

**Table 12A. New Mexico 2017 Irrigated Forage Sorghum Performance Test - Agricultural Science Center at Clovis**

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

**Test Description**

Location:	Management Practices:	Growing Conditions:																																																																																																																					
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: 31-May Harvest Date: 13-Oct  <u>Production Inputs</u> <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>Nitrogen</td> <td>81 lb/ac</td> <td>carryover</td> </tr> <tr> <td>Nitrogen</td> <td>100 lb/ac</td> <td>at plant</td> </tr> <tr> <td>P<sub>2</sub>O<sub>5</sub></td> <td>35 lb/ac</td> <td>at plant</td> </tr> <tr> <td>S</td> <td>16 lb/ac</td> <td>at plant</td> </tr> <tr> <td>Zn</td> <td>1 qt/ac</td> <td>at plant</td> </tr> <tr> <td colspan="3"><b>Herbicides:</b></td> </tr> <tr> <td>Atrazine</td> <td>1.5 pt/ac</td> <td>at plant</td> </tr> <tr> <td>Huskie</td> <td>1 pt/ac</td> <td>5-Jul</td> </tr> <tr> <td>Brawl</td> <td>12 oz/ac</td> <td>5-Jul</td> </tr> <tr> <td>Atrazine</td> <td>8 oz/ac</td> <td>5-Jul</td> </tr> <tr> <td colspan="3"><b>Insecticides:</b></td> </tr> <tr> <td>Sivanto</td> <td>7 oz/ac</td> <td>30-Apr <del>26</del></td> </tr> <tr> <td>Sivanto</td> <td>7 oz/ac</td> <td>2-Oct</td> </tr> </tbody> </table>		Rate	Date	<b>Fertilizer:</b>			Nitrogen	81 lb/ac	carryover	Nitrogen	100 lb/ac	at plant	P <sub>2</sub> O <sub>5</sub>	35 lb/ac	at plant	S	16 lb/ac	at plant	Zn	1 qt/ac	at plant	<b>Herbicides:</b>			Atrazine	1.5 pt/ac	at plant	Huskie	1 pt/ac	5-Jul	Brawl	12 oz/ac	5-Jul	Atrazine	8 oz/ac	5-Jul	<b>Insecticides:</b>			Sivanto	7 oz/ac	30-Apr <del>26</del>	Sivanto	7 oz/ac	2-Oct	<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>36.5</td><td></td><td></td></tr> <tr><td>February</td><td>45.8</td><td></td><td></td></tr> <tr><td>March</td><td>51.7</td><td></td><td></td></tr> <tr><td>April</td><td>55.5</td><td></td><td></td></tr> <tr><td>May</td><td>61.4</td><td></td><td></td></tr> <tr><td>June</td><td>74.1</td><td>1.02</td><td>3.80</td></tr> <tr><td>July</td><td>77.0</td><td>2.18</td><td>3.60</td></tr> <tr><td>August</td><td>71.0</td><td>7.87</td><td>1.06</td></tr> <tr><td>September</td><td>67.0</td><td>4.13</td><td>1.00</td></tr> <tr><td>October 1-13</td><td>56.5</td><td>2.01</td><td>0.06</td></tr> <tr><td>November</td><td>50.0</td><td></td><td></td></tr> <tr><td>December</td><td>38.0</td><td></td><td></td></tr> <tr> <td>Seasonal Precipitation:</td> <td></td> <td>17.2 in.</td> <td></td> </tr> <tr> <td>Total Irrigation:</td> <td></td> <td>9.5 in.</td> <td></td> </tr> <tr> <td>Date of Last Spring Frost:</td> <td colspan="3">1-May</td> </tr> <tr> <td>Date of First Fall Frost:</td> <td colspan="3">10-Oct</td> </tr> <tr> <td>Frost Free Period:</td> <td colspan="3">162 days</td> </tr> </tbody> </table>		Average Temp. °F	Precip. in.	Irrigation in.	January	36.5			February	45.8			March	51.7			April	55.5			May	61.4			June	74.1	1.02	3.80	July	77.0	2.18	3.60	August	71.0	7.87	1.06	September	67.0	4.13	1.00	October 1-13	56.5	2.01	0.06	November	50.0			December	38.0			Seasonal Precipitation:		17.2 in.		Total Irrigation:		9.5 in.		Date of Last Spring Frost:	1-May			Date of First Fall Frost:	10-Oct			Frost Free Period:	162 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: 75000 seed/a																																																																																																																							

**Table 12B. New Mexico 2017 Irrigated Forage Sorghum Performance Test - Agricultural Science Center at Clovis**

**Results**

Brand/Company Name	Hybrid/Variety Name	Sorghum <sup>†</sup> Type	Maturity <sup>§</sup> Group	Brown Midrib	Moisture			CP	NDF	NDFD 48hr	Ash	TDN	NE <sub>i</sub> Mcal/lb	Milk/ Ton lb/t	Milk/ Acre lb/a
					Dry Forage t/a	Green Forage t/a	at Harvest %								
NuTech Seed, LLC	FS300	FS	ML	Conv	7.6	19.5	60.9	8.4	52.2	61.6	5.5	62.3	0.638	3085	23527
Dyna-Gro Seed	705F	FS	ME	Conv	7.4	19.2	61.5	8.4	49.5	62.1	6.1	61.5	0.629	3017	22367
Dyna-Gro Seed	F74FS23 BMR	FS	M	BMR	6.8	21.2	68.1	8.4	51.2	68.8	6.5	62.7	0.643	2965	20102
NuTech Seed, LLC	FSB310	FS	ML	BMR	6.6	23.6	71.7	9.7	48.7	68.6	6.9	64.4	0.662	2972	19711
Blue River Hybrids	Seahawk	SxS	ML	BMR	6.5	16.8	61.4	7.6	54.8	60.0	5.5	60.5	0.618	3119	20248
NuTech Seed, LLC	PrimeCut	SxS	PS	Conv	6.4	31.1	79.4	7.9	59.3	62.5	6.7	57.1	0.580	3240	20724
Alta Seeds	AF7401	FS	L	BMR	6.3	23.2	73.0	9.1	47.3	71.3	6.8	66.2	0.681	2973	18532
Alta Seeds	XF7302	FS	M	BMR	6.2	20.9	70.0	9.0	52.9	70.1	7.4	64.6	0.664	3050	18915
Blue River Hybrids	Nighthawk	SxS	L	BMR	5.9	19.4	69.4	9.2	52.9	68.5	7.0	63.4	0.650	2936	17319
Blue River Hybrids	Blackhawk	SxS	ML	BMR	5.7	17.6	67.3	7.9	55.5	64.3	5.7	61.8	0.633	2982	17109
Alta Seeds	XF7303	FS	M	BMR	5.5	16.2	65.9	8.6	51.9	67.8	7.2	64.4	0.661	3067	16771
Dyna-Gro Seed	F76FS77 BMR	FS	ML	BMR	5.3	18.0	70.8	8.2	52.1	71.9	6.9	65.2	0.670	2976	15570
Blue River Hybrids	Pelican	SxS	ML	BMR	5.3	13.9	61.7	8.8	51.1	66.2	6.3	62.6	0.642	2847	15148
Dyna-Gro Seed	Fullgraze BMR	SxS	M	BMR	5.3	22.4	76.4	8.3	53.4	69.8	5.9	60.4	0.617	3069	16162
Dyna-Gro Seed	Dual Forage SCA	GS	ML	Conv	4.0	8.0	49.6	8.2	46.7	64.7	5.6	65.7	0.676	2870	11483
Alta Seeds	XF7103	FS	E	BMR	3.2	7.9	57.8	8.7	42.3	68.5	5.7	66.3	0.682	3044	9657
	Trial Mean				5.9	18.7	66.6	8.5	51.4	66.7	6.4	63.1	0.647	3013	14211
	LSD				1.5	5.0	4.8	1.0	5.0	4.6	1.3	2.5	0.027	192	3736
	LSD P >				0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	CV				15.7	16.2	4.3	7.2	5.9	4.1	11.9	2.3	2.5	3.8	15.8
	F Test				0.0002	<.0001	27.0001	0.0263	<.0001	<.0001	0.0250	<.0001	<.0001	<.0001	0.0735

<sup>†</sup> Sorghum Type: FS = Forage Sorghum, BD = Brachytic Dwarf, SxS = Sorghum-Sudangrass Hybrid, GS = Grain Sorghum

<sup>§</sup> Maturity Group: E = Early, M = Medium, L = Late, PS = Photoperiod Sensitive

Brown Midrib Trait: BMR = Brown Midrib, Conv = Conventional