weights.

**Cooperator:** Cameron Murley  
**Tillage Practice:** Strip-tilled into wheat residue  
**Soil Series:** Gruver Clay Loam  
**Target Population:** 55,000 seeds/ac  
**Fertilizer:** 200 lbs N/ac, 65 lbs P/ac  
**Planting Date:** May 21  
**Harvest Date:** Oct. 31

**Table 17:** Early maturity sorghum hybrids (<60 days until mid-bloom) at the Oklahoma Panhandle Research and Extension Center near the Goodwell location in 2024.

Company	Cultivar	Yield		Moisture	Test Weight
		lbs/ac	% of trial average	%	lbs/bu
Advanta	ADV G1329	879	75.6	11.3	53.3
Dekalb	DKS 28-07	1761	151.6	11.2	51.3
Kauffman Seeds	5563	1145	98.5	10.7	50.5
Kauffman Seeds	5583	1093	94.0	11.6	46.3
Dyna-Gro	M54GR24	1050	90.4	11.4	50.5
Dyna-Gro	M59GB57	1468	126.3	11.2	50.8
Dyna-Gro	M59GB94	1145	98.5	12.9	48.7
Dyna-Gro	GX24991	1168	100.5	12.4	44.2
Sorghum Partners	SP 43M80	750	64.5	12.1	51.4
<b>Mean</b>		1161.9		11.6	49.7
<b>CV</b>		17.4			
<b>LSD</b>		487.9			



**Table 18:** Medium maturity sorghum hybrids (60-70 days until mid-bloom) at the Oklahoma Panhandle Research and Extension Center near the Goodwell location in 2024.

Company	Cultivar	Yield		Moisture	Test Weight
		lbs/ac	% of trial average	%	lbs/bu
Advanta	ADV G2106	7285	94.2	10.0	65.3
Advanta	ADV G2168IG	6983	90.3	12.0	59.8
Advanta	ADV G 2193IG	6155	79.6	9.8	65.1
Advanta	ADV G 3127	8132	105.1	11.8	68.2
Dekalb	DKS 33-07	7558	97.7	10.9	68.8
Dekalb	DKS 36-07	6169	79.8	7.8	58.3
Dekalb	DKS 44-07	8409	108.7	12.5	60.3
Dekalb	DKS 50-07	7828	101.2	12.1	58.9
Kauffman Seed	5603	9405	121.6	10.8	65.6
Kauffman Seed	5643	6332	81.9	13.3	64.4
Kauffman Seed	5710	9725	125.7	11.9	63.1
Kauffman Seed	5653IG	8439	109.1	11.6	65.3
Kauffman Seed	GS203X	7504	97.0	11.7	58.6
Dyna-Gro	M60GB31	6467	83.6	10.8	64.3
Dyna-Gro	M60GB88	6034	78.0	7.3	50.9
Dyna-Gro	M63GB78	7855	101.6	11.7	57.7
Dyna-Gro	M67GB87	9536	123.3	12.0	64.6
Dyna-Gro	M66GR32	7520	97.2	10.9	59.8
Dyna-Gro	M62GC36	7278	94.1	12.0	57.8
Dyna-Gro	M62GC23	7819	101.1	10.3	59.1
Sorghum Partners	SP 66M16	9985	129.1	11.3	61.7
<b>Mean</b>		7734.2		11.1	61.8
<b>CV</b>		10.8			
<b>LSD</b>		911.5			

**Table 19:** Late maturity sorghum hybrids (>70 days until mid-bloom) at the Oklahoma Panhandle Research and Extension Center near the Goodwell location in 2024.

Company	Cultivar	Yield		Moisture	Test Weight
		lbs/ac	% of trial average	%	lbs/bu
Dekalb	DKS 54-07	6761	98.8	10.6	60.1
Dyna-Gro	M71GR91	7393	108.0	10.9	61.1
Dyna-Gro	M72GB71	7554	110.4	10.3	60.2
Dyna-Gro	M70GR37	7543	110.2	7.5	55.9
Sorghum Partners	SP7715	4971	72.6	9.4	60.7
<b>Mean</b>		6844.3		9.7	59.6
<b>CV</b>		16.4			
<b>LSD</b>		1089.6			

## McCaul:

The trial location was at the McCaul Research and Demonstration Farm near Elkhart, Kansas. The trial was strip-tilled into previous wheat crop residue. All fertilizer was applied in the strip. The trial was irrigated with overhead sprinkler irrigation and was on the inner irrigation spans of a quarter acre pivot with the outer spans planted to corn. With rainfall and irrigation applied before planting, soil moisture at planting was more than adequate. This resulted in very good stands shortly after planting. However, with the associated moisture, early flushes of weeds were present. These were primarily bindweed mixed with sporadic pigweeds. Due to periodic moisture and rapid early growth, auxin herbicide could not occur. These had to be controlled through manual removal. Irrigation and timely rainfall limited stress throughout the season. Similar to other locations, hotter-than-average conditions resulted in more rapid dry-down. However, yields and test weights were not impacted by these conditions. No insect or disease pressure was experienced throughout the trial period.

**Cooperator:** Cameron Murley  
**Tillage Practice:** Strip-tilled into wheat residue  
**Soil Series:** Gruver Clay Loam  
**Target Population:** 55,000 seeds/ac  
**Fertilizer:** 200 lbs N/ac; 65 lbs P/ac  
**Planting Date:** May 22  
**Harvest Date:** Oct. 30

**Table 20:** Early maturity sorghum hybrids (<60 days until mid-bloom) at the McCaul Research and Demonstration Farm near Eva in 2024.

Company	Cultivar	Yield		Moisture	Test Weight
		lbs/ac	% of trial average	%	lbs/bu
Advanta	ADV G1329	7616	106.2	12.0	55.5
Dekalb	DKS 28-07	7166	100.0	11.2	54.7
Kauffman Seeds	5563	7989	111.4	12.2	56.6
Kauffman Seeds	5583	7454	104.0	11.7	56.7
Dyna-Gro	M54GR24	5053	70.5	11.9	56.5
Dyna-Gro	M59GB57	7600	106.0	11.4	56.3
Dyna-Gro	M59GB94	9060	126.4	12.2	58.5
Dyna-Gro	GX24991	8651	120.7	11.7	57.3
Sorghum Partners	SP 43M80	6968	97.2	12.5	54.7
<b>Mean</b>		7168.6		11.8	59.3
<b>CV</b>		14.4			
<b>LSD</b>		805.6			

**Table 21:** Medium maturity sorghum hybrids (60-70 days until mid-bloom) at the McCaull Research and Demonstration Farm near Eva in 2024.

Company	Cultivar	Yield		Moisture	Test Weight
		lbs/ac	% of trial average	%	lbs/bu
Advanta	ADV G2106	9413	92.5	11.8	58.8
Advanta	ADV G2168IG	9138	89.8	12.1	56.2
Advanta	ADV G 2193IG	8698	85.5	11.8	58.5
Advanta	ADV G 3127	10433	102.6	12.4	59.5
Dekalb	DKS 33-07	9724	95.6	12.3	60.4
Dekalb	DKS 36-07	10034	98.7	12.5	60.2
Dekalb	DKS 44-07	12514	123.0	12.4	61.4
Dekalb	DKS 50-07	11481	112.9	12.6	60.9
Kauffman Seed	5603	8608	84.6	11.9	58.7
Kauffman Seed	5643	11311	111.2	12.4	58.7
Kauffman Seed	5710	11208	110.2	12.0	58.2
Kauffman Seed	5653IG	8908	87.6	11.9	56.6
Kauffman Seed	GS203X	11883	116.8	12.5	59.7
Dyna-Gro	M60GB31	10108	99.4	12.2	59.2
Dyna-Gro	M60GB88	8941	87.9	11.6	57.2
Dyna-Gro	M63GB78	10660	104.8	12.5	59.6
Dyna-Gro	M67GB87	9980	98.1	12.5	57.9
Dyna-Gro	M66GR32	10339	101.7	12.5	61.1
Dyna-Gro	M62GC36	10636	104.6	12.6	60.8
Dyna-Gro	M62GC23	9445	92.9	12.1	58.3
Sorghum Partners	SP 66M16	10130	99.6	12.1	58.4
Mean		10170.8		12.2	59.0
CV		10.8			
LSD		1045.7			

**Table 22:** Late maturity sorghum hybrids (>70 days until mid-bloom) at the McCaull Research and Demonstration Farm near Eva in 2024.

Company	Cultivar	Yield		Moisture	Test Weight
		lbs/ac	% of trial average	%	lbs/bu
Dekalb	DKS 54-07	11639	106.2	13.4	60.2
Dyna-Gro	M71GR91	11714	106.9	13.3	62.4
Dyna-Gro	M72GB71	10953	100.0	13.0	61.2
Dyna-Gro	M70GR37	12631	115.3	13.1	61.5
Sorghum Partners	SP7715	7839	71.6	11.2	53.1
<b>Mean</b>		10955		12.8	59.7
<b>CV</b>		16.8			
<b>LSD</b>		1179.8			

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