

Table 13A. New Mexico 2017 Dryland 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: 20-Jun Harvest Date: 25-Oct <hr/> Production Inputs <hr/> <table 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">Fertilizer:</td> </tr> <tr> <td>Nitrogen</td> <td>46 lb/a</td> <td>carryover</td> </tr> <tr> <td>Nitrogen</td> <td>30 lb/ac</td> <td>18-Apr</td> </tr> <tr> <td>P₂O₅</td> <td>20 lb/ac</td> <td>18-Apr</td> </tr> <tr> <td>S</td> <td>4.4 lb/ac</td> <td>18-Apr</td> </tr> <tr> <td>Zn</td> <td>1 qt/ac</td> <td>18-Apr</td> </tr> <tr> <td>Nitrogen</td> <td>45 lb/ac</td> <td>at plant</td> </tr> <tr> <td>S</td> <td>8 lb/ac</td> <td>at plant</td> </tr> <tr> <td colspan="3">Herbicides:</td> </tr> <tr> <td>Glyphosate</td> <td>48 oz/ac</td> <td>30-Apr</td> </tr> <tr> <td>Detonate</td> <td>8 oz/ac</td> <td>30-Apr</td> </tr> <tr> <td>Sharpen</td> <td>1.5 oz/ac</td> <td>19-Jun</td> </tr> <tr> <td>Atrazine</td> <td>1.5 pt/ac</td> <td>19-Jun</td> </tr> <tr> <td>Glyphosate</td> <td>48 oz/ac</td> <td>19-Jun</td> </tr> <tr> <td colspan="3">Insecticides:</td> </tr> <tr> <td>Sivanto</td> <td>7 oz/ac</td> <td>30-Aug</td> </tr> <tr> <td>Dimilin</td> <td>2 oz/ac</td> <td>at plant</td> </tr> </tbody> </table>		Rate	Date	Fertilizer:			Nitrogen	46 lb/a	carryover	Nitrogen	30 lb/ac	18-Apr	P ₂ O ₅	20 lb/ac	18-Apr	S	4.4 lb/ac	18-Apr	Zn	1 qt/ac	18-Apr	Nitrogen	45 lb/ac	at plant	S	8 lb/ac	at plant	Herbicides:			Glyphosate	48 oz/ac	30-Apr	Detonate	8 oz/ac	30-Apr	Sharpen	1.5 oz/ac	19-Jun	Atrazine	1.5 pt/ac	19-Jun	Glyphosate	48 oz/ac	19-Jun	Insecticides:			Sivanto	7 oz/ac	30-Aug	Dimilin	2 oz/ac	at plant	<hr/> <table 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 style="text-align: center;">36.5</td><td></td><td></td></tr> <tr><td>February</td><td style="text-align: center;">45.8</td><td></td><td></td></tr> <tr><td>March</td><td style="text-align: center;">51.7</td><td></td><td></td></tr> <tr><td>April</td><td style="text-align: center;">55.5</td><td></td><td></td></tr> <tr><td>May</td><td style="text-align: center;">61.4</td><td></td><td></td></tr> <tr><td>June 20-30</td><td style="text-align: center;">74.1</td><td style="text-align: center;">0.74</td><td style="text-align: center;">1.0</td></tr> <tr><td>July</td><td style="text-align: center;">77.0</td><td style="text-align: center;">2.18</td><td></td></tr> <tr><td>August</td><td style="text-align: center;">71.0</td><td style="text-align: center;">7.87</td><td></td></tr> <tr><td>September</td><td style="text-align: center;">67.0</td><td style="text-align: center;">4.13</td><td></td></tr> <tr><td>October 1-25</td><td style="text-align: center;">56.5</td><td style="text-align: center;">2.04</td><td></td></tr> <tr><td>November</td><td style="text-align: center;">50.0</td><td></td><td></td></tr> <tr><td>December</td><td style="text-align: center;">38.0</td><td></td><td></td></tr> <tr><td colspan="4"><hr/></td></tr> <tr> <td style="text-align: right;">Seasonal Precipitation:</td> <td></td> <td style="text-align: center;">17.0 in.</td> <td></td> </tr> <tr> <td style="text-align: right;">Total Irrigation:</td> <td></td> <td style="text-align: center;">1.0 in.</td> <td></td> </tr> <tr><td colspan="4"><hr/></td></tr> <tr> <td style="text-align: right;">Date of Last Spring Frost:</td> <td></td> <td colspan="2" style="text-align: center;">1-May</td> </tr> <tr> <td style="text-align: right;">Date of First Fall Frost:</td> <td></td> <td colspan="2" style="text-align: center;">10-Oct</td> </tr> <tr> <td style="text-align: right;">Frost Free Period:</td> <td></td> <td colspan="2" style="text-align: center;">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 20-30	74.1	0.74	1.0	July	77.0	2.18		August	71.0	7.87		September	67.0	4.13		October 1-25	56.5	2.04		November	50.0			December	38.0			<hr/>				Seasonal Precipitation:		17.0 in.		Total Irrigation:		1.0 in.		<hr/>				Date of Last Spring Frost:		1-May		Date of First Fall Frost:		10-Oct		Frost Free Period:		162 days	
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Test Design: Replications: 3 Plot Length: 20 ft. Rows per Plot: 2 Row Spacing: 30 in. Seeding Rate: 50000 seed/a																																																																																																																																								

Table 13B. New Mexico 2017 Dryland Forage Sorghum Performance Test - Agricultural Science Center at Clovis

Results

Brand/Company Name	Hybrid/Variety Name	Sorghum [†] Type	Maturity [§] Group	Brown Midrib	Moisture			CP	NDFD			TDN	NE _i Mcal/lb	Milk/Ton lb/t	Milk/Acre lb/a
					Dry Forage t/a	Green Forage t/a	at Harvest %		NDF %	48hr %	Ash %				
Dyna-Gro Seed	705F	FS	ME	Conv	5.8	18.6	68.6	8.4	49.5	62.1	6.1	61.5	0.629	2864	16774
NuTech Seed, LLC	FS300	FS	ML	Conv	5.6	17.5	68.1	8.4	52.2	61.6	5.5	62.3	0.638	2916	16344
NuTech Seed, LLC	PrimeCut	SxS	PS	Conv	5.6	23.1	75.8	7.9	59.3	62.5	6.7	57.1	0.580	2549	14180
Dyna-Gro Seed	F74FS23 BMR	FS	M	BMR	5.3	18.2	71.1	8.4	51.2	68.8	6.5	62.7	0.642	3005	16017
Alta Seeds	AF7401	FS	L	BMR	5.2	17.8	70.5	9.1	47.3	71.3	6.8	66.2	0.681	3270	17160
Blue River Hybrids	Blackhawk	SxS	ML	BMR	5.0	15.9	68.7	7.9	55.5	64.4	5.7	61.8	0.633	2906	14489
Blue River Hybrids	Seahawk	SxS	ML	BMR	4.9	12.6	61.0	7.6	54.8	60.0	5.5	60.5	0.618	2775	13617
NuTech Seed, LLC	FSB310	FS	ML	BMR	4.8	16.8	71.4	9.7	48.7	68.6	6.9	64.4	0.662	3126	14924
Alta Seeds	XF7103	FS	E	BMR	4.6	11.0	58.4	8.7	42.3	68.5	5.7	66.3	0.682	3256	14982
Dyna-Gro Seed	F76FS77 BMR	FS	ML	BMR	4.5	16.3	72.1	8.2	52.1	71.9	6.9	65.2	0.670	3207	14568
Alta Seeds	XF7302	FS	M	BMR	4.3	15.7	72.6	9.0	52.9	70.1	7.4	64.6	0.664	3153	13501
Dyna-Gro Seed	Fullgraze BMR	SxS	M	BMR	4.1	15.5	73.1	8.3	53.4	69.8	5.9	60.4	0.617	2848	11786
Blue River Hybrids	Pelican	SxS	ML	BMR	4.1	11.9	64.9	8.8	51.1	66.2	6.3	62.6	0.642	2978	12303
Blue River Hybrids	Nighthawk	SxS	L	BMR	4.0	12.5	68.2	9.2	52.9	68.5	7.0	63.4	0.650	3049	12140
Dyna-Gro Seed	Dual Forage SCA	GS	ML	Conv	3.9	10.2	60.3	8.2	46.7	64.7	5.6	65.7	0.676	3186	12596
Alta Seeds	XF7303	FS	M	BMR	3.8	13.4	71.2	8.6	51.9	67.8	7.2	64.4	0.661	3117	12009
	Trial Mean				4.7	15.4	68.5	8.5	51.4	66.7	6.4	63.1	0.646	3013	14212
	LSD				1.1	3.5	3.1	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				13.8	13.5	2.7	7.2	5.9	4.1	11.9	2.3	2.5	3.8	15.8
	F Test				0.0056	<.0001	<.0001	0.0263	<.0001	<.0001	0.0250	<.0001	<.0001	<.0001	0.0735

[†] Sorghum Type: FS = Forage Sorghum, BD = Brachytic Dwarf, SxS = Sorghum-Sudangrass Hybrid, HPM = Hybrid Pearl Millet, GS = Grain Sorghum

[§]Maturity Group: E = Early, M = Medium, L = Late, PS = Photoperiod Sensitive

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