

New Mexico 2016 Corn and Sorghum Performance Tests



College of Agricultural, Consumer and Environmental Sciences
Agricultural Experiment Station | Cooperative Extension Service

**New Mexico
2016
Corn and Sorghum Performance Tests**

New Mexico State University
Agricultural Science Centers
at
Artesia, Clovis, Farmington, Los Lunas, and Tucumcari

Department of Extension Plant Sciences

and

Department of Plant and Environmental Sciences

Agricultural Experiment Station/Cooperative Extension Service
College of Agricultural, Consumer and Environmental Sciences
New Mexico State University

Authors:

M.A. Marsalis¹, R.P. Flynn², L.M. Lauriault³, A. Mesbah⁴, and M.K. O'Neill⁵

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¹ Superintendent and Extension Forage Specialist, Agricultural Science Center at Los Lunas

² Associate Professor and Extension Agronomist, Agricultural Science Center at Artesia

³ Superintendent and Forage Crop Management Scientist, Agricultural Science Center at Tucumcari

⁴ Superintendent and Agronomist, Agricultural Science Center at Clovis

⁵ Professor of Agronomy, Agricultural Science Center at Farmington

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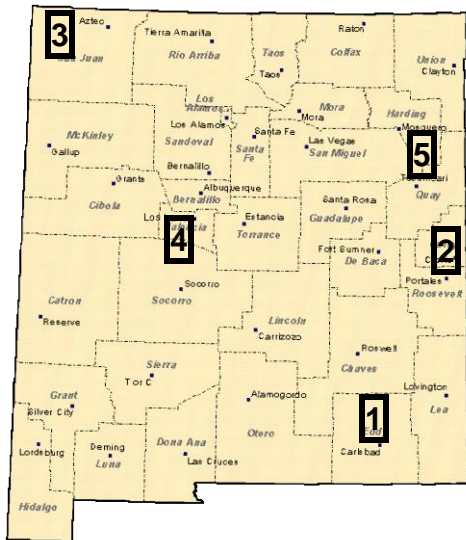
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INTRODUCTION

Performance tests for grain corn, grain sorghum, forage corn, forage sorghum and sorghum sudangrass were conducted at the Agricultural Science Centers at Artesia, Clovis, Farmington, Los Lunas, and Tucumcari New Mexico in 2016 (Figure 1). This report contains information from all Agricultural Science Center corn and sorghum tests; however, it is possible that not all locations contain every test listed above.

The New Mexico corn and sorghum performance testing program is part of an ongoing program to provide farmers, Extension workers and seed industry personnel with reliable, unbiased, information that will allow a valid comparison of corn and sorghum varieties/hybrids at various locations throughout the state. The state of New Mexico encompasses eight climate zones, all of which have some form of agricultural production (Figure 2). Variability in climate, soils, water and local production practices contribute to the need for crop performance tests throughout the state. Climate data for the Agricultural Science Center testing locations are shown in Table 1. Growers who use this report to make cropping decisions should rely primarily on results from tests near their location or in comparable climate zones.

Figure 1. Corn and sorghum testing locations.



1. Agricultural Science Center at Artesia
2. Agricultural Science Center at Clovis
3. Agricultural Science Center at Farmington
4. Agricultural Science Center at Los Lunas
5. Agricultural Science Center at Tucumcari

Figure 2. Climate zones in New Mexico.

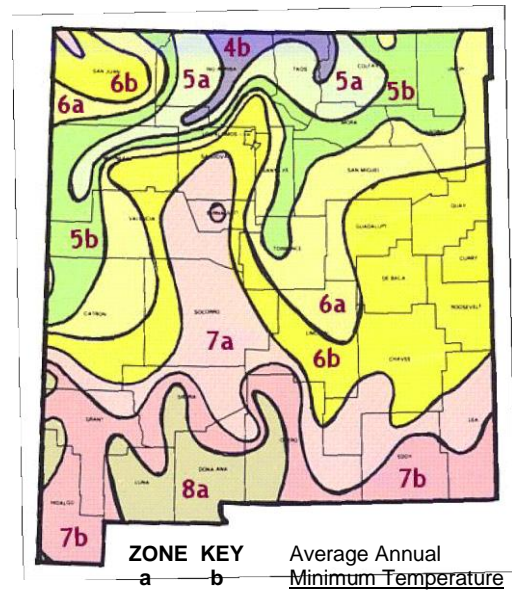


Table 1. Historical average monthly precipitation (inches) and temperatures (°F) for cooperating agricultural science centers.					
	Artesia	Clovis	Farmington	Los Lunas	Tucumcari
Precipitation (inches)					
January	0.39	0.35	0.53	0.36	0.37
February	0.42	0.38	0.56	0.41	0.47
March	0.43	0.72	0.71	0.50	0.75
April	0.62	0.81	0.63	0.46	1.10
May	1.20	1.93	0.55	0.46	1.97
June	1.40	2.39	0.20	0.61	1.87
July	1.76	2.75	0.87	1.25	2.62
August	1.67	3.03	1.06	1.70	2.70
September	1.81	1.84	1.02	1.17	1.53
October	1.16	1.66	0.92	1.04	1.28
November	0.53	0.52	0.72	0.46	0.66
December	0.51	0.50	0.48	0.52	0.57
Total	11.88	16.87	8.25	8.93	15.90
Average Temperature (°F)					
January	40.4	37.9	31.4	34.6	38.4
February	45.0	41.4	36.0	40.0	42.0
March	52.0	47.9	43.7	47.0	49.1
April	60.4	56.2	51.1	54.7	57.6
May	69.4	64.8	60.3	63.3	66.2
June	77.7	73.6	70.1	72.3	75.7
July	79.8	76.5	75.6	76.8	79.0
August	78.4	74.8	73.2	74.8	77.4
September	71.4	68.5	65.8	67.3	70.6
October	60.8	58.3	53.7	55.9	59.5
November	48.9	46.3	40.8	43.5	47.5
December	40.7	38.9	31.3	35.0	39.1
Average	60.4	57.1	52.7	55.4	58.5
Source: Western Region Climate Center: http://www.wrcc.dri.edu/summary/climsnm.html					

TEST LOCATIONS

The New Mexico corn and sorghum performance testing program is supported by paid fees from the cooperating companies. Personnel at each location determine which tests will be conducted at their site and seed companies are invited to participate in those tests. Because seed company participation in individual tests and locations is voluntary, many of the hybrids/varieties that are grown in the state are not included in the tests, and different groups of hybrids/varieties are evaluated at the different locations.

A list of seed companies that participated in the 2016 fee-test program and relevant contact information are presented in Appendix A*. Additional company names and contacts may be added to the list of prospective companies by contacting the Agricultural Science Center at Los Lunas, 1036 Miller Rd, Los Lunas, NM 87031, (505) 865-7340, <http://loslunassc.nmsu.edu/>. Entry forms for the 2017 Corn and Sorghum Performance Tests will be mailed to seed companies in February 2017. Additional 2017 entry forms can be obtained from the address above.

***Due to an area-wide irrigation system breakage and subsequent water allocation shortfall, the Farmington location was not able to plant corn entries into this testing program for 2016. The Farmington ASC will resume corn variety testing in 2017.**

TEST PROCEDURES

In an effort to provide readers with easily accessible information, procedural data for individual tests are presented in the 'Test Description' tables that immediately precede the summary tables of results for the tests. The 'Test Description' tables contain information on location, test design, management practices and growing conditions. Test description tables are designated with an 'A' suffix.

All of the Agricultural Science Center performance tests were replicated randomized complete block designs (RBD). Where appropriate, statistical analyses were used to calculate measures of least significant difference (LSD), coefficient of variation (CV) and F test values. All LSD's are reported at the 95% probability level. If the F test value is greater than 0.05 the LSD is not used. When the F test value is less than 0.05, it is appropriate to use the LSD value as a measure of the magnitude by which one entry must differ from another to be considered significantly different. The CV is a measure of variability relative to the mean. A CV below 10 generally indicates reliable data or methodology. CV's of 10 to 20 are indicators of normal variability for grain and forage tests.

Yields for the grain tests are presented on a bushel-per-acre or pound-per-acre basis, adjusted to a standard moisture content and bushel weight. Corn yields are calculated at a standard moisture of 15.5% and a bushel weight of 56 lb. Grain sorghum yields are calculated at a standard moisture of 14% and a bushel weight of 56 lb.

Dry and green (fresh) forage yields reported for the forage tests are in tons per acre. Moisture at harvest was calculated from a representative sample (approximately 1 lb.) from harvested plots. Samples from variety tests at the Agricultural Science Centers were dried in a forced air oven (150°F) for determination of moisture content. Moisture

content determinations at Farmington were derived from air-dried samples. Sub-samples of the dried material from all locations were submitted to an NFTA-certified forage testing laboratory for nutrient composition analysis using near infrared reflectance spectroscopy (NIRS). For these trials, milk production estimates were calculated using the University of Wisconsin Milk2000 and Milk2006 spreadsheet programs.

RESULTS

Results for the 2016 corn and sorghum variety tests are shown in Tables 2-13 below. Test procedures for each test are presented in tables designated with an 'A' at each location. Results are presented in tables designated with 'B' or 'C' suffixes. Within tables, hybrids and varieties are ranked according to grain yield or total dry forage yield. A glossary of terms used in the tables is presented in Appendix B.

***Due to an area-wide irrigation system breakage and subsequent water allocation shortfall, the Farmington location was not able to plant corn entries into this testing program for 2016. The Farmington ASC will resume corn variety testing in 2017.**

The multi-cut forage sorghum/sorghum x sudangrass tests at both Artesia and Tucumcari were harvested only once. At Artesia, the field was exceptionally wet at the first scheduled harvest and plants were in poor condition. At Tucumcari, the irrigation system was not functional until late in the season and only one harvest was possible.

Table 2A. New Mexico 2016 Irrigated Grain Corn Performance Test - Agricultural Science Center at Tucumcari

Investigators: L.M. Lauriault, A. Cunningham, J. Box, P.L. Cooksey, S. Jennings, J. Jennings, and A. Williams

Test Description



Location:	Management Practices:	Growing Conditions:																																																																			
County/Area: Quay Longitude: -103.68 Latitude: 35.20 Elevation: 4086 ft. Soil Name: Canez Soil Texture: Fine sandy loam Soil Depth: >60 in.	Previous Crop: Fallow Planting Date: 3-Jun Harvest Dates: 7-Dec <hr/> Production Inputs <hr/> <table border="1"> <thead> <tr> <th></th> <th>Rate</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td colspan="3">Fertilizer:</td> </tr> <tr> <td>Nitrogen</td> <td>278 lb/a</td> <td>13-Aug</td> </tr> <tr> <td>P2O5</td> <td>0 lb/a</td> <td></td> </tr> </tbody> </table> Pesticides (herbicides and insecticides): <table border="1"> <tbody> <tr> <td>Brawl</td> <td>1 pt/a</td> <td>28-May</td> </tr> </tbody> </table>		Rate	Date	Fertilizer:			Nitrogen	278 lb/a	13-Aug	P2O5	0 lb/a		Brawl	1 pt/a	28-May	<hr/> <table border="1"> <thead> <tr> <th></th> <th>Average Temp. °F</th> <th>Precip. in.</th> <th>Irrigation in.</th> </tr> </thead> <tbody> <tr><td>January</td><td>38</td><td>0.01</td><td>0.00</td></tr> <tr><td>February</td><td>47</td><td>0.94</td><td>0.50</td></tr> <tr><td>March</td><td>53</td><td>0.08</td><td>2.50</td></tr> <tr><td>April</td><td>57</td><td>0.67</td><td>1.50</td></tr> <tr><td>May</td><td>66</td><td>1.30</td><td>2.00</td></tr> <tr><td>June</td><td>78</td><td>3.28</td><td>3.48</td></tr> <tr><td>July</td><td>84</td><td>1.11</td><td>4.74</td></tr> <tr><td>August</td><td>77</td><td>2.33</td><td>6.50</td></tr> <tr><td>September</td><td>73</td><td>0.41</td><td>5.00</td></tr> <tr><td>October</td><td>66</td><td>0.00</td><td>7.00</td></tr> <tr><td>November</td><td>52</td><td>1.39</td><td></td></tr> <tr><td>December</td><td>39</td><td>0.37</td><td></td></tr> </tbody> </table> Seasonal Precipitation  10.2 in. Total Irrigation  28.7 in. Date of Last Spring Frost: 18-Apr Date of First Fall Frost: 12-Nov Frost Free Period: 208 days		Average Temp. °F	Precip. in.	Irrigation in.	January	38	0.01	0.00	February	47	0.94	0.50	March	53	0.08	2.50	April	57	0.67	1.50	May	66	1.30	2.00	June	78	3.28	3.48	July	84	1.11	4.74	August	77	2.33	6.50	September	73	0.41	5.00	October	66	0.00	7.00	November	52	1.39		December	39	0.37	
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Table 2B. New Mexico 2016 Irrigated Grain Corn Performance Test - Agricultural Science Center at Tucumcari

Brand/Company Name	Hybrid/Variety Name	Relative Maturity days	Plant Population plants/ac	Moisture %	Yield lb/A	Yield bu/A	Test Weight lb/bu
Rob See Co.	IC6698-3111	118	13504	10.8	1503	26.8	50.0
CPS Dyna-Gro Seed	D39SS17	99	14593	11.4	1236	22.1	56.9
Rob See Co.	RC4310-3000	93	20909	11.5	1232	22.0	54.1
Mycogen Seeds	MY02J51	102	10019	10.9	1224	21.9	46.0
Rob See Co.	IC4173-3110A	91	22651	11.2	1149	20.5	42.5
DuPont Pioneer	P1751AM	118	21345	10.9	1027	18.3	51.9
DuPont Pioneer	P9697AM	96	13286	11.8	797	14.2	43.8
DuPont Pioneer	P1151AM	111	15682	11.1	797	14.2	48.6
Rob See Co.	IC5736-3111A	109	16771	10.1	734	13.1	59.6
Mycogen Seeds	MYRD848	117	16771	10.8	723	12.9	44.2
Rob See Co.	RC4343-3110A	93	15900	12.7	673	12.0	52.4
DuPont Pioneer	P0801AM	108	16771	11.3	658	11.8	48.5
DuPont Pioneer	P0339AM	103	20909	10.9	651	11.6	46.5
Mycogen Seeds	MY98G34	98	17642	11.4	618	11.0	45.1
CPS Dyna-Gro Seed	D46SS46	106	20038	11.2	586	10.5	40.2
CPS Dyna-Gro Seed	D42SS42	102	15682	11.1	472	8.4	50.9
Mycogen Seeds	MY12G38	112	10019	11.0	353	6.3	48.8
DuPont Pioneer	P1311AM	113	10890	11.0	203	3.6	40.8
	Trial Mean		16117	11.2	803	14.5	48.5
	LSD		NS	NS	NS	NS	NS
	LSD P >		0.05	0.05	0.05	0.05	0.05
	CV		21.8	5.7	54.2	54.2	14.5
	F Test		0.0627	0.3107	0.3191	0.3191	0.3736

Table 3A. New Mexico 2016 Dryland Grain Sorghum Performance Test - Agricultural Science Center at Clovis

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

Test Description

<p>Location:</p> <p>County/Area: Curry Longitude: -103.22 Latitude: 34.60 Elevation: 4435 ft. Soil Name: Olton Soil Texture: clay loam Soil Depth: >60 in.</p> <p>Test Design:</p> <p>Replications: 3 Plot Length: 20 ft. Rows per Plot: 2 Row Spacing: 30 in. Seeding Rate: 29000 seed/ac</p>	<p>Management Practices:</p> <p>Previous Crop: fallow Planting Date: 21-Jun Harvest Date: 22-Nov</p> <p>Production Inputs</p> <table border="1"> <thead> <tr> <th></th> <th>Rate</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td colspan="3">Fertilizer:</td> </tr> <tr> <td>Nitrogen</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>P₂O₅</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">Herbicides:</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">Insecticides:</td> </tr> <tr> <td>Sivanto</td> <td>7 oz/ac</td> <td>8-Sep</td> </tr> </tbody> </table>		Rate	Date	Fertilizer:			Nitrogen	19 lb/a	carryover	Nitrogen	21 lb/ac	6-May	P ₂ O ₅	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	Herbicides:			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	Insecticides:			Sivanto	7 oz/ac	8-Sep	<p>Growing Conditions:</p> <table border="1"> <thead> <tr> <th></th> <th>Average Temp. °F</th> <th>Precip. in.</th> <th>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 colspan="2">11.1 in.</td></tr> <tr><td colspan="2">Date of Last Spring Frost:</td><td colspan="2">3-May</td></tr> <tr><td colspan="2">Date of First Fall Frost:</td><td colspan="2">6-Nov</td></tr> <tr><td colspan="2">Frost Free Period:</td><td colspan="2">187 days</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:		187 days	
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Table 3B. New Mexico 2016 Dryland Grain Sorghum Performance Test - Agricultural Science Center at Clovis

Brand/Company Name	Hybrid/Variety Name	Grain Yield bu/a	Grain Yield lb/a	Moisture at Harvest %	Test Weight lb/bu	Plant Height in	Head Exertion in	Lodging %	Heading Date
Dupont 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 Part./Chromatin	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 Dyna-Gro Seed	M60GB31	91.9	5147	16.3	53.1	18.1	5.0	0	25-Aug
Dupont Pioneer	85Y40	88.1	4935	17.8	54.3	21.4	4.2	0	19-Aug
Warner Seeds, Inc.	W 625-Y	87.5	4897	17.9	50.6	19.9	7.2	0	18-Aug
Golden Acres Genetics	3960B	85.9	4807	16.7	52.0	13.1	3.3	0	26-Aug
Sorghum Part./Chromatin	SP31A15	83.0	4649	17.5	49.4	16.0	2.9	0	21-Aug
Frontier Hybrids	279	77.5	4342	16.9	50.6	15.9	5.4	0	21-Aug
Hoegemeyer Hybrids	671	77.1	4319	17.7	50.1	17.7	5.0	0	20-Aug
CPS Dyna-Gro Seed	M60GB88	76.8	4298	16.4	52.7	16.0	3.5	0	23-Aug
Golden Acres Genetics	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 Seeds	AG1201	72.9	4082	17.2	51.9	18.0	3.6	0	25-Aug
Richardson Seeds	RS 215	72.3	4084	15.3	53.9	19.8	6.2	2	19-Aug
Hoegemeyer Hybrids	6020	71.1	3979	14.6	54.4	14.5	5.1	1	18-Aug
Advanta Seeds	AG1101	70.1	3928	14.7	53.9	15.6	4.1	0	19-Aug
Frontier Hybrids	305C	67.4	3773	15.4	47.9	17.2	3.3	2	24-Aug
Dupont 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
Dupont Pioneer	87P06	56.3	3151	15.1	51.8	17.2	5.2	2	23-Aug
Richardson Seeds	Swift	47.2	2644	17.4	53.5	13.5	3.6	0	16-Aug
Warner Seeds, Inc.	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	20.0	1122	2.3	3.2	2.9	2.4	NS	3.1
	LSD P>	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	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

Table 4A. New Mexico 2016 Irrigated Grain Sorghum Performance Test - Agricultural Science Center at Tucumcari

Investigators: L.M. Lauriault, A. Cunningham, J. Box, P.L. Cooksey, S. Jennings, J. Jennings, and A. Williams

Test Description



Location:	Management Practices:	Growing Conditions:																																																																								
<p>County/Area: Quay Longitude: -103.68 Latitude: 35.20 Elevation: 4086 ft. Soil Name: Redona Soil Texture: Fine sandy loam Soil Depth: >60 in.</p>	<p>Previous Crop: Fallow Planting Date: 3-Jun Harvest Dates: 21-Dec</p> <hr/> <p>Production Inputs</p> <table border="1"> <thead> <tr> <th></th> <th>Rate</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td colspan="3">Fertilizer:</td> </tr> <tr> <td>Nitrogen</td> <td>278 lb/a</td> <td>13-Aug</td> </tr> <tr> <td>P2O5</td> <td>0 lb/a</td> <td></td> </tr> </tbody> </table>		Rate	Date	Fertilizer:			Nitrogen	278 lb/a	13-Aug	P2O5	0 lb/a		<table border="1"> <thead> <tr> <th></th> <th colspan="3">Average</th> </tr> <tr> <th></th> <th>Temp.</th> <th>Precip.</th> <th>Irrigation</th> </tr> <tr> <th></th> <th>°F</th> <th>in.</th> <th>in.</th> </tr> </thead> <tbody> <tr><td>January</td><td>38</td><td>0.01</td><td>0.00</td></tr> <tr><td>February</td><td>47</td><td>0.94</td><td>0.50</td></tr> <tr><td>March</td><td>53</td><td>0.08</td><td>2.50</td></tr> <tr><td>April</td><td>57</td><td>0.67</td><td>1.50</td></tr> <tr><td>May</td><td>66</td><td>1.30</td><td>2.00</td></tr> <tr><td>June</td><td>78</td><td>3.28</td><td>3.48</td></tr> <tr><td>July</td><td>84</td><td>1.11</td><td>4.74</td></tr> <tr><td>August</td><td>77</td><td>2.33</td><td>6.50</td></tr> <tr><td>September</td><td>73</td><td>0.41</td><td>5.00</td></tr> <tr><td>October</td><td>66</td><td>0.00</td><td>7.00</td></tr> <tr><td>November</td><td>52</td><td>1.39</td><td></td></tr> <tr><td>December</td><td>39</td><td>0.37</td><td></td></tr> </tbody> </table>		Average				Temp.	Precip.	Irrigation		°F	in.	in.	January	38	0.01	0.00	February	47	0.94	0.50	March	53	0.08	2.50	April	57	0.67	1.50	May	66	1.30	2.00	June	78	3.28	3.48	July	84	1.11	4.74	August	77	2.33	6.50	September	73	0.41	5.00	October	66	0.00	7.00	November	52	1.39		December	39	0.37	
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<p>Test Design:</p> <p>Replications: 3 Plot Length: 20 ft. Rows per Plot: 2 Row Spacing: 30 in.</p> <p>Seeding Rate: 60,000 seeds/ac</p>	<p>Pesticides (herbicides and insecticides):</p> <table border="1"> <tbody> <tr> <td>Brawl</td> <td>1 pt/a</td> <td>28-May</td> </tr> </tbody> </table>	Brawl	1 pt/a	28-May	<p>Seasonal Precipitation  10.2 in. Total Irrigation  28.7 in.</p> <p>Date of Last Spring Frost: 18-Apr Date of First Fall Frost: 12-Nov Frost Free Period: 208 days</p>																																																																					
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Table 4B. New Mexico 2016 Irrigated Grain Sorghum Performance Test - Agricultural Science Center at Tucumcari

Brand/Company Name	Hybrid/Variety Name	Maturity Class	Head	Combine Run	Moisture	Yield	Yield	Test
			Fill	Cleanness				Weight
			%	%	%	lb/A	bu/A	lb/bu
Sorghum Part./Chromatin	CH13GS0070		95.0	95.9	11.2	7847	140.1	61.2
Gayland Ward Seed	EXP9098		86.7	94.5	11.2	6473	115.6	60.3
Gayland Ward Seed	EXP9125		95.0	93.6	11.2	6385	114.0	61.0
Gayland Ward Seed	EXP9131		95.0	92.8	11.0	6375	113.8	61.2
Gayland Ward Seed	EXP9135		91.7	94.5	11.1	5701	101.8	60.7
Gayland Ward Seed	EXP9108		96.7	95.7	11.4	5419	96.8	60.5
Gayland Ward Seed	EXP9134		81.7	94.2	11.1	4678	83.5	60.3
Sorghum Part./Chromatin	KS585	M	61.7	93.5	11.1	4598	82.1	60.8
Gayland Ward Seed	EXP9097		75.0	94.8	11.3	4488	80.1	59.3
Sorghum Part./Chromatin	CH13GS0072	ML	90.0	95.2	11.2	4291	76.6	60.2
Gayland Ward Seed	GW9417	M	95.0	95.5	11.2	4152	74.1	59.5
Gayland Ward Seed	EXP9139		92.7	95.2	11.2	3991	71.3	60.8
Gayland Ward Seed	EXP9138		81.7	92.3	11.0	3474	62.0	60.7
Sorghum Part./Chromatin	SP34A19	ME	70.0	92.6	11.4	2706	48.3	59.7
Sorghum Part./Chromatin	NK5418	M	93.3	89.9	11.4	2675	47.8	59.2
Trial Mean			86.7	94.0	11.2	4883	87.2	60.4
LSD			NS	2.3	NS	1772	31.6	1.0
LSD P >			0.05	0.05	0.05	0.05	0.05	0.05
CV			17.6	1.5	1.5	21.7	21.7	1.0
F Test			0.1910	0.0009	0.1191	0.0001	0.0001	0.0029

Combine run cleanness, when subtracted from 100, indicates the amount of trash and extra cleaning needed. Grain yields are adjusted to 14.5% moisture.

Table 5A. New Mexico 2016 Forage Corn Performance Test - Agricultural Science Center at Artesia

Investigators: R.P. Flynn, R. Pacheco, and S. Bustillos

Test Description

<p>Location: County/Area: Eddy Longitude: -104.38 Latitude: 32.75 Elevation: 3353 ft. Soil Name: Harkey Soil Texture: very fine sandy loam Soil Depth: >60 in.</p> <p>Test Design: Replications: 4 Plot Length: 34 ft. Rows per Plot: 2 Row Spacing: 40 in.</p> <p>Seeding Rate: 38000 seeds/a</p> <p>*Harvest delayed due to wet field conditions.</p>	<p>Management Practices: Previous Crop: cotton Planting Date: 26-May Harvest Date: 26-Sep</p> <p>Production Inputs</p> <table border="1"> <thead> <tr> <th></th> <th>Rate</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td colspan="3">Fertilizer:</td> </tr> <tr> <td>Nitrogen</td> <td>115 lb/a</td> <td>30-Jun</td> </tr> <tr> <td>Nitrogen</td> <td>12 lb/a</td> <td>30-Jun</td> </tr> <tr> <td>Nitrogen</td> <td>40 lb/a</td> <td>10-Jul</td> </tr> <tr> <td>P₂O₅</td> <td>60 lb/a</td> <td>30-Jun</td> </tr> </tbody> </table> <p>Herbicides: None</p> <p>Cultivation/Hand Weeding</p> <p>Insecticides: None</p>		Rate	Date	Fertilizer:			Nitrogen	115 lb/a	30-Jun	Nitrogen	12 lb/a	30-Jun	Nitrogen	40 lb/a	10-Jul	P ₂ O ₅	60 lb/a	30-Jun	<p>Growing Conditions:</p> <table border="1"> <thead> <tr> <th></th> <th>Average Temp. °F</th> <th>Precip. in.</th> <th>Irrigation in.</th> </tr> </thead> <tbody> <tr><td>January</td><td>37.7</td><td></td><td></td></tr> <tr><td>February</td><td>46.9</td><td></td><td></td></tr> <tr><td>March</td><td>55.0</td><td></td><td></td></tr> <tr><td>April</td><td>60.6</td><td>0.53</td><td></td></tr> <tr><td>May</td><td>67.3</td><td>0.98</td><td>7.00</td></tr> <tr><td>June</td><td>79.1</td><td>1.02</td><td>5.50</td></tr> <tr><td>July</td><td>85.2</td><td>0.43</td><td>8.00</td></tr> <tr><td>August</td><td>78.0</td><td>4.17</td><td></td></tr> <tr><td>September</td><td>71.8</td><td>5.93</td><td></td></tr> <tr><td>October</td><td>64.6</td><td></td><td></td></tr> <tr><td>November</td><td>52.1</td><td></td><td></td></tr> <tr><td>December</td><td>40.4</td><td></td><td></td></tr> </tbody> </table> <p>Seasonal Precipitation: 13.06 in. Total Irrigation: 20.5 in.</p> <p>Date of Last Spring Frost: 4-Apr Date of First Fall Frost: 12-Nov Frost Free Period: 222 days</p>		Average Temp. °F	Precip. in.	Irrigation in.	January	37.7			February	46.9			March	55.0			April	60.6	0.53		May	67.3	0.98	7.00	June	79.1	1.02	5.50	July	85.2	0.43	8.00	August	78.0	4.17		September	71.8	5.93		October	64.6			November	52.1			December	40.4		
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Table 5B. New Mexico 2016 Forage Corn Performance Test - Agricultural Science Center at Artesia

Results

Brand/Company Name	Hybrid/Variety Name	Moisture			Nitrogen Uptake	Ear Height	CP	NDFD			Ash	TDN	NE _i	Milk/Ton	Milk/Acre
		Dry Forage	Green Forage	at Harvest				NDF	48hr	Starch					
		t/a	t/a	%	lb/ac	ft	%	%	% NDF	%	%	%	Mcal/lb	lb/t	lb/ac
Mycogen Seeds	BMR 15B15	8.1	23.2	47.1	189	4.3	7.7	59.8	69.1	5.8	5.9	61.4	0.542	2328	17929
CPS Dyna-Gro Seed	D57VP51	7.9	22.5	49.9	171	3.4	7.2	61.2	68.7	5.1	5.9	61.0	0.538	2301	17172
CPS Dyna-Gro Seed	D53VC47	7.7	21.9	52.2	171	2.9	7.4	58.6	69.1	6.0	6.0	60.4	0.531	2256	16411
Mycogen Seeds	TMF15H88	7.3	20.7	49.3	162	3.8	7.4	60.4	68.9	5.4	5.9	61.1	0.539	2306	15886
CPS Dyna-Gro Seed	D58QC72	7.0	20.0	42.7	151	3.7	7.1	59.6	71.9	5.7	6.1	62.5	0.546	2370	15769
CPS Dyna-Gro Seed	CX16218	6.9	19.7	44.8	154	3.4	7.4	60.8	73.2	5.3	5.7	63.9	0.558	2453	16080
CPS Dyna-Gro Seed	D54DC94	6.9	19.7	46.5	158	3.9	7.6	59.6	68.2	5.2	6.2	60.2	0.531	2251	14731
Golden Acres Genetics	G7601	6.8	19.4	44.8	149	3.7	7.3	59.5	70.1	6.1	6.0	61.6	0.542	2330	14970
Mycogen Seeds	TMF17L86	6.8	19.6	49.0	150	3.9	7.3	60.6	68.9	5.3	5.8	61.0	0.538	2298	15017
Golden Acres Genetics	G8738 UIP3110	6.7	19.1	41.0	138	3.9	6.8	62.3	66.5	4.0	5.8	58.9	0.519	2165	13774
Mycogen Seeds	TMF14L46	6.4	18.2	42.0	146	4.4	7.7	60.8	68.2	4.7	6.3	60.5	0.533	2265	13706
Mycogen Seeds	TMF17W95	6.4	18.3	39.7	140	4.4	7.1	60.7	70.6	5.2	6.0	61.9	0.543	2339	14288
CPS Dyna-Gro Seed	D55VP77	6.3	18.0	49.0	150	3.5	7.8	58.8	69.3	4.3	6.1	60.1	0.525	2220	13282
	Trial Mean	7.0	20.0	46.0	156.0	3.8	7.4	60.2	69.4	5.2	6.0	61.1	0.537	2299	15309
	LSD	1.1	3.0	NS	NS	0.4	NS	NS	NS	NS	NS	NS	NS	NS	2756
	LSD P >	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	CV	10.6	10.6	13.0	14.2	7.8	14.0	2.9	3.7	32.7	10.7	3.1	2.9	4.9	12.6
	F Test	0.0231	0.0231	0.1129	0.1216	0.0001	0.9846	0.2264	0.0894	0.8961	0.9829	0.1061	0.2401	0.1237	0.0424

Table 6A. New Mexico 2016 Forage Corn Performance Test - Agricultural Science Center at Clovis

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

Test Description

<p>Location: County/Area: Curry Longitude: -103.22 Latitude: 34.60 Elevation: 4435 ft. Soil Name: Olton Soil Texture: clay loam Soil Depth: >60 in.</p>	<p>Management Practices: Previous Crop: fallow Planting Date: 20-May Harvest Date: 12-Sep</p> <p>Production Inputs</p> <table border="1"> <thead> <tr> <th></th> <th>Rate</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td colspan="3">Fertilizer:</td> </tr> <tr> <td>Nitrogen</td> <td>30 lb/a</td> <td>carryover</td> </tr> <tr> <td>Nitrogen</td> <td>270 lb/a</td> <td>16-May</td> </tr> <tr> <td>P₂O₅</td> <td>60 lb/a</td> <td>16-May</td> </tr> <tr> <td>S</td> <td>45.6 lb/ac</td> <td>16-May</td> </tr> <tr> <td>Zn</td> <td>1 g/ac</td> <td>16-May</td> </tr> <tr> <td colspan="3">Herbicides:</td> </tr> <tr> <td>Bicep Lite II Mag</td> <td>3 pt/a</td> <td>21-May</td> </tr> <tr> <td>Brawl</td> <td>1 pt/ac</td> <td>24-Jun</td> </tr> <tr> <td>Diflex</td> <td>8 oz/ac</td> <td>24-Jun</td> </tr> <tr> <td colspan="3">Insecticides:</td> </tr> <tr> <td>Onager</td> <td>16 oz/ac</td> <td>24-Jun</td> </tr> <tr> <td>Oberon</td> <td>8 oz/ac</td> <td>30-Jul</td> </tr> <tr> <td>Prevathon</td> <td>16 oz/ac</td> <td>30-Jul</td> </tr> </tbody> </table>		Rate	Date	Fertilizer:			Nitrogen	30 lb/a	carryover	Nitrogen	270 lb/a	16-May	P ₂ O ₅	60 lb/a	16-May	S	45.6 lb/ac	16-May	Zn	1 g/ac	16-May	Herbicides:			Bicep Lite II Mag	3 pt/a	21-May	Brawl	1 pt/ac	24-Jun	Diflex	8 oz/ac	24-Jun	Insecticides:			Onager	16 oz/ac	24-Jun	Oberon	8 oz/ac	30-Jul	Prevathon	16 oz/ac	30-Jul	<p>Growing Conditions:</p> <table border="1"> <thead> <tr> <th></th> <th>Average Temp. °F</th> <th>Precip. in.</th> <th>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>0.16</td><td>1.40</td></tr> <tr><td>June</td><td>72.8</td><td>4.26</td><td>1.80</td></tr> <tr><td>July</td><td>78.5</td><td>0.48</td><td>8.60</td></tr> <tr><td>August</td><td>73.0</td><td>3.25</td><td>4.50</td></tr> <tr><td>September</td><td>67.0</td><td>1.59</td><td></td></tr> <tr><td>October</td><td>61.5</td><td></td><td></td></tr> <tr><td>November</td><td></td><td></td><td></td></tr> <tr><td>December</td><td></td><td></td><td></td></tr> <tr> <td>Seasonal Precipitation:</td> <td></td> <td>9.7 in.</td> <td></td> </tr> <tr> <td>Total Irrigation:</td> <td></td> <td>16.3 in.</td> <td></td> </tr> <tr> <td>Date of Last Spring Frost:</td> <td></td> <td>3-May</td> <td></td> </tr> <tr> <td>Date of First Fall Frost:</td> <td></td> <td>6-Nov</td> <td></td> </tr> <tr> <td>Frost Free Period:</td> <td></td> <td>187 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	0.16	1.40	June	72.8	4.26	1.80	July	78.5	0.48	8.60	August	73.0	3.25	4.50	September	67.0	1.59		October	61.5			November				December				Seasonal Precipitation:		9.7 in.		Total Irrigation:		16.3 in.		Date of Last Spring Frost:		3-May		Date of First Fall Frost:		6-Nov		Frost Free Period:		187 days	
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Table 6B. New Mexico 2016 Forage Corn Performance Test - Agricultural Science Center at Clovis

Results

Brand/Company Name	Hybrid/Variety Name	Moisture			CP	NDF	NDFD		Ash	TDN	NE _i	Milk/ Ton	Milk/ Acre
		Dry Forage	Green Forage	at Harvest			48hr	Starch					
		t/a	t/a	%	%	%	%	%	%	Mcal/lb	lb/t	lb/a	
CPS Dyna-Gro	D 58 QC 72	9.6	31.6	69.4	10.3	44.5	60.8	25.6	4.2	66.1	0.680	3185	30706
Golden Acres	G 7601	8.4	25.2	66.6	9.6	42.2	62.4	29.1	3.8	67.8	0.699	3323	28016
B-H Genetics	BH 8590 VT 2 P	8.4	24.6	65.8	9.8	43.2	59.4	26.2	4.2	65.5	0.673	3127	26368
Mycogen Seeds, Inc.	TMF 17 W 95	8.3	27.0	69.1	10.0	42.7	59.8	26.1	4.0	66.0	0.679	3170	26439
Masters Choice	MCT 6733	8.3	23.9	65.3	9.7	39.2	63.0	32.4	3.7	68.4	0.705	3365	27809
Mycogen Seeds, Inc.	TMF 15 H 86	8.2	23.8	65.7	10.0	40.2	62.9	29.8	4.2	68.2	0.703	3352	27348
CPS Dyna-Gro	D 55 VP 77	8.1	22.8	64.2	9.6	39.3	60.8	31.9	3.8	68.0	0.701	3318	27006
Blue River Hybrids	73 B 33	8.1	24.4	66.6	9.6	41.9	60.7	29.0	3.8	66.9	0.689	3239	26256
CPS Dyna-Gro	D 57 VP 51	8.1	23.7	65.9	9.7	40.4	61.3	31.3	3.8	67.6	0.696	3291	26585
Masters Choice	EXP 609 Q	8.0	23.6	66.3	8.9	38.6	60.7	33.1	3.3	68.3	0.705	3341	26660
B-H Genetics	BH 8732 VTTP	8.0	24.1	66.8	9.5	41.9	61.3	28.8	3.8	67.2	0.692	3264	26048
B-H Genetics	X 16077 SS	7.9	22.6	64.9	9.7	43.9	61.1	26.5	4.0	66.6	0.686	3222	25543
Mycogen Seeds, Inc.	TMF 17 L 86	7.9	24.5	67.9	9.7	45.7	60.1	22.9	4.3	65.1	0.669	3105	24437
CPS Dyna-Gro	D 54 DC 94	7.9	22.3	64.6	9.7	39.3	61.9	31.5	3.8	68.5	0.706	3364	26549
Golden Acres	G 8738 VIP 3110	7.8	25.6	69.6	9.6	43.2	60.9	27.4	4.0	66.3	0.682	3199	24932
B-H Genetics	BH 8907 RR	7.8	23.5	66.9	9.7	44.1	60.8	25.7	4.0	66.4	0.683	3204	24939
Masters Choice	EXP 688 P	7.8	24.0	67.6	9.2	42.1	62.4	29.4	4.2	67.5	0.695	3295	25564
B-H Genetics	BH 8735 VTTP	7.8	22.4	65.3	9.5	41.3	61.5	31.1	3.3	68.0	0.700	3321	25756
B-H Genetics	BH 8912 VIP 3110	7.7	24.3	68.3	10.2	41.8	61.3	27.1	4.1	66.7	0.686	3227	24928
Mycogen Seeds, Inc.	TMF 14 L 46	7.7	25.4	69.8	9.9	43.8	60.0	24.3	4.6	64.4	0.660	3052	23421
Masters Choice	EXP 685 P	7.7	23.3	67.2	10.2	44.9	60.5	24.6	4.3	66.1	0.680	3183	24364
B-H Genetics	X 16076 SS	7.6	21.6	64.8	9.7	41.0	61.5	30.5	3.8	67.6	0.696	3293	25210
Masters Choice	MCT 6363	7.5	22.7	66.9	9.4	39.5	61.4	31.3	3.6	67.2	0.692	3267	24553
B-H Genetics	X 16080 SS	7.5	21.2	64.7	9.8	42.4	61.0	28.3	3.8	66.7	0.686	3226	24117
Blue River Hybrids	73 L 30	7.4	21.7	65.8	9.6	44.0	61.2	25.5	3.9	65.9	0.678	3173	23463
Masters Choice	EXP 635 P	7.3	22.3	67.2	10.0	39.6	61.4	31.1	3.9	67.8	0.698	3308	24242
CPS Dyna-Gro	CX 16218	7.3	21.8	66.4	10.0	41.4	61.2	29.2	3.6	67.8	0.698	3306	24142
Masters Choice	MCT 6583	7.1	21.9	67.3	9.3	38.6	62.8	33.8	3.9	68.2	0.703	3350	23926
Masters Choice	MCT 6894	7.1	21.8	67.2	9.4	40.8	62.6	30.0	3.7	68.0	0.700	3331	23766
Blue River Hybrids	70 A 47	7.1	21.4	66.7	9.8	41.0	61.6	29.1	4.1	67.5	0.695	3287	23405
Masters Choice	EXP 640 P	7.1	21.1	66.3	9.7	41.0	62.5	29.3	4.2	67.5	0.695	3296	23379
CPS Dyna-Gro	D 53 VC 47	7.0	19.9	64.8	9.2	41.0	62.7	31.5	3.8	67.9	0.700	3330	23222
Mycogen Seeds, Inc.	BMR 15 B 15	6.9	20.3	66.1	9.9	44.1	65.4	25.5	3.6	68.8	0.710	3413	23468
Masters Choice	MCT 6153	6.7	19.9	66.3	9.3	39.5	60.8	31.6	3.8	67.6	0.696	3287	22005
	Trial Mean	7.7	23.3	66.7	9.7	41.7	61.5	28.8	3.92	67.2	0.692	3265	25242
	LSD	1.0	3.2	0.0	0.72	3.8	2.22	6.10	0.77	2.10	0.023	164	3686
	LSD P >	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	CV	8.3	8.5	2.1	4.5	5.5	2.2	13.0	12.1	1.9	2.1	3.1	9.0
	F Test	<0.0001	0.0023	<0.0001	0.0655	0.0063	0.0039	0.5470	0.5317	0.0153	0.0140	0.0127	0.0256

Table 7A. New Mexico 2016 Forage Sorghum (Single Cut) Performance Test - Agricultural Science Center at Artesia

Investigators: R. Flynn, R. Pacheco, and S. Bustillos

Test Description

Location:	Management Practices:	Growing Conditions:																																																																																
County/Area: Eddy Longitude: -104.38 Latitude: 32.75 Elevation: 3353 ft. Soil Name: Reeves Soil Texture: loam Soil Depth: >60 in.	Previous Crop: cotton Planting Date: 3-Jun Harvest Date: 1-Nov 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 style="text-align: center;">115 lb/a</td> <td style="text-align: center;">30-Jun</td> </tr> <tr> <td>Nitrogen</td> <td style="text-align: center;">12 lb/a</td> <td style="text-align: center;">30-Jun</td> </tr> <tr> <td>P2O5</td> <td style="text-align: center;">60 lb/a</td> <td style="text-align: center;">30-Jun</td> </tr> </tbody> </table> Herbicides: <table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td>Huskie</td> <td style="text-align: center;">28 oz/ac</td> <td style="text-align: center;">9-Jul</td> </tr> <tr> <td>Cultivated</td> <td></td> <td style="text-align: center;">22-Jun</td> </tr> <tr> <td>Cultivated</td> <td></td> <td style="text-align: center;">29-Jul</td> </tr> </tbody> </table> Insecticides: None		Rate	Date	Fertilizer:			Nitrogen	115 lb/a	30-Jun	Nitrogen	12 lb/a	30-Jun	P2O5	60 lb/a	30-Jun	Huskie	28 oz/ac	9-Jul	Cultivated		22-Jun	Cultivated		29-Jul	<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;">37.7</td><td></td><td></td></tr> <tr><td>February</td><td style="text-align: center;">46.9</td><td></td><td></td></tr> <tr><td>March</td><td style="text-align: center;">55.0</td><td></td><td></td></tr> <tr><td>April</td><td style="text-align: center;">60.6</td><td style="text-align: center;">0.53</td><td></td></tr> <tr><td>May</td><td style="text-align: center;">67.3</td><td style="text-align: center;">0.98</td><td></td></tr> <tr><td>June</td><td style="text-align: center;">79.1</td><td style="text-align: center;">1.02</td><td style="text-align: center;">5.50</td></tr> <tr><td>July</td><td style="text-align: center;">85.2</td><td style="text-align: center;">0.43</td><td style="text-align: center;">8.00</td></tr> <tr><td>August</td><td style="text-align: center;">78.0</td><td style="text-align: center;">4.17</td><td></td></tr> <tr><td>September</td><td style="text-align: center;">71.8</td><td style="text-align: center;">5.93</td><td></td></tr> <tr><td>October</td><td style="text-align: center;">64.6</td><td style="text-align: center;">1.42</td><td></td></tr> <tr><td>November</td><td style="text-align: center;">52.1</td><td></td><td></td></tr> <tr><td>December</td><td style="text-align: center;">40.4</td><td></td><td></td></tr> </tbody> </table> <hr/> <table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 60%;">Seasonal Precipitation</td> <td style="text-align: right;">14.5 in.</td> </tr> <tr> <td style="padding-left: 20px;">Total Irrigation</td> <td style="text-align: right;">13.5 in.</td> </tr> </tbody> </table> Date of Last Spring Frost: 4-Apr Date of First Fall Frost: 12-Nov Frost Free Period: 222 days		Average Temp. °F	Precip. in.	Irrigation in.	January	37.7			February	46.9			March	55.0			April	60.6	0.53		May	67.3	0.98		June	79.1	1.02	5.50	July	85.2	0.43	8.00	August	78.0	4.17		September	71.8	5.93		October	64.6	1.42		November	52.1			December	40.4			Seasonal Precipitation	14.5 in.	Total Irrigation	13.5 in.
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Test Design: Replications: 4 Plot Length: 34 ft. Rows per Plot: 2 Row Spacing: 40 in. Seeding Rate: 95000 seeds/a Harvest delayed due to wet field conditions.																																																																																		

Table 7B. New Mexico 2016 Forage Sorghum (Single Cut) Performance Test - Agricultural Science Center at Artesia

Results

Brand/Company Name	Hybrid/Variety Name	Sorghum [†] Type	Maturity [§] Group	Brown Midrib	Moisture			CP	NDF	NDFD 48hr	Ash	TDN	NE _i Mcal/lb	Milk/ Ton lb/t	Milk/ Acre lb/a
					Dry Forage t/a	Green Forage t/a	at Harvest %								
Gayland Ward Seed	GW 600 BMR	FS	M	BMR	4.3	10.8	60.8	9.4	52.9	50.0	7.6	59.4	0.606	2601	11560
CPS Dyna-Gro Seed	705F	FS	ME	Conv	3.8	12.5	69.6	8.0	58.2	43.7	11.6	50.1	0.503	1871	6960
CPS Dyna-Gro Seed	F73FS10	FS	ME	Conv	3.7	12.5	70.9	7.2	66.0	42.8	9.0	46.9	0.467	1634	5988
Gayland Ward Seed	EXP 10216	FS	E	BMR	3.6	10.0	64.0	9.8	53.9	51.3	9.5	58.1	0.592	2524	9102
Gayland Ward Seed	GW 400 BMR	FS	ME	BMR	3.2	9.8	67.7	9.9	51.5	50.2	7.6	60.1	0.614	2655	8497
Gayland Ward Seed	Super Sugar DM	SxS	L	Conv	3.2	11.3	71.6	8.8	59.8	43.4	6.9	52.7	0.531	2050	6568
Gayland Ward Seed	Sweet Forever BMR	SxS	PS	BMR	3.1	11.6	72.9	6.2	66.7	45.7	9.1	48.7	0.487	1791	5568
Ceres, Inc.	EJ7281	FS	L	Conv	3.0	12.1	75.1	6.3	62.9	45.1	6.2	51.9	0.523	2017	6092
Ceres, Inc.	F4C207	FS	M	Conv	3.0	11.4	73.6	7.9	61.9	47.2	9.0	52.0	0.524	2046	5958
Gayland Ward Seed	Silo Pro BMR	FS	ML	BMR	3.0	12.0	75.1	7.8	64.4	48.9	12.8	48.6	0.486	1817	5434
	Trial Mean				3.9	11.4	70.1	8.1	59.8	46.8	8.9	52.9	0.533	2101	7173
	LSD				1.0	NS	4.2	1.7	6.0	1.7	3.6	5.2	0.058	380	NS
	CV				19.4	14.9	4.2	14.4	6.9	2.5	28.0	6.8	7.5	12.5	30.7
	F Test				0.0508	0.3146	0.0001	0.0004	0.0001	0.0001	0.0241	0.0001	0.0001	0.0001	0.1314

[†] Sorghum Type: FS = Forage Sorghum, BD = Brachytic Dwarf, SxS = Sorghum-Sudangrass Hybrid

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

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

Table 8A. New Mexico 2016 Forage Sorghum-SxS (Multi-Cut) Performance Test - Agricultural Science Center at Artesia

Investigators: R. Flynn, R. Pacheco, and S. Bustillos

Test Description

Location:	Management Practices:	Growing Conditions:																																																																			
County/Area: Eddy Longitude: -104.38 Latitude: 32.75 Elevation: 3353 ft. Soil Name: Pima Soil Texture: loam Soil Depth: >60 in.	Previous Crop: cotton Planting Date: 3-Jun Harvest Date: 9-Aug attempted 1-Nov completed Production Inputs <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">Fertilizer:</td> </tr> <tr> <td>Nitrogen</td> <td style="text-align: center;">115 lb/a</td> <td style="text-align: center;">30-Jun</td> </tr> <tr> <td>Nitrogen</td> <td style="text-align: center;">12 lb/a</td> <td style="text-align: center;">30-Jun</td> </tr> <tr> <td>P2O5</td> <td style="text-align: center;">60 lb/a</td> <td style="text-align: center;">30-Jun</td> </tr> </tbody> </table> Herbicides: Cultivated 22-Jun Cultivated 9-Jul Cultivated 24-Jul Insecticides: None		Rate	Date	Fertilizer:			Nitrogen	115 lb/a	30-Jun	Nitrogen	12 lb/a	30-Jun	P2O5	60 lb/a	30-Jun	<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 style="text-align: center;">37.7</td><td></td><td></td></tr> <tr><td>February</td><td style="text-align: center;">46.9</td><td></td><td></td></tr> <tr><td>March</td><td style="text-align: center;">55.0</td><td></td><td></td></tr> <tr><td>April</td><td style="text-align: center;">60.6</td><td></td><td></td></tr> <tr><td>May</td><td style="text-align: center;">67.3</td><td style="text-align: center;">0.98</td><td></td></tr> <tr><td>June</td><td style="text-align: center;">79.1</td><td style="text-align: center;">1.02</td><td style="text-align: center;">5.50</td></tr> <tr><td>July</td><td style="text-align: center;">85.2</td><td style="text-align: center;">0.43</td><td style="text-align: center;">7.12</td></tr> <tr><td>August</td><td style="text-align: center;">78.0</td><td style="text-align: center;">4.17</td><td></td></tr> <tr><td>September</td><td style="text-align: center;">71.8</td><td style="text-align: center;">5.93</td><td></td></tr> <tr><td>October</td><td style="text-align: center;">64.6</td><td style="text-align: center;">1.42</td><td></td></tr> <tr><td>November</td><td style="text-align: center;">52.1</td><td></td><td></td></tr> <tr><td>December</td><td style="text-align: center;">40.4</td><td></td><td></td></tr> </tbody> </table> Seasonal Precipitation 14.0 in. Total Irrigation 12.6 in. Date of Last Spring Frost: 4-Apr Date of First Fall Frost: 12-Nov Frost Free Period: 222 days		Average Temp. °F	Precip. in.	Irrigation in.	January	37.7			February	46.9			March	55.0			April	60.6			May	67.3	0.98		June	79.1	1.02	5.50	July	85.2	0.43	7.12	August	78.0	4.17		September	71.8	5.93		October	64.6	1.42		November	52.1			December	40.4		
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Test Design: Replications: 4 Plot Length: 34 ft. Rows per Plot: 2 Row Spacing: 40 in. Seeding Rate: 95000 seeds/a 1st harvest interrupted due to wet field conditions. Forage too wet to harvest. 1st cut shredded due to poor condition.																																																																					

Table 8B. New Mexico 2016 Forage Sorghum-SxS (Multi-Cut) Performance Test - Agricultural Science Center at Artesia

Results

Brand/Company Name	Hybrid/Variety Name	Sorghum [†] Type	Maturity [§] Group	Brown Midrib	Moisture			CP	NDF	NDFD 48hr	Ash	TDN	NE _l	Milk/Ton	Milk/Acre
					Dry Forage	Green Forage	at Harvest								
					t/a	t/a	%	%	%	%	%	%	Mcal/lb	lb/t	lb/a
Blue River Hybrids	Blackhawk	SxS	ML	BMR	5.3	14.6	63.8	5.5	71.7	46.7	7.9	47.8	0.477	1736	9330
Gayland Ward Seed	Nutra King BMR	SxS	M	BMR	5.1	14.5	64.8	7.4	62.5	51.6	8.6	54.3	0.549	2254	11638
Gayland Ward Seed	Super Sugar	SxS	ME	Conv	5.1	13.6	62.3	8.1	60.8	46.9	7.3	53.7	0.543	2163	11196
Ceres, Inc.	S4B224	SxS	L	BMR	5.0	12.7	60.9	7.8	62.1	55.9	11.3	55.0	0.557	2344	11668
Ceres, Inc.	F2P134	SxS	PS	Conv	4.9	16.6	70.9	6.5	64.9	46.8	5.1	53.1	0.536	2120	10325
CPS Dyna-Gro Seed	FullGraze	SxS	L	Conv	4.8	13.9	65.5	7.1	66.6	46.0	5.7	51.3	0.516	1984	9503
Gayland Ward Seed	Sweet Forever BMR	SxS	PS	BMR	4.5	14.8	69.7	5.8	69.6	50.2	5.7	52.4	0.529	2105	9424
CPS Dyna-Gro Seed	FullGraze BMR	SxS	L	BMR	4.4	14.9	70.6	7.1	67.9	50.6	9.3	50.8	0.510	1988	8641
Gayland Ward Seed	Sweet Six BMR	SxS	ME	BMR	3.5	11.3	69.6	7.8	64.8	54.5	9.4	54.5	0.551	2295	8090
Browning Seed, Inc.	Cadan 99B	SxS	M	Conv	3.4	10.1	66.0	8.1	69.4	48.0	10.5	47.4	0.472	1716	5639
Gayland Ward Seed	Super Sugar DM	SxS	L	Conv	2.5	9.8	75.0	8.4	66.3	54.8	9.5	53.8	0.544	2250	5673
Browning Seed, Inc.	Sweet Sioux WMR	SxS	M	Conv	2.5	8.5	71.2	7.9	69.0	50.1	10.3	49.0	0.490	1857	4494
Blue River Hybrids	Seahawk	SxS	ML	BMR	2.4	7.3	67.5	9.1	62.1	53.1	11.1	53.5	0.540	2207	5369
Browning Seed, Inc.	Wondergreen SX66	SxS	ME	Conv	2.2	7.6	71.0	8.5	67.1	50.2	10.6	49.8	0.499	1915	4246
Browning Seed, Inc.	Sweet Sioux BMR	SxS	M	BMR	1.7	7.2	74.5	10.0	63.0	55.5	11.7	53.9	0.544	2259	3864
Ceres, Inc.	S4B221	SxS	L	BMR	1.3	4.7	71.6	10.1	60.8	57.9	11.9	56.2	0.570	2447	3179
Gayland Ward Seed	GW 600 BMR	FS	ML	BMR	0.9	3.5	72.2	11.2	61.9	58.1	12.6	55.4	0.561	2391	2182
Trial Mean					3.5	10.9	68.7	8.0	65.3	51.6	9.3	52.5	0.529	2119	7321
LSD					1.3	3.4	4.7	1.5	4.0	4.4	2.0	4.0	0.045	322	3067
CV					25.7	21.9	4.8	13.5	4.3	6	15.0	5.4	6	10.7	29.5
F Test					0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.0003	0.0002	0.0001

[†] Sorghum Type: FS = Forage Sorghum, BD = Brachytic Dwarf, SxS = Sorghum-Sudangrass Hybrid

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

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

Table 9A. New Mexico 2016 Irrigated Forage Sorghum Performance Test - Agricultural Science Center at Clovis

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

Test Description

<p>Location:</p> <p>County/Area: Curry Longitude: -103.22 Latitude: 34.60 Elevation: 4435 ft. Soil Name: Olton Soil Texture: clay loam Soil Depth: >60 in.</p>	<p>Management Practices:</p> <p>Previous Crop: fallow Planting Date: 7-Jun Harvest Date: 19-Oct</p>	<p>Growing Conditions:</p>																																																																																																												
<p>Test Design:</p> <p>Replications: 3 Plot Length: 20 ft. Rows per Plot: 2 Row Spacing: 30 in. Seeding Rate: 75000 seed/a</p>	<p>Production Inputs</p> <table border="1"> <thead> <tr> <th></th> <th>Rate</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td colspan="3">Fertilizer:</td> </tr> <tr> <td>Nitrogen</td> <td>8 lb/ac</td> <td>carryover</td> </tr> <tr> <td>Nitrogen</td> <td>150 lb/ac</td> <td>31-May</td> </tr> <tr> <td>P₂O₅</td> <td>35 lb/ac</td> <td>31-May</td> </tr> <tr> <td>S</td> <td>25.3 lb/ac</td> <td>31-May</td> </tr> <tr> <td>Zn</td> <td>1 qt/ac</td> <td>31-May</td> </tr> <tr> <td colspan="3">Herbicides:</td> </tr> <tr> <td>Atrazine</td> <td>2 pt/a</td> <td>9-Jun</td> </tr> <tr> <td colspan="3">Insecticides:</td> </tr> <tr> <td>Sivanto</td> <td>7 oz/ac</td> <td>20-Sep</td> </tr> <tr> <td>Belt</td> <td>4 oz/ac</td> <td>29-Sep</td> </tr> </tbody> </table>		Rate	Date	Fertilizer:			Nitrogen	8 lb/ac	carryover	Nitrogen	150 lb/ac	31-May	P ₂ O ₅	35 lb/ac	31-May	S	25.3 lb/ac	31-May	Zn	1 qt/ac	31-May	Herbicides:			Atrazine	2 pt/a	9-Jun	Insecticides:			Sivanto	7 oz/ac	20-Sep	Belt	4 oz/ac	29-Sep	<table border="1"> <thead> <tr> <th></th> <th>Average Temp. °F</th> <th>Precip. in.</th> <th>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>1.39</td><td>1.10</td></tr> <tr><td>July</td><td>78.5</td><td>0.48</td><td>5.10</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></td><td></td><td></td></tr> <tr><td>December</td><td></td><td></td><td></td></tr> <tr><td colspan="2">Seasonal Precipitation:</td><td>7.2 in.</td><td></td></tr> <tr><td colspan="2">Total Irrigation:</td><td>6.2 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>187 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	1.39	1.10	July	78.5	0.48	5.10	August	73.0	3.25		September	67.0	2.05		October	61.5	0.01		November				December				Seasonal Precipitation:		7.2 in.		Total Irrigation:		6.2 in.		Date of Last Spring Frost:		3-May		Date of First Fall Frost:		6-Nov		Frost Free Period:		187 days	
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Table 9B. New Mexico 2016 Irrigated Forage Sorghum Performance Test - Agricultural Science Center at Clovis

Results

Brand/Company Name	Hybrid/Variety Name	Sorghum Type	Maturity Group	Brown Midrib	Moisture			CP	NDF	NDFD 48hr	Ash	TDN	NE _i	Milk/Ton	Milk/Acre
					Dry Forage	Green Forage	Harvest								
					t/a	t/a	%	%	%	%	%	Mcal/lb	lb/t	lb/a	
Sorghum Part/Chromatin	SP 1880	FS	L	Conv	9.7	26.7	63.9	7.3	52.4	59.6	4.9	56.2	0.570	2464	23742
Sorghum Part/Chromatin	SS 304	FS	L	Conv	8.3	25.8	67.7	7.0	50.0	63.5	6.0	59.4	0.606	2726	22724
Browning Seed, Inc.	Silage Master	FS	ML	Conv	7.9	23.3	65.9	7.0	49.9	60.3	6.1	59.3	0.604	2690	21315
Ceres, Inc.	EJ7281*	FS	L	Conv	7.6	25.4	70.1	6.8	48.5	63.5	5.4	54.6	0.552	2380	18062
Sorghum Part/Chromatin	SS 405	FS	L	Conv	7.6	20.6	63.4	6.2	56.6	60.0	4.4	60.3	0.616	2762	20937
University of Nebraska	Sugar Pins	FS	M	Conv	7.5	25.2	70.0	6.3	48.0	62.9	5.7	52.3	0.526	2208	16562
Gayland Ward Seed	Super Sugar DM ³	SxS	L	Conv	7.4	24.6	70.0	6.8	54.4	66.8	5.3	57.6	0.586	2622	19266
Sorghum Part/Chromatin	SP 1615	FS	PS	Conv	7.3	25.3	71.2	7.1	59.2	62.5	6.6	54.1	0.546	2337	17030
Gayland Ward Seed	Super Sugar DM ³	SxS	L	Conv	7.2	21.6	66.8	6.7	51.8	58.2	6.2	53.4	0.538	2246	16185
Sorghum Part/Chromatin	Sordan Headless	SxS	PS	Conv	7.1	24.7	71.3	8.3	54.8	59.2	7.2	51.3	0.515	2107	15088
University of Nebraska	Hybrid Pearl Millet				7.0	24.8	71.0	8.3	56.9	66.7	7.1	60.3	0.615	2813	19614
CPS Dyna-Gro Seed	F73FS10	FS	M	Conv	6.3	14.6	56.6	7.8	47.8	59.9	6.1	58.1	0.591	2603	16541
University of Nebraska	Sweet N	FS	M	Conv	6.3	20.1	68.5	6.6	45.6	60.7	5.5	53.3	0.537	2262	14636
CPS Dyna-Gro Seed	705F	FS	ME	Conv	5.6	13.2	57.4	7.1	55.5	63.7	7.2	60.2	0.614	2783	15687
Gayland Ward Seed	EXP 10217 ³	FS	M	Conv	5.6	18.5	69.8	7.9	55.7	63.9	7.1	58.1	0.590	2631	14723
Sorghum Part/Chromatin	CHR12FS0012	FS	M	Conv	5.4	13.8	61.2	8.3	46.5	61.3	6.0	60.3	0.616	2774	14844
Sorghum Part/Chromatin	Red Top + BMR	FS	M	BMR	4.9	14.3	66.2	7.6	45.6	66.1	6.8	59.2	0.603	2732	13371
Ceres, Inc.	F4C207 *	FS	M	Conv	4.9	17.6	72.4	7.6	46.4	62.6	5.4	56.4	0.572	2498	12163
Gayland Ward Seed	Silo Pro BMR ²	FS	ML	BMR	4.7	15.0	68.5	8.4	52.2	65.7	7.9	57.8	0.587	2627	12413
Sorghum Part/Chromatin	NK 300	FS	ME	Conv	4.7	11.1	57.7	7.4	51.0	61.4	7.1	60.0	0.611	2747	12925
Sorghum Part/Chromatin	SP 3903 BD	FS-BD	ML	BMR	4.7	14.4	67.7	8.6	54.4	64.3	8.8	58.4	0.595	2662	12383
Gayland Ward Seed	EXP 10216 ³	FS	E	BMR	4.7	12.0	61.1	8.1	46.4	63.0	6.6	56.6	0.574	2520	11721
Sorghum Part/Chromatin	SP 2774	FS	M	BMR	4.6	12.7	63.5	7.7	50.7	67.4	6.0	63.0	0.645	3012	13920
Blue River Hybrids	Nighthawk	SxS	E	BMR	4.5	11.3	59.9	7.2	52.5	65.9	7.2	59.4	0.605	2743	12373
Blue River Hybrids	Blackhawk	SxS	ML	BMR	4.5	12.7	64.9	7.4	54.7	64.7	5.9	59.5	0.607	2745	12381
Sorghum Part/Chromatin	SP 3902 BD	FS-BD	L	BMR	4.5	13.9	67.6	7.9	52.2	67.0	8.0	57.1	0.580	2586	11792
Sorghum Part/Chromatin	SP 2876	FS	M	BMR	4.4	12.1	63.5	7.8	50.9	64.6	6.6	61.0	0.623	2847	12545
Sorghum Part/Chromatin	SP 4105	SS	PS	BMR	4.4	18.4	76.2	8.9	54.7	64.3	8.0	53.9	0.544	2338	10219
Sorghum Part/Chromatin	Hikane II	FS	M	Conv	4.3	12.5	65.2	7.5	46.0	60.0	5.6	58.5	0.595	2631	11386
Gayland Ward Seed	GW 600 BMR ¹	FS	M	BMR	4.2	11.8	64.2	8.0	49.8	67.1	6.7	61.9	0.633	2929	12414
Gayland Ward Seed	GW 400 BMR ³	FS	ME	BMR	3.7	11.4	67.5	8.0	48.0	63.7	6.9	57.1	0.580	2562	9548
University of Nebraska	Atlas BMR	FS	M	BMR	3.7	11.6	67.8	7.0	48.5	71.0	6.2	58.3	0.593	2702	10063
Sorghum Part/Chromatin	CHR14FB0240	FS	M	BMR	3.4	9.6	65.3	7.6	54.6	67.8	8.1	60.0	0.612	2800	9342
	Trial Mean				5.7	17.3	66.2	7.5	51.3	63.6	6.5	57.8	0.587	2609	14777
	LSD				1.2	3.1	4.5	1.1	6.5	3.3	1.5	3.3	0.036	242	3571
	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				13.3	11.0	4.2	9.3	7.7	3.2	14.6	3.5	3.8	5.7	14.8
	F Test				<0.0001	<0.0001	<0.0001	0.0003	0.0004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

¹ Sorghum Type: FS = Forage Sorghum, BD = Brachytic Dwarf, SxS = Sorghum-Sudangrass Hybrid

² Maturity Group: E = Early, M = Medium, L = Late, PS = Photoperiod Sensitive

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

Table 10A. New Mexico 2016 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: 21-Jun Harvest Date: 20-Oct 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>10 lb/a</td> <td>carryover</td> </tr> <tr> <td>Nitrogen</td> <td>21 lb/ac</td> <td>6-May</td> </tr> <tr> <td>P₂O₅</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">Herbicides:</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>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">Insecticides:</td> </tr> <tr> <td>Sivanto</td> <td>7 oz/ac</td> <td>8-Sep</td> </tr> </tbody> </table>		Rate	Date	Fertilizer:			Nitrogen	10 lb/a	carryover	Nitrogen	21 lb/ac	6-May	P ₂ O ₅	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	Herbicides:			Atrazine	1.5 pt/ac	24-Jun	Glyphosate	32 oz/ac	24-Jun	Sharpen	2 oz/ac	24-Jun	Yukon	4 oz/ac	13-Jul	Atrazine	8 oz/ac	13-Jul	Brox	8 oz/ac	13-Jul	Insecticides:			Sivanto	7 oz/ac	8-Sep	<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;">35.8</td><td></td><td></td></tr> <tr><td>February</td><td style="text-align: center;">42.8</td><td></td><td></td></tr> <tr><td>March</td><td style="text-align: center;">49.3</td><td></td><td></td></tr> <tr><td>April</td><td style="text-align: center;">53.6</td><td></td><td></td></tr> <tr><td>May</td><td style="text-align: center;">59.9</td><td></td><td></td></tr> <tr><td>June</td><td style="text-align: center;">72.8</td><td style="text-align: center;">4.26</td><td></td></tr> <tr><td>July</td><td style="text-align: center;">78.5</td><td style="text-align: center;">0.48</td><td></td></tr> <tr><td>August</td><td style="text-align: center;">73.0</td><td style="text-align: center;">3.25</td><td></td></tr> <tr><td>September</td><td style="text-align: center;">67.0</td><td style="text-align: center;">2.05</td><td></td></tr> <tr><td>October</td><td style="text-align: center;">61.5</td><td style="text-align: center;">0.01</td><td></td></tr> <tr><td>November</td><td></td><td></td><td></td></tr> <tr><td>December</td><td></td><td></td><td></td></tr> <tr> <td>Seasonal Precipitation:</td> <td></td> <td style="text-align: center;">10.1 in.</td> <td></td> </tr> <tr> <td>Total Irrigation:</td> <td></td> <td style="text-align: center;">0.0 in.</td> <td></td> </tr> <tr> <td>Date of Last Spring Frost:</td> <td></td> <td style="text-align: center;">3-May</td> <td></td> </tr> <tr> <td>Date of First Fall Frost:</td> <td></td> <td style="text-align: center;">6-Nov</td> <td></td> </tr> <tr> <td>Frost Free Period:</td> <td></td> <td style="text-align: center;">187 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				December				Seasonal Precipitation:		10.1 in.		Total Irrigation:		0.0 in.		Date of Last Spring Frost:		3-May		Date of First Fall Frost:		6-Nov		Frost Free Period:		187 days	
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Table 10B. New Mexico 2016 Dryland Forage Sorghum Performance Test - Agricultural Science Center at Clovis

Results

Brand/Company Name	Hybrid/Variety Name	Sorghum Maturity			Brown Midrib	Moisture			CP	NDF	NDFD 48hr	Ash	TDN	NE _L	Milk/Ton	Milk/Acre
		Type	Group	Group		Dry Forage	Green Forage	at Harvest								
					t/a	t/a	%	%	%	%	%	%	Mcal/lb	lb/t	lb/a	
Gayland Ward Seed	Ensile Master	FS	ML	Conv	4.2	14.1	70.6	8.3	51.0	63.0	5.0	58.1	0.591	2627	10892	
CPS Dyna-Gro Seed	F73FS10	FS	M	Conv	3.9	13.3	70.5	9.0	50.5	60.6	5.3	57.9	0.589	2589	10160	
Blue River Hybrids	Blackhawk	SxS	ML	BMR	3.5	13.0	72.9	9.5	54.1	67.9	6.0	61.3	0.627	2896	10313	
CHS Seed Resources	HighYield Conv	SxS	L	Conv	3.5	12.2	71.5	8.1	53.0	60.3	5.3	56.5	0.574	2489	8678	
CHS Seed Resources	SiloSorghum Conv	FS	L	Conv	3.2	11.1	71.6	9.8	50.5	61.8	5.8	60.0	0.613	2756	8693	
CPS Dyna-Gro Seed	705F	FS	ME	Conv	3.1	10.7	70.8	9.6	50.1	63.4	5.6	61.0	0.623	2839	8870	
Gayland Ward Seed	Super Sugar DM	SxS	L	Conv	3.0	10.6	71.3	8.8	54.2	61.7	5.6	58.5	0.595	2645	8056	
CHS Seed Resources	HighYield BMR PS	FS	L (PPS)	BMR	2.8	12.3	77.4	9.8	55.6	72.6	6.5	62.4	0.639	3011	8342	
CHS Seed Resources	HighYield BMR Dwarf	SxS-BD	ME	BMR	2.8	9.9	72.0	9.1	49.7	70.6	5.3	66.9	0.689	3317	9140	
CHS Seed Resources	SiloSorghum BMR MS	FS	L	BMR	2.7	10.9	75.2	9.6	52.7	71.8	6.2	61.1	0.625	2913	7886	
Gayland Ward Seed	Sweet Forever BMR	SxS	PS	BMR	2.7	10.3	73.7	8.9	55.8	67.9	5.5	61.2	0.626	2887	7775	
Gayland Ward Seed	GW 400 BMR	FS	ME	BMR	2.6	10.1	73.9	9.0	46.3	65.9	6.0	57.9	0.589	2636	6939	
CHS Seed Resources	HighYield BMR	SxS	L	BMR	2.6	10.3	75.0	10.5	52.6	68.7	6.5	59.7	0.609	2788	7166	
Gayland Ward Seed	GW 2120	FS	M	Conv	2.4	9.4	74.0	9.2	50.0	62.8	5.7	60.0	0.612	2759	6723	
Blue River Hybrids	Nighthawk	SxS	E	BMR	2.0	8.0	75.2	11.9	52.9	68.4	7.2	59.4	0.605	2762	5473	
CHS Seed Resources	SiloSorghum BMR Dwarf	FS	L	BMR	2.0	7.3	72.9	10.2	53.3	68.8	5.7	60.1	0.614	2819	5518	
Trial Mean					2.9	10.8	73.0	9.4	52.0	66.0	5.8	60.1	0.613	2796	8163	
LSD					0.7	2.4	2.2	0.93	3.8	2.63	0.84	2.25	0.025	173	2071	
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					14.8	13.2	1.8	5.9	4.4	2.4	8.6	2.2	2.4	3.7	15.2	
F Test					<0.0001	<0.0001	<0.0001	0.0169	0.0015	0.9685	0.0009	<0.0001	<0.0001	<0.0001	<0.0001	

† Sorghum Type: FS = Forage Sorghum, BD = Brachytic Dwarf, SxS = Sorghum-Sudangrass Hybrid

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

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

Table 11A. New Mexico 2016 Irrigated Forage Sorghum Performance Test - Agricultural Science Center at Los Lunas

Investigators: M.A. Marsalis, C. Havik, and M. Place

Test Description

Location:		Management Practices:			Growing Conditions:																																																																														
County/Area:	Valencia	Previous Crop:	oats		<table border="1"> <thead> <tr> <th></th> <th>Average Temp.</th> <th>Precip.</th> <th>Irrigation</th> </tr> <tr> <th></th> <th>°F</th> <th>in.</th> <th>in.</th> </tr> </thead> <tbody> <tr><td>January</td><td></td><td></td><td></td></tr> <tr><td>February</td><td></td><td></td><td></td></tr> <tr><td>March</td><td></td><td></td><td></td></tr> <tr><td>April</td><td></td><td></td><td></td></tr> <tr><td>May</td><td>62.2</td><td>0.50</td><td></td></tr> <tr><td>June</td><td>76.9</td><td>0.75</td><td>15.80</td></tr> <tr><td>July</td><td>79.7</td><td>0.75</td><td>8.10</td></tr> <tr><td>August</td><td>73.3</td><td>0.50</td><td>6.65</td></tr> <tr><td>September</td><td>68.4</td><td>0.68</td><td>6.53</td></tr> <tr><td>October</td><td></td><td></td><td></td></tr> <tr><td>November</td><td></td><td></td><td></td></tr> <tr><td>December</td><td></td><td></td><td></td></tr> <tr> <td>Seasonal Precipitation</td> <td></td> <td>3.18 in.</td> <td></td> </tr> <tr> <td>Total Irrigation</td> <td></td> <td>37.08 in.</td> <td></td> </tr> <tr> <td>Date of Last Spring Frost:</td> <td colspan="3">27-Apr</td> </tr> <tr> <td>Date of First Fall Frost:</td> <td colspan="3">14-Oct</td> </tr> <tr> <td>Frost Free Period:</td> <td colspan="3">170 days</td> </tr> </tbody> </table>				Average Temp.	Precip.	Irrigation		°F	in.	in.	January				February				March				April				May	62.2	0.50		June	76.9	0.75	15.80	July	79.7	0.75	8.10	August	73.3	0.50	6.65	September	68.4	0.68	6.53	October				November				December				Seasonal Precipitation		3.18 in.		Total Irrigation		37.08 in.		Date of Last Spring Frost:	27-Apr			Date of First Fall Frost:	14-Oct			Frost Free Period:	170 days		
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Test Design:

Replications: 3
 Plot Length: 20 ft.
 Rows per Plot: 2
 Row Spacing: 30 in.
 Seeding Rate: 80,000 seed/a

Table 11B. New Mexico 2016 Irrigated Forage Sorghum Performance Test - Agricultural Science Center at Los Lunas

Results

Brand/Company Name	Hybrid/Variety Name	Sorghum [†] Type	Maturity [§] Group	Brown Midrib	65%Adj Moisture			CP	NDF	NDFD 30hr	Ash	TDN	NE _i Mcal/lb	Milk/Ton lb/t	Milk/Acre lb/a	Milk/Irrigation lb/ac-inch	
					Dry Forage t/a	Green Forage t/a	at Harvest %										
Sorghum Part./Chromatin	SP 1615	FS	PS	Conv	9.3	26.5	77.6	7.5	59.1	62.4	5.2	63.0	0.645	3042	28182	760	
Sorghum Part./Chromatin	SP 1880	FS	L	Conv	9.0	25.6	74.5	9.0	59.1	53.4	5.6	62.8	0.644	3011	26992	728	
Sorghum Part./Chromatin	SS 405	FS	L	Conv	8.8	25.3	72.9	7.7	53.4	56.9	4.7	61.8	0.632	2937	26016	702	
Sorghum Part./Chromatin	Sordan Headless	SS	PS	Conv	8.1	23.2	76.8	9.0	59.0	48.8	5.6	60.3	0.616	2806	22776	614	
Sorghum Part./Chromatin	SS 304	FS	L	Conv	7.5	21.5	76.6	9.0	55.2	56.4	6.3	62.4	0.640	2998	22562	609	
Ceres, Inc.	F4C204	FS	E	Conv	7.1	20.2	73.9	8.4	47.9	54.7	5.3	60.0	0.612	2805	19835	535	
Sorghum Part./Chromatin	Red Top + BMR	FS	M	BMR	6.6	18.8	74.0	8.7	52.9	63.0	5.9	62.7	0.642	3041	20004	540	
Sorghum Part./Chromatin	CHR12FS0012	FS	M	Conv	6.3	18.0	73.8	8.5	53.9	54.9	5.5	62.6	0.642	2999	18858	509	
Sorghum Part./Chromatin	CHR14FB0240	FS	M	BMR	6.2	17.8	73.1	8.6	52.6	66.5	6.5	68.4	0.706	3472	21643	584	
Gayland Ward Seed	GW 2120	FS	M	Conv	6.1	17.4	73.9	9.2	50.8	49.4	6.3	61.0	0.623	2879	17552	473	
Sorghum Part./Chromatin	SP 2876	FS	M	BMR	6.1	17.3	74.5	8.7	52.0	68.4	5.8	65.4	0.672	3252	19663	530	
Gayland Ward Seed	GW 600 BMR	FS	M	BMR	6.0	17.0	73.0	7.6	49.1	63.4	5.1	63.3	0.649	3081	18368	495	
Sorghum Part./Chromatin	NK 300	FS	ME	Conv	5.9	16.8	74.2	9.0	53.5	54.9	6.4	61.7	0.631	2934	17229	465	
Sorghum Part./Chromatin	Hikane II	FS	M	Conv	5.8	16.6	74.8	8.7	52.2	55.7	5.8	60.8	0.621	2870	16761	452	
Sorghum Part./Chromatin	SP 2774	FS	M	BMR	5.5	15.8	75.1	8.7	53.4	65.7	5.9	65.9	0.678	3278	18169	490	
Ceres, Inc.	F4C207	FS	M	Conv	5.5	15.6	78.4	9.5	54.2	57.0	6.0	62.8	0.644	3035	16598	448	
Gayland Ward Seed	GW 400 BMR	FS	ME	BMR	5.4	15.4	75.8	9.6	50.9	55.3	6.4	62.3	0.638	3008	16209	437	
Gayland Ward Seed	EXP 10216	FS	E	BMR	4.9	14.0	73.0	9.0	51.1	55.6	6.0	62.2	0.637	2991	14602	394	
Sorghum Part./Chromatin	SP 4105	SS	PS	BMR	4.4	12.7	80.7	10.7	55.4	53.0	7.6	62.2	0.637	2997	13267	358	
Sorghum Part./Chromatin	SP 3903 BD	FS	ML	BMR	4.1	11.6	77.7	9.9	52.3	56.5	7.0	62.5	0.640	3030	12353	333	
Sorghum Part./Chromatin	SP 3902 BD	FS	L	BMR	3.7	10.5	74.6	10.1	50.1	54.2	6.3	62.3	0.638	3008	11093	299	
Gayland Ward Seed	Silo Pro BMR Dwarf	FS	ML	BMR	3.5	10.1	74.5	10.4	49.6	49.4	7.0	61.6	0.631	2941	10465	282	
Trial Mean					6.2	17.6	75.2	9.0	53.1	57.1	6.0	62.6	0.642	3018	18600	502	
LSD					0.9	2.5	2.4	1.3	4.1	8.5	1.1	2.3	0.025	175	2940	79	
LSD P >					0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
CV					8.6	8.6	1.9	9.0	4.7	9.0	11.3	2.2	2.4	3.5	9.6	9.6	9.6
F Test					<0.0001	<0.0001	<0.0001	0.0008	<0.0001	0.0003	0.0008	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

[†] Sorghum Type: FS=Forage Sorghum, BD = Brachytic Dwarf, SxS = Sorghum-Sudangrass Hybrid

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

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

Table 12A. New Mexico 2016 Irrigated Forage Sorghum & Sorghum Sudangrass (Single Cut) Performance Test - Agricultural Science Center at Tucumcari

Investigators: L.M. Lauriault, A. Cunningham, J. Box, P.L. Cooksey, S. Jennings, J. Jennings, and A. Williams

Test Description

Location:	Management Practices:	Growing Conditions:																																																																														
County/Area: Quay Longitude: -103.68 Latitude: 35.20 Elevation: 4086 ft. Soil Name: Canez Soil Texture: Fine sandy loam Soil Depth: >60 in.	Previous Crop: Small grain forage Planting Date: 9-Jun Harvest Dates: 21-Oct <u>Production Inputs</u> <table border="1" data-bbox="705 651 1209 683"> <thead> <tr> <th></th> <th>Rate</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td colspan="3">Fertilizer:</td> </tr> <tr> <td>Nitrogen</td> <td>lb/a</td> <td></td> </tr> <tr> <td>Nitrogen</td> <td>lb/a</td> <td></td> </tr> <tr> <td>P2O5</td> <td>lb/a</td> <td></td> </tr> <tr> <td>Nitrogen</td> <td>lb/a</td> <td></td> </tr> </tbody> </table> Herbicides: Aim EC 1 oz/a 11-Jun Detonate 8 oz/a 26-Jul Insecticides: None		Rate	Date	Fertilizer:			Nitrogen	lb/a		Nitrogen	lb/a		P2O5	lb/a		Nitrogen	lb/a		<table border="1" data-bbox="1312 480 1822 987"> <thead> <tr> <th></th> <th colspan="3">Average</th> </tr> <tr> <th></th> <th>Temp.</th> <th>Precip.</th> <th>Irrigation</th> </tr> <tr> <th></th> <th>°F</th> <th>in.</th> <th>in.</th> </tr> </thead> <tbody> <tr><td>January</td><td>38.0</td><td>0.01</td><td>0.00</td></tr> <tr><td>February</td><td>47.0</td><td>0.94</td><td>0.00</td></tr> <tr><td>March</td><td>53.0</td><td>0.08</td><td>0.00</td></tr> <tr><td>April</td><td>57.0</td><td>0.67</td><td>0.00</td></tr> <tr><td>May</td><td>66.0</td><td>1.30</td><td>0.00</td></tr> <tr><td>June</td><td>78.0</td><td>3.28</td><td>5.08</td></tr> <tr><td>July</td><td>84.0</td><td>1.11</td><td>8.70</td></tr> <tr><td>August</td><td>77.0</td><td>2.33</td><td>2.50</td></tr> <tr><td>September</td><td>73.0</td><td>0.41</td><td>2.50</td></tr> <tr><td>October</td><td>66.0</td><td>0.00</td><td>0.50</td></tr> <tr><td>November</td><td></td><td></td><td></td></tr> <tr><td>December</td><td></td><td></td><td></td></tr> </tbody> </table> Seasonal Precipitation 9.1 in. Total Irrigation 19.3 in. Date of Last Spring Frost: 18-Apr Date of First Fall Frost: 12-Nov Frost Free Period: 208 days		Average				Temp.	Precip.	Irrigation		°F	in.	in.	January	38.0	0.01	0.00	February	47.0	0.94	0.00	March	53.0	0.08	0.00	April	57.0	0.67	0.00	May	66.0	1.30	0.00	June	78.0	3.28	5.08	July	84.0	1.11	8.70	August	77.0	2.33	2.50	September	73.0	0.41	2.50	October	66.0	0.00	0.50	November				December			
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Table 12B. New Mexico 2016 Irrigated Forage Sorghum & Sorghum Sudangrass (Single Cut) Performance Test - Agricultural Science Center at Tucumcari ¹

Results

Brand/Company Name	Hybrid/Variety Name	Sorghum [†] Type	Maturity [§] Group	Moisture			CP	NDF	NDFD 48hr	Ash	TDN	NE _i	Milk/Ton	Milk/Acre
				Dry Forage	Green Forage	at Harvest								
				t/a	t/a	%	%	%	%	%	Mcal/lb	lb/t	lb/a	
Sorghum Part./Chromatin	SP1615	FS	PS	4.1	10.8	37.9	7.3	60.0	69.1	5.5	60.3	0.528	2235	9147
Sorghum Part./Chromatin	Sordan Headless	SxS	PS	3.2	8.5	37.2	7.9	58.7	66.1	5.3	58.9	0.522	2180	6890
Gayland Ward Seed	GW600 BMR	FS	M	2.7	6.8	39.0	7.4	56.2	74.0	5.9	62.8	0.547	2383	6338
Gayland Ward Seed	GW400 BMR	FS	ME	2.4	5.4	46.3	7.3	54.1	68.2	6.0	58.8	0.517	2156	5229
Blue River Hybrids	Warbler			2.4	6.1	39.6	8.0	54.5	71.1	5.3	61.8	0.544	2351	5625
Gayland Ward Seed	Silo Pro BMR	FS	ML	2.2	5.2	42.7	8.0	55.3	70.7	5.7	61.0	0.535	2288	4919
Sorghum Part./Chromatin	Trudan Headless	SxS	PS	2.1	5.6	38.4	7.8	57.5	66.7	5.4	58.6	0.517	2151	4442
Blue River Hybrids	Bobwhite 6	FS	E	1.8	4.1	44.7	8.0	54.2	67.2	5.8	58.2	0.511	2116	3904
Gayland Ward Seed	EXP10216	FS	E	1.7	4.0	42.1	7.5	55.6	72.0	5.5	61.2	0.532	2281	3793
Gayland Ward Seed	GW2120	FS	E	1.4	3.2	44.4	7.6	54.3	65.1	5.6	58.1	0.517	2143	2997
Trial Mean				2.4	6.0	41.2	7.7	56.0	69.0	5.6	60.0	0.527	2228	5328
LSD				1.2	3.5	NS	NS	2.3	5.0	NS	NS	NS	NS	2864
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				35.8	40.3	10.8	7.9	2.8	5.0	7.8	3.9	3.5	6.2	37.0
F Test				0.0066	0.0044	0.0633	0.5064	0.0001	0.0194	0.2242	0.0716	0.1263	0.1101	0.0077

[†] Sorghum Type: Conv = Conventional, BMR = Brown Midrib

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

¹The irrigation system was non-functional from 8/24 until it was repaired on 9/18, which impacted yield.

Table 13A. New Mexico 2016 Irrigated Forage Sorghum & Sorghum Sudangrass (Multi-Cut) Performance Test - Agricultural Science Center at Tucumcari

Investigators: L.M. Lauriault, A. Cunningham, J. Box, P.L. Cooksey, S. Jennings, J. Jennings, and A. Williams

Test Description

Location:	Management Practices:	Growing Conditions:																																																																																																																		
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Results

Brand/Company Name	Hybrid/Variety Name	Sorghum [†] Type	Maturity [§] Group	Moisture			CP %	NDF %	NDFD 48hr % NDF	Ash %	TDN %	NE _l Mcal/lb	Milk/Ton lb/t	Milk/Acre lb/a
				Dry Forage t/a	Green Forage t/a	at Harvest %								
Blue River Hybrids	Night Hawk 6	SxS	E	3.0	7.3	41.8	7.6	59.4	72.8	6.2	63.1	0.550	2402	7324
Sorghum Part./Chromatin	Trudan Headless	SxS	PS	2.7	6.8	40.1	7.5	60.5	69.9	5.9	62.3	0.550	2385	6513
Gayland Ward Seed	Sweet Forever BMR	SxS	PS	2.5	6.6	38.1	7.3	61.7	71.5	5.4	63.1	0.555	2414	6106
Sorghum Part./Chromatin	SP 4555	SxS	M	2.4	5.5	44.5	6.9	58.3	68.4	5.7	59.6	0.525	2200	5407
Sorghum Part./Chromatin	Sordan 79	SxS	E	2.4	5.4	44.4	6.9	61.8	68.1	6.1	60.8	0.538	2285	5413
Blue River Hybrids	Black Hawk 12	SxS	ML	2.0	4.5	44.8	6.6	62.1	71.3	5.4	63.0	0.550	2407	4877
Sorghum Part./Chromatin	Sordan Headless	SxS	PS	2.0	5.4	38.0	8.1	60.8	69.0	6.3	61.6	0.545	2342	4566
Sorghum Part./Chromatin	SP4105	SxS	PS	1.9	4.9	40.7	8.2	60.6	71.2	6.7	61.9	0.540	2330	4484
Gayland Ward Seed	Super Sugar DM	SxS	L	1.9	4.5	43.4	7.4	59.6	67.8	5.7	60.7	0.540	2298	4437
Gayland Ward Seed	Nutra King BMR			1.8	4.2	43.4	6.9	59.2	70.6	5.7	61.8	0.547	2343	4220
Gayland Ward Seed	Silo Pro BMR	FS	ML	1.8	4.0	44.2	6.9	58.0	72.6	5.9	62.5	0.548	2367	4168
Gayland Ward Seed	Sweet Six BMR			1.8	4.0	44.2	6.9	58.6	70.0	5.5	61.6	0.545	2330	4128
Gayland Ward Seed	Super Sugar			1.7	3.5	48.8	6.2	61.1	65.7	5.5	58.5	0.517	2146	3707
Blue River Hybrids	Sea Hawk 6	SxS		0.9	1.8	49.7	8.0	59.8	69.4	6.5	59.8	0.520	2188	2004
	Trial Mean			2.0	4.8	43.8	7.3	60.2	69.8	5.9	61.4	0.540	2313	4688
	LSD			0.8	2.0	6.4	NS	NS	3.3	0.6	NS	NS	152	1877
				0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	CV			26.8	29.0	10.0	11.5	2.7	3.3	6.6	2.9	2.9	4.5	27.7
	F Test			0.0061	0.0011	0.0017	0.0964	0.1160	0.0338	0.0016	0.0784	0.0677	0.0563	0.0032

[†] Sorghum Type: Conv = Conventional, BMR = Brown Midrib

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

¹ The irrigation system was non-functional from 8/24 until it was repaired on 9/18, which prevented multiple harvests and impacted yield.

Appendix A

Companies and Contact Information for Participants in the Agricultural Science Center
Fee-Test Program

New Mexico 2016 Grain Corn Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Relative Maturity
CPS Dyna-Gro Seed	D52SS91	112
3492 Long Prairie Rd., Ste 200	D54DC94	114
Flower Mound, TX 75028	D54VC52	114
Shawn Carter	D55VP77	115
972-691-9680	D39SS17	99
	D40SS27	100
	D42SS42	102
	D46SS46	106
DuPont Pioneer	P9697AM	96
6519 72nd St.	P0157AM	101
Lubbock, TX 79424	P0339AM	103
Grant Groene	P0365AM	103
620-229-0465	P0589AM	105
	P0801AM	108
	P0805AM	108
Mycogen Seeds	MY 04A11	102-104
2076 Parkridge Dr.	MY 98G34	98
Hurst, TX 76054	MY 01C77 RA	101
Adam Owens	MY 01D87 RA	101
	MY 02J51	102
	MY 05C67 RA	104
Rob See Co.	IC 4173-3110 A	91
1015 N 205th St	RC 4310-3000 GT	93
Elkhorn, NE 68022	RC 4343-3110 A	93
Trent Leisy	IC 4453-3110	94
970 215 0331	IC 4654-3111	96
	IC 4730-3010	97
	IC 4848-3000 GT	98
	IC 4903-3111 A	99
	IC 5105-3010	101
	RC 5112-3011 A	101
Syngenta	G95D32-3110	95
443 W. County Rd	G98L17-3000 GT	98
Sutherland, NE 69165	G01Q76-3010	101
John Flynn		

New Mexico 2016 Forage Corn Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Relative Maturity
Blue River Hybrids 2326 230th St. Ames, IA 50014 Scott Ausborn 800-370-7979	70A47	114
	73B33	115
	73L30	115
B-H Genetics 5933 FM 1157 Ganado, TX 77962 Travis Janak 361-771-8722	8732VTTP	117
	8907RR	118
	8912VIP3110	118
	8735VTTP	117
	8590VT2P	115
	X16076SS	116
	X16077SS	116
X16080SS	114	
CPS Dyna-Gro Seed 3492 Long Prairie Rd., Ste 200 Flower Mound, TX 75028 Shawn Carter 972-691-9680	D53VC47	113
	D54DC94	114
	D55VP77	115
	D57VP51	117
	D58QC72	118
	CX16218	118
Golden Acres Genetics P.O. Box 20787 Waco, TX 76702 James Allison 512-793-5205	G7601	117
	G8738 UIP3110	118

New Mexico 2016 Forage Corn Hybrid Performance Test, Con't.

Company/Brand Name	Hybrid/Variety Name	Relative Maturity
Masters Choice	EXP 640P	114
305 W. Vienna St	EXP 635P	113
Anna, IL 62906	EXP 688P	113
Kyle Vosburgh	EXP 609Q	112
618-833-6552	EXP 685P	117
	MCT 6733	117
	MCT 6894	118
	MCT 6583	115
	MCT 6153	111
	MCT 6363	
Mycogen Seeds	TMF 14L46	114
2076 Parkridge Dr.	TMF 15H88	115
Hurst, TX 76054	BMR 15B15	115
Adam Owens	TMF 17L86	117
	TMF 17W95	117

New Mexico 2016 Grain Sorghum Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Maturity Group*
Gayland Ward Seed 4395 Hwy 60 Hereford, TX 79045 Carson Ward 806-258-7394	GW 9417	M
Sorghum Partners/Chromatin 1301 E. 50th St Lubbock, TX 79404 Alfredo Pineda 806-790-6542	SP31A15 SP34A19 KS310 K35-Y5 CHR0L0163 NK5418 KS585 CHR13GS0072	E ME E ME E M M ML

*E=early, ME=medium early, ML=medium late, L=late or PS=photoperiod sensitive

New Mexico 2016 Forage Sorghum/SxS Hybrid Performance Test (Single Cut)

Company/Brand Name	Hybrid/Variety Name	Forage Type	Maturity Group*	Brown Midrib
Blue River Hybrids 2326 230th St. Ames, IA 50014 Scott Ausborn 800-370-7979	Bobwhite	FS	E	Y
	Blackhawk	SxS	ML	Y
Browning Seed, Inc. 3101 S. I-27 Plainview, TX 79072 Rodney Smith 806-293-5271	Silage Master	FS	ML	N
CHS Seed Resources 1303 5th St. Friona, TX 79035 John Douglas 806-265-7922	SiloSorghum Conv	FS	L	N
	SiloSorghum BMR Dwarf	FS	L	Y
	SiloSorghum BMR MS	FS	L	Y
	HighYield Conv	SxS	L	N
	HighYield BMR	SxS	L	Y
	HighYield BMR Dwarf	SxS	ME	Y
	HighYield BMR PS	FS	L (PPS)	Y
CPS Dyna-Gro Seed 3492 Long Prairie Rd., Ste 200 Flower Mound, TX 75028 Shawn Carter 972-691-9680	705F	FS	ME	N
	F73FS10	FS	M	N
Ceres, Inc. 1535 Rancho Conejo Blvd Thousand Oaks, CA 91320 Sam Harris 805-375-7811	F4C207	FS	M	N
	EJ7281	FS	L	N
	F4C204	FS	E	N

*E=early, ME=medium early, ML=medium late, L=late or PS=photoperiod sensitive

New Mexico 2016 Forage Sorghum/SxS Hybrid Performance Test (Single Cut), Con't.

Company/Brand Name	Hybrid/Variety Name	Forage Type	Maturity Group*	Brown Midrib
Sorghum				
Partners/Chromatin	Red Top + BMR	FS	M	Y
1301 E. 50th St	Hikane II	FS	M	N
Lubbock, TX 79404	NK 300	FS	ME	N
Alfredo Pineda	SS 405	FS	L	N
806-790-6542	SS 304	FS	L	N
	SP 2876	FS	M	Y
	SP 1615	FS	PS	N
	SP 3903 BD	FS	ML	Y
	SP 1880	FS	L	N
	SP 2774	FS	M	Y
	SP 3902 BD	FS	L	Y
	SP 4105	SS	PS	Y
	CHR14FB0240	FS	M	Y
	CHR12FS0012	FS	M	N
	Sordan Headless	SS	PS	N
<hr/>				
Gayland Ward Seed	Silo Pro BD BMR	FS	ML	Y
4395 Hwy 60	GW 600 BMR	FS	M	Y
Hereford, TX 79045	GW 400 BMR	FS	ME	Y
Carson Ward	GW 2120	FS	M	N
806-258-7394	EXP 10216	FS	E	Y
	EXP 10217	FS	M	N
	Ensile Master	FS	ML	N
	Sweet Forever BMR	SxS	PS	Y
	Super Sugar DM	SxS	L	N

*E=early, ME=medium early, ML=medium late, L=late or PS=photoperiod sensitive

New Mexico 2016 Forage Sorghum/SxS Hybrid Performance Test (Multi Cut)

Company/Brand Name	Hybrid/Variety Name	Forage Type	Maturity Group*	Brown Midrib
Blue River Hybrids 2326 230th St. Ames, IA 50014 Scott Ausborn 800-370-7979	Blackhawk	SxS	ML	Y
	Seahawk	SxS	ML	Y
Browning Seed, Inc. 3101 S. I-27 Plainview, TX 79072 Rodney Smith 806-293-5271	Cadan 99B	SS	M	N
	Sweet Sioux WMR	SS	M	N
	Sweet Sioux BMR	SS	M	Y
	Wondergreen SX66	SS	ME	N
CPS Dyna-Gro Seed 3492 Long Prairie Rd., Ste 200 Flower Mound, TX 75028 Shawn Carter 972-691-9680	FullGraze	SxS	L	N
	FullGraze BMR	SxS	L	Y
Ceres, Inc. 1535 Rancho Conejo Blvd Thousand Oaks, CA 91320 Sam Harris 805-375-7811	S4B221	SxS	L	Y
	S4B224	SxS	L	Y
	F2P134	SxS	PS	N
Gayland Ward Seed 4395 Hwy 60 Hereford, TX 79045 Carson Ward 806-258-7394	Sweet Six BMR	SxS	ME	Y
	Nutra King BMR	SxS	M	Y
	Sweet Forever BMR	SxS	PS	Y
	Super Sugar DM	SxS	L	N
	Super Sugar	SxS	ME	N
	GW 600 BMR	FS	ML	Y

*E=early, ME=medium early, ML=medium late, L=late or PS=photoperiod sensitive

Appendix B
Glossary of Terms

ADF (Acid Detergent Fiber): ADF consists primarily of cellulose, lignin and acid detergent fiber crude protein. In the past ADF was used as a predictor of indigestibility of forages, however in recent years, research has indicated that ADF is not as strongly correlated with decreased digestibility as once thought.

Ash: Ash is the percentage of residue (minerals) remaining after all organic matter in a sample has been completely incinerated.

CP (Crude Protein): CP is termed 'crude' because it is not a direct measurement of protein. CP is an estimation of total protein based on the nitrogen content of a sample. This fraction consists of non-protein nitrogen as well.

Days to Silk: Days to Silk is the number of days from planting until 50% of plants have begun to show silks.

Dry Forage: Dry Forage is green forage converted to a 100% dry matter basis by deducting the amount of Moisture at Harvest.

Ear Height: Ear Height is the average distance from the ground to the base of the ear.

Green Forage: Green Forage is the harvested yield from the entire plot area, except for the basal part of the stem and the roots, multiplied by a conversion factor to convert the harvested plot yield to a per acre equivalent.

Grain Yield: Grain Yield is the harvested grain yield adjusted to a standard moisture and a standard bushel weight then converted to a per acre equivalent. For grain corn, the standard moisture is 15.5% and the standard bushel weight is 56 pounds.

Lodging: Lodging is a visual estimate of the percentage of plants with stalks broken below the head or leaning at an angle in excess of 45 degrees.

Milk/acre (Milk production per acre): Milk/acre is Milk/ton multiplied by Dry Forage (ton/ac).

Milk/ton (Milk production per ton of dry matter forage): Milk/ton is an index of forage nutritive value. Milk/ton is calculated from the Milk2006 Excel spreadsheet <http://www.uwex.edu/ces/forage/pubs/milk2006.xls>. This index uses forage analyses (CP, NDF, NDFD 48hr, Starch and non-fiber carbohydrate) to estimate energy content, and DMI and NDFD 48hr to predict milk/ton.

Moisture at Harvest: Moisture at Harvest is the percentage of the green forage sample or grain sample weight that is moisture at the time of harvest.

NDF (Neutral Detergent Fiber): NDF is an estimate of the total fiber content of the forage. The NDF or cell wall fraction contains cellulose, hemicellulose and lignin. NDF

gives the best estimate of the total fiber content of the feed and is associated with feed intake.

NDFD 48hr (Neutral Detergent Fiber Digestibility - 48hr): NDFD 48hr is a measure of 48 hr digestibility of the NDF component. The NDFD 48 hr procedure employs a 48-hour *in vitro* fermentation. NDFD 48hr is expressed as a percent of NDF.

NE_L (Net Energy for Lactation): NE_L is the energy value of feeds for lactating cows.

N Removal: N Removal is the total amount of nitrogen, in pounds per acre that is removed from the field at harvest. $N \text{ Removal} = \text{dry forage (t/a)} \times 2000 \times N (\%); \text{ where } N (\%) = CP (\%) / 6.25.$

Plant Height: Plant Height is the average height of the plant measured from the ground to the top of the canopy at harvest.

Population: Population is the number of plants per acre based on a count of the number of plants in a plot converted to a per-acre equivalent.

RFV (Relative Feed Value): RFV is an index that estimates the overall quality of the forage to a ruminant. The equation uses ADF to estimate the digestible dry matter content of the forage. This is then combined with an estimate of dry matter intake, which is an estimate of the amount of forage an animal will eat in a given time period. RFV is the most widely used forage quality index in the United States. It is scaled so that full-bloom alfalfa hay would score 100. Typically, hay must score above 150 RFV to be considered 'dairy quality' hay.

RFQ (Relative Forage Quality): RFQ is similar to RFV in that it is an estimate of overall quality of a forage, but it differs in the way it is calculated. It takes total digestible nutrients (TDN) into account rather than DDM calculated from ADF values. This TDN, combined with dry matter intake (DMI), is derived from *in vitro* estimates of digestible fiber. The RFQ value is considered an improved method over RFV and is becoming the new 'standard' in forage quality testing.

Silk Date: Silk Date is the date when 50% of ears have silks fully emerged.

Starch: Starch is the percentage of starch in the ground forage sample.

TDN (Total Digestible Nutrients): TDN represents the sum of digestible crude protein, digestible carbohydrates, digestible nitrogen-free extract and digestible fat. TDN is highly correlated with the energy content of the feed and is used in calculations of net energy values.

Test Weight: Test Weight is the bushel weight equivalent of a sample of grain.