

**New Mexico 2016 Dryland Grain Sorghum Performance Test - Agricultural Science Center at Clovis**

**Investigators:** A. Mesbah, A. Scott, and B. Niece

**Test Description**

<b>Location:</b>	<b>Management Practices:</b>	<b>Growing Conditions:</b>																																																																																																																																	
County/Area: Curry Longitude: -103.22 Latitude: 34.60 Elevation: 4435 ft. Soil Name: Olton Soil Texture: clay loam Soil Depth: >60 in.	Previous Crop: fallow Planting Date: 21-Jun Harvest Date: 22-Nov  <b>Production Inputs</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">Rate</th> <th style="text-align: center;">Date</th> </tr> </thead> <tbody> <tr> <td colspan="3"><b>Fertilizer:</b></td> </tr> <tr> <td>carryover</td> <td>19 lb/a</td> <td>carryover</td> </tr> <tr> <td>Nitrogen</td> <td>21 lb/ac</td> <td>6-May</td> </tr> <tr> <td>P<sub>2</sub>O<sub>5</sub></td> <td>20 lb/ac</td> <td>6-May</td> </tr> <tr> <td>S</td> <td>2.8 lb/ac</td> <td>6-May</td> </tr> <tr> <td>Zn</td> <td>1 qt/ac</td> <td>6-May</td> </tr> <tr> <td>Nitrogen</td> <td>60 lb/ac</td> <td>24-Jun</td> </tr> <tr> <td>S</td> <td>11 lb/ac</td> <td>24-Jun</td> </tr> <tr> <td colspan="3"><b>Herbicides:</b></td> </tr> <tr> <td>Atrazine</td> <td>1.5 pt/ac</td> <td>24-Jun</td> </tr> <tr> <td>Glyphosate</td> <td>32 oz/ac</td> <td>24-Jun</td> </tr> <tr> <td>Sharpen</td> <td>2 oz/ac</td> <td>24-Jun</td> </tr> <tr> <td>Brawl</td> <td>1.3 pt/ac</td> <td>24-Jun</td> </tr> <tr> <td>Yukon</td> <td>4 oz/ac</td> <td>13-Jul</td> </tr> <tr> <td>Atrazine</td> <td>8 oz/ac</td> <td>13-Jul</td> </tr> <tr> <td>Brox</td> <td>8 oz/ac</td> <td>13-Jul</td> </tr> <tr> <td colspan="3"><b>Insecticides:</b></td> </tr> <tr> <td>Sivanto</td> <td>7 oz/ac</td> <td>8-Sep</td> </tr> </tbody> </table>		Rate	Date	<b>Fertilizer:</b>			carryover	19 lb/a	carryover	Nitrogen	21 lb/ac	6-May	P <sub>2</sub> O <sub>5</sub>	20 lb/ac	6-May	S	2.8 lb/ac	6-May	Zn	1 qt/ac	6-May	Nitrogen	60 lb/ac	24-Jun	S	11 lb/ac	24-Jun	<b>Herbicides:</b>			Atrazine	1.5 pt/ac	24-Jun	Glyphosate	32 oz/ac	24-Jun	Sharpen	2 oz/ac	24-Jun	Brawl	1.3 pt/ac	24-Jun	Yukon	4 oz/ac	13-Jul	Atrazine	8 oz/ac	13-Jul	Brox	8 oz/ac	13-Jul	<b>Insecticides:</b>			Sivanto	7 oz/ac	8-Sep	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">Average Temp. °F</th> <th style="text-align: center;">Precip. in.</th> <th style="text-align: center;">Irrigation in.</th> </tr> </thead> <tbody> <tr><td>January</td><td>35.8</td><td></td><td></td></tr> <tr><td>February</td><td>42.8</td><td></td><td></td></tr> <tr><td>March</td><td>49.3</td><td></td><td></td></tr> <tr><td>April</td><td>53.6</td><td></td><td></td></tr> <tr><td>May</td><td>59.9</td><td></td><td></td></tr> <tr><td>June</td><td>72.8</td><td>4.26</td><td></td></tr> <tr><td>July</td><td>78.5</td><td>0.48</td><td></td></tr> <tr><td>August</td><td>73.0</td><td>3.25</td><td></td></tr> <tr><td>September</td><td>67.0</td><td>2.05</td><td></td></tr> <tr><td>October</td><td>61.5</td><td>0.01</td><td></td></tr> <tr><td>November *</td><td>51.7</td><td>1.00</td><td></td></tr> <tr><td>December</td><td></td><td></td><td></td></tr> <tr><td colspan="4">* Nov. 1-22</td></tr> <tr><td colspan="2">Seasonal Precipitation:</td><td>11.1 in.</td><td></td></tr> <tr><td colspan="2">Date of Last Spring Frost:</td><td>3-May</td><td></td></tr> <tr><td colspan="2">Date of First Fall Frost:</td><td>6-Nov</td><td></td></tr> <tr><td colspan="2">Frost Free Period:</td><td>178 days</td><td></td></tr> </tbody> </table>		Average Temp. °F	Precip. in.	Irrigation in.	January	35.8			February	42.8			March	49.3			April	53.6			May	59.9			June	72.8	4.26		July	78.5	0.48		August	73.0	3.25		September	67.0	2.05		October	61.5	0.01		November *	51.7	1.00		December				* Nov. 1-22				Seasonal Precipitation:		11.1 in.		Date of Last Spring Frost:		3-May		Date of First Fall Frost:		6-Nov		Frost Free Period:		178 days	
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<b>Test Design:</b> Replications: 3 Plot Length: 20 ft. Rows per Plot: 2 Row Spacing: 30 in. Seeding Rate: 29000 seed/ac																																																																																																																																			



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Brand/Company Name	Hybrid/Variety Name	Grain Yield bu/a	Grain Yield lb/a	Moisture	Test Weight lb/bu	Plant Height in	Head Exertion in	Lodging %	Heading Date
				at Harvest %					
Pioneer	85P05	105.6 ***	5913 ***	18.0 *	54.8 *	20.4 *	3.0	8	26-Aug ***
Channel	6B60	105.2 *	5889 *	17.2 *	54.0	21.9 *	5.9 *	0	24-Aug *
Sorghum Partners	KS 585	103.9 *	5818 *	17.4 *	52.0	22.0 ***	2.5	0	21-Aug
Sorghum Part./Chromatin	SP34A19	103.5 *	5796 *	14.6	50.3	20.7 *	3.1	0	21-Aug
Dekalb	37-07	96.9 *	5426 *	16.9 *	52.7	17.2	4.8	0	26-Aug *
Dekalb	44-20	93.6 *	5243 *	15.6	57.3 ***	18.8	1.3	0	24-Aug *
CPS	M60GB31	91.9 *	5147 *	16.3 *	53.1	18.1	5.0 *	0	25-Aug *
Pioneer	85Y40	88.1 *	4935 *	17.8 ***	54.3 *	21.4 *	4.2	0	19-Aug
Warner	W 625-Y	87.5 *	4897 *	17.9 *	50.6	19.9 *	7.2 ***	0	18-Aug
Golden Acres	3960B	85.9 *	4807 *	16.7 *	52.0	13.1	3.3	0	26-Aug *
Sorghum Partners	SP 34A19	83.2	4659	17.9 *	46.6	17.3	3.0	0	22-Aug
Sorghum Part./Chromatin	SP31A15	83.0	4649	17.5 *	49.4	16.0	2.9	0	21-Aug
Sorghum Part./Chromatin	KS 310	82.7	4632	15.7	52.7	17.3	5.4 *	8	22-Aug
Frontier	279	77.5	4342	16.9 *	50.6	15.9	5.4 *	0	21-Aug
Hoegemeyer	671	77.1	4319	17.7 *	50.1	17.7	5.0 *	0	20-Aug
CPS	M60GB88	76.8	4298	16.4 *	52.7	16.0	3.5	0	23-Aug *
Golden Acres	H-390W	74.4	4167	17.5 *	47.6	20.0 *	3.7	1	19-Aug
Sorghum Part./Chromatin	K35-Y5	73.3	4105	15.9 *	52.4	14.3	6.2 *	0	21-Aug
Advanta	AG1201	72.9	4082	17.2 *	51.9	18.0	3.6	0	25-Aug *
Richardson	RS 215	72.3	4084	15.3	53.9	19.8 *	6.2 *	2	19-Aug
Hoegemeyer	6020	71.1	3979	14.6	54.4 *	14.5	5.1 *	1	18-Aug
Advanta	AG1101	70.1	3928	14.7	53.9	15.6	4.1	0	19-Aug
Frontier	305C	67.4	3773	15.4	47.9	17.2	3.3	2	24-Aug *
Pioneer	86P20	61.1	3425	17.5 *	51.4	13.9	2.4	0	23-Aug
Channel	5B90	59.2	3313	17.2 *	48.4	15.9	5.5 *	25 *	26-Aug *
Pioneer	87P06	56.3	3151	15.1	51.8	17.2	5.2 *	2	23-Aug
Richardson	Swift	47.2	2644	17.4 *	53.5	13.5	3.6	0	16-Aug
Warner	W 632-W	41.9	2348	18.0 *	40.5	21.9 *	2.9	25 *	23-Aug
Sorghum Part./Chromatin	CHR0L0163	36.5	2042	17.7 *	50.6	16.4	2.0	33 ***	22-Aug
	Trial Mean	77.5	4337	16.7	51.4	17.7	4.1	3.5	22-Aug
	LSD (P > 0.05)	20.0	1121.9	2.3	3.2	2.9	2.4	19.9	3.1
	CV	15.8	15.8	8.5	3.7	9.9	35.5	347.3	0.8
	F Test	<0.0001	<0.0001	0.0196	<0.0001	<0.0001	0.0004	0.0869	<0.0001

\*\*\* Highest numerical value in the column.

\* Not significantly different from the highest numerical value in the column based on the 5% LSD.