

New Mexico 2014 Corn and Sorghum Performance Tests



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

**New Mexico
2014
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

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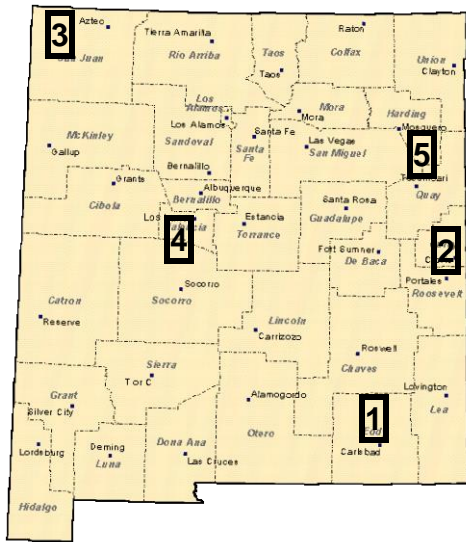
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INTRODUCTION

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 2014 (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.

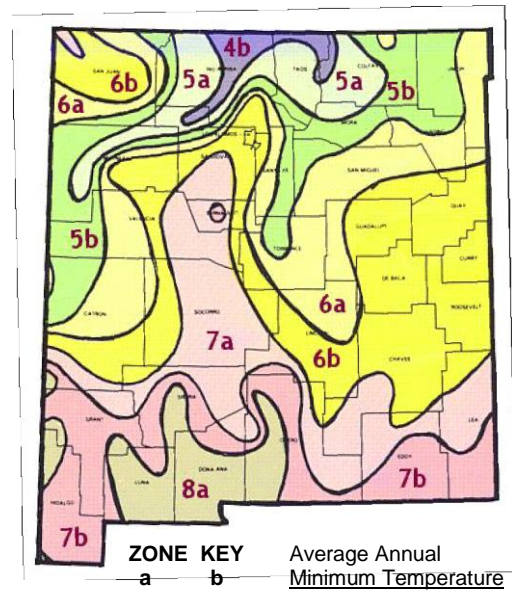


Table 1. Historical average monthly precipitation (inches) and temperatures (°F) for cooperating agricultural science centers.

	Artesia	Clovis	Farmington	Los Lunas	Tucumcari
Precipitation (inches)					
January	0.39	0.35	0.54	0.35	0.36
February	0.41	0.39	0.54	0.41	0.47
March	0.43	0.71	0.70	0.49	0.74
April	0.62	0.79	0.61	0.46	1.08
May	1.05	1.92	0.54	0.45	1.96
June	1.38	2.39	0.19	0.56	1.88
July	1.80	2.88	0.85	1.36	2.59
August	1.67	2.97	1.14	1.70	2.65
September	1.79	1.90	1.09	1.19	1.56
October	1.14	1.60	0.91	1.03	1.25
November	0.54	0.51	0.70	0.46	0.64
December	0.50	0.48	0.48	0.52	0.58
Total	11.55	16.82	8.31	8.91	15.83
Average Temperature (°F)					
January	40.5	37.8	30.2	34.5	38.5
February	45.2	41.2	35.9	40.0	42.2
March	51.9	47.9	43.7	47.0	49.3
April	60.5	56.3	51.0	54.8	57.7
May	69.2	64.8	60.2	63.4	66.3
June	77.7	74.0	70.2	72.5	75.8
July	79.7	76.4	75.7	76.9	79.1
August	78.4	74.9	73.4	74.8	77.5
September	71.6	68.5	65.9	67.3	70.7
October	61.0	58.3	53.7	55.8	59.7
November	48.8	46.4	40.9	43.5	47.6
December	40.8	38.8	31.2	35.1	39.3
Average	60.4	57.0	52.7	55.6	58.7

Source: Western Region Climate Center: <http://www.wrcc.dri.edu/summary/climsmnm.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 2014 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 2015 Corn and Sorghum Performance Tests will be mailed to seed companies in February 2015. Additional 2015 entry forms can be obtained from the address above.

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 the University of Wisconsin, Soil and Forage Analysis Laboratory, Marshfield, WI (or other 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 2014 corn and sorghum variety tests are shown in Tables 2-14. 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.

Grain Corn

Entries for grain corn tests were accepted by the Agricultural Science Centers at Farmington.

One grain corn test was conducted at Farmington. The grain corn test contained 18 entries. Mean grain yield was 226 bu/ac and yields were different and average test weight was 59 lb/bu. (Tables 2A-B). Differences were observed for all other measured parameters.

Grain Sorghum

A dryland grain sorghum test was conducted at the Clovis science center in 2014. Several entries included in the dryland test were part of a larger, regional testing program conducted by Texas A&M in which the Clovis center participates. Although yield results are reported, company contact information and variety characteristics of these entries are not included in this report.

The dryland grain sorghum test at Clovis contained 39 entries in all; mean yield was 29 bu/A (1619 lb/A) and yields ranged from 7 to 49 bu/A (Tables 3A-B). Sporadic precipitation, combined with field inconsistency, led to highly variable yield results and a relatively high CV.

An irrigated grain sorghum test was conducted at the Tucumcari science center. Nine entries were tested. Mean yield was 59 bu/ac (3298 lb/ac) and yields were quite variable at this location as well. Test weights were good and averaged 59 lb/ac (Tables 4A-B).

Forage Corn

Forage corn tests were conducted at the Agricultural Science Centers at Artesia, Clovis, and Farmington. The Artesia forage corn test experienced extensive hail and wind damage and was not harvested as a result.

There were 33 entries in the Clovis forage corn test. Mean dry forage yield was 7.7 ton/A and wet yields averaged 26.4 ton/A (Tables 5A-B). Yields ranged from 22 to 30 ton/A. The initial planting at Clovis was hailed out and the trial was replanted on June 19. Despite the late second planting, yields were respectable with more moderate inputs. Hybrids differed in all yield and nutrient composition parameters except for ash

content. Beginning in 2010, fertilizer, seed and irrigation inputs were reduced in the Clovis trial. This was done in response to the ever-increasing pressures of regional water issues, specifically declining well capacities. Researchers at Clovis feel that it is prudent to test new hybrid performance under such limiting conditions.

Four hybrids were evaluated in the Farmington forage corn test. Dry forage yield averaged 13.0 ton/ac and yields were similar among hybrids for both dry and wet estimates (Tables 6A-B). Differences were observed for only plant/ear heights and neutral detergent fiber digestibility.

Forage Sorghum & Sorghum Sudangrass

Entries for irrigated forage sorghum and sorghum x sudangrass evaluations were accepted at the Agricultural Science Centers at Artesia, Clovis, Los Lunas, and Tucumcari.

There were 10 entries in the irrigated forage sorghum test at Artesia. Dry forage yield ranged from 2.5 to 5.4 ton/ac and mean wet yield was 14.5 ton/ac (Tables 7A-B). Yields were low due to moderate damage to plants as a result of a herbicide misapplication. Forage yield and quality estimates differed among the entries. Artesia also conducted a separate sorghum x sudangrass test (Tables 13A-B). Again, as a result of the herbicide misapplication, all plots were harvested only once on October 15. There were 6 entries in the test. Mean total, dry forage yield was 3.7 ton/A and only a few quality differences were observed.

At Clovis, there were 35 entries in the irrigated forage sorghum test. Mean forage yields were 5.8 and 19.8 ton/ac for dry and green yields, respectively, and differences were observed for all yield and nutritive parameters (Tables 8A-B). Wet yields ranged from 9.3 to 28.5 ton/ac; the higher yields are excellent considering the late planting and sporadic rainfall conditions of 2014. A separate dryland forage sorghum trial including the same 35 entries was conducted at Clovis; and one cutting was obtained. Total dry forage yield averaged 2.3 ton/ac for the year (Tables 9A-B) and wet yields averaged 8.1 ton/ac as a result of inconsistent rains.

The Los Lunas forage sorghum test contained 20 entries and contained both forage sorghum hybrids and sorghum sudangrass hybrids, managed as a one-cut system. Ideal growing conditions and timely rains resulted in good yields (Tables 10A-B). Dry forage yield averaged 6.7 ton/ac (24.7 mean wet yield). Fresh weights exceeded 40 ton/ac in certain varieties; however, yields were broad in range and ranged from 14.6 to 40.9 ton/ac. Differences were observed for all yield components and quality parameters.

The Tucumcari science center conducted two forage sorghum/sorghum sudangrass tests. One was managed as a one-cut system, the other as a two-cut. In the one-cut trial, 9 sorghums were planted on May 28 in the irrigated test (Tables 11A-B). Yields averaged 5.7 and 16.3 ton/ac for dry and wet yields, respectively. Yields among the entries were different, and several quality parameters were as well. In the two-cut test, planted on June 3, the same 9 entries were grown (Tables 12A-C). This test was harvested on Aug 20 and Oct 27. Total dry yields (5.5 ton/ac) were similar to those observed in the one-cut test; however, wet yields were higher. No varietal differences were observed for any of the yield or quality components in the two-cut test.

Table 2A. New Mexico 2014 Grain Corn Performance Test - Agricultural Science Center at Farmington

Investigators: O'Neill, M.K. and Owen, C.K. and Begay, D. and West, M

Test Description

Location:	Management Practices:	Growing Conditions:
County/Area: San Juan	Previous Crop: 2013 fallow, 2012 potaoes	
Longitude: -108.306	Planting Date: 14-May	
Latitude: 36.6812	Harvest Date: 13-Nov	
Elevation: 5,640 ft.		
Soil Name: Wall		
Soil Texture: sandy loam		
Soil Depth: > 75 in.		
	Production Inputs	
	<u>Rate</u>	<u>Date</u>
	Fertilizer:	
	Nitrogen 25 lb/a	6-Mar
	Nitrogen 14 lb/a	27-May
	Nitrogen 14 lb/a	4-Jun
	Nitrogen 14 lb/a	10-Jun
	Nitrogen 14 lb/a	18-Jun
	Nitrogen 14 lb/a	25-Jun
	Nitrogen 14 lb/a	30-Jun
	Nitrogen 14 lb/a	3-Jul
	Nitrogen 14 lb/a	8-Jul
	Nitrogen 14 lb/a	11-Jul
	Nitrogen 14 lb/a	15-Jul
	Nitrogen 105 lb/a	July 17 to Aug 7
	Total Nitrogen 270 lb/a	
	P ₂ O ₅ 110 lb/a	6-Mar
	K ₂ O 165 lb/a	6-Mar
	ZnSO ₄ 7 lb/a	6-Mar
	Herbicides:	
	Bicep Lite II Mag 1.5 qt/a	21-May
	2,4-D 3 oz/a	21-May
	Status 5 oz/a	17-Jun
	Prowl H ₂ O 1.3 pt/a	17-Jun
Test Design:		
Replications: 3		
Plot Length: 20 ft.		
Rows per Plot: 4		
Row Spacing: 30 in.		
Seeding Rate: 36,000 seeds/a		
Harvest area: 2 row 20 feet long		
		Average
		Temp. Precip. Irrigation
		°F in. in.
		January
		February
		March
		April
		May 59.2 0.26 4.0
		June 70.8 0.00 6.5
		July 77.4 0.47 11.0
		August 72.1 1.07 11.5
		September 69.1 1.55 7.4
		October 56.2 0.15
		November
		December
		Seasonal Precipitation 3.5 in.
		Total Irrigation 40.4 in.
		Date of Last Spring Frost: 13-May
		Date of First Fall Frost: 3-Nov
		Frost Free Period: 174 days

Table 2B. New Mexico 2014 Grain Corn Performance Test - Agricultural Science Center at Farmington

Results

Brand/Company Name	Hybrid/Variety Name	Grain Yield bu/a	Moisture at Harvest %	Test Weight lb/bu	Plant Height in	Ear Height in	Silk Date	Plant Population
Mycogen Seeds	X13512VX	270.3	15.7	58.2	98	43	27-Jul	32,670
Roth Seed Co. Inc.	RSC-5400-3000GT	267.8	15.9	57.3	98	42	29-Jul	33,541
Mycogen Seeds	2P659	260.1	16.7	58.8	99	48	31-Jul	34,993
Mycogen Seeds	2D598	256.7	14.8	58.3	94	41	30-Jul	34,993
DuPont Pioneer	P0157AM	254.4	13.9	60.6	89	38	29-Jul	36,155
Roth Seed Co. Inc.	RSC-4024-3000GT	253.0	13.9	56.9	88	36	27-Jul	34,993
Mycogen Seeds	2T619 (X14504)	238.9	15.1	59.0	93	36	28-Jul	34,703
DuPont Pioneer	P0506AM	235.5	13.9	60.2	94	42	30-Jul	33,686
Roth Seed Co. Inc.	RSC-3500-3000GT	232.1	14.3	58.3	96	35	30-Jul	34,993
Mycogen Seeds	2V489 (X14402)	228.8	12.6	58.3	87	37	27-Jul	35,574
DuPont Pioneer	P0419AMX	210.3	14.6	61.4	83	34	28-Jul	33,541
DuPont Pioneer	P0365AM	208.6	13.9	60.1	89	35	29-Jul	33,541
Mycogen Seeds	2Y479	207.8	13.3	59.5	85	37	29-Jul	35,864
Mycogen Seeds	2T498	197.7	12.7	59.9	87	35	26-Jul	33,541
DuPont Pioneer	P9697AM	195.5	12.1	60.2	77	29	22-Jul	36,445
Roth Seed Co. Inc.	RSC-4030-3000GT Artesian	188.0	14.9	59.3	88	39	28-Jul	35,284
Mycogen Seeds	2K395	187.5	12.3	59.5	82	33	26-Jul	34,412
DuPont Pioneer	P9789AMX	182.2	12.8	57.9	78	32	26-Jul	30,782
	Trial Mean	226.4	14.1	59.1	89	37	28-Jul	34,429
	LSD	42.6	1.0	0.8	8	6	-	2173
	LSD P >	0.05	0.05	0.05	0.05	0.05	-	0.05
	CV	11.3	4.2	0.9	5.1	9.0	-	3.8
	F Test	0.0003	<0.0001	<0.0001	<0.0001	<0.0001	-	0.0013

Table 3A. New Mexico 2014 Dryland Grain Sorghum 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-Jun Harvest Date: 20-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>49 lb/a</td> <td>carryover</td> </tr> <tr> <td>Nitrogen</td> <td>75 lb/a</td> <td>19-Jun</td> </tr> <tr> <td>P₂O₅</td> <td>30 lb/a</td> <td>19-Jun</td> </tr> <tr> <td>S</td> <td>12 lb/a</td> <td>19-Jun</td> </tr> <tr> <td>Zn</td> <td>2 qt/a</td> <td>19-Jun</td> </tr> </tbody> </table> <p>Herbicides: Bicep Lite Mag II 3 pt/a 20-Jun</p> <p>Insecticides: None</p>		Rate	Date	Fertilizer:			Nitrogen	49 lb/a	carryover	Nitrogen	75 lb/a	19-Jun	P ₂ O ₅	30 lb/a	19-Jun	S	12 lb/a	19-Jun	Zn	2 qt/a	19-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>35.0</td><td></td><td></td></tr> <tr><td>February</td><td>38.4</td><td></td><td></td></tr> <tr><td>March</td><td>45.1</td><td></td><td></td></tr> <tr><td>April</td><td>53.6</td><td></td><td></td></tr> <tr><td>May</td><td>62.9</td><td></td><td></td></tr> <tr><td>June</td><td>73.2</td><td>3.08</td><td></td></tr> <tr><td>July</td><td>75.0</td><td>2.23</td><td></td></tr> <tr><td>August</td><td>75.0</td><td>0.61</td><td></td></tr> <tr><td>September</td><td>67.0</td><td>2.65</td><td></td></tr> <tr><td>October</td><td>60.0</td><td>0.09</td><td></td></tr> <tr><td>November</td><td>41.0</td><td>0.13 *</td><td></td></tr> <tr><td>December</td><td></td><td></td><td></td></tr> </tbody> </table> <p>* Nov 1-20</p> <p>Seasonal Precipitation: 8.79 in.</p> <p>Date of Last Spring Frost: 14-May Date of First Fall Frost: 11-Nov Frost Free Period: 181 days</p>		Average Temp. °F	Precip. in.	Irrigation in.	January	35.0			February	38.4			March	45.1			April	53.6			May	62.9			June	73.2	3.08		July	75.0	2.23		August	75.0	0.61		September	67.0	2.65		October	60.0	0.09		November	41.0	0.13 *		December			
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<p>Test Design: Replications: 3 Plot Length: 20 ft. Rows per Plot: 2 Row Spacing: 30 in. Seeding Rate: 29,000 seed/a</p>																																																																											

Table 3B. New Mexico 2014 Dryland Grain Sorghum Performance Test - Agricultural Science Center at Clovis

Hybrid	Company or Brand Name	Maturity Class	Head Date	Plant Height in.*	Moisture %	Yield lb/A	Yield bu/A	Test Weight lb/bu
Terral Seed	RV 9782	ML	28-Aug	20.2	11.1	2714	48.5	54.3
Monsanto/Dekalb	DKS 41-50	M	21-Aug	20.9	11.1	2544	45.4	54.2
Monsanto/Dekalb	DKS 37-07	ME	20-Aug	21.5	10.9	2374	42.4	50.7
Monsanto/Dekalb	DKS 29-28	E	13-Aug	19.3	10.8	2315	41.3	55.9
Texas A&M Agrilife Res.	ATx378xRTx430	ML	29-Aug	24.0	10.3	2314	41.3	48.7
Advanta US	Alta AG 1203	E	28-Aug	21.4	11.5	2294	41.0	56.2
Sorghum Partners	SP 6929	ML	20-Aug	21.7	10.9	2280	40.7	53.9
Advanta US	Alta AG 1301	ME	29-Aug	21.9	10.4	2137	38.2	53.9
Advanta US	Alta AG 1201	E	17-Aug	20.0	10.4	2090	37.3	53.7
Mycogen Seeds	1G557	E	23-Aug	17.2	10.3	1990	35.5	55.8
Sorghum Partners	NK 5418	M	24-Aug	20.7	10.5	1958	35.0	54.4
Sorghum Partners	KS 310	E	15-Aug	18.0	10.2	1936	34.6	52.8
Armour Seed	Lighting	E	24-Aug	21.3	10.6	1932	34.5	55.4
Advanta US	Alta AG 1101	E	14-Aug	18.6	9.5	1927	34.4	49.3
Sorghum Partners	SP 3425	ME	16-Aug	17.7	10.8	1905	34.0	55.6
Advanta US	XG 02008	ME	27-Aug	21.0	10.3	1842	32.9	54.6
Mycogen Seeds	E 33573	ML	25-Aug	22.4	10.9	1773	31.7	53.5
Sorghum Partners	NK 7633	ML	27-Aug	21.4	10.8	1773	31.6	54.8
Sorghum Partners	SP 3303	ME	21-Aug	19.5	10.1	1763	31.5	53.1
Advanta US	Alta AG 2115	M	23-Aug	21.5	11.1	1739	31.1	55.1
Armour Seed	Outlaw	ML	4-Sep	23.1	11.1	1691	30.2	53.2
Monsanto/Dekalb	DKS 44-20	M	20-Aug	19.7	11.3	1647	29.4	55.5
Sorghum Partners	KS 585	M	28-Aug	22.6	11.1	1610	28.7	56.8
Texas A&M Agrilife Res.	ATx631xRTx436	ML	8-Sep	21.9	10.5	1442	25.8	50.5
Sorghum Partners	K 35-Y5	ME	16-Aug	21.0	10.4	1435	25.6	56.4
Mycogen Seeds	E 33761	ML	2-Sep	21.1	10.4	1393	24.9	52.4
Terral Seed	RV 9562	MW	28-Aug	20.5	10.3	1307	23.3	53.5
Sorghum Partners	X 445	ME	25-Aug	21.2	10.2	1306	23.3	53.9
Monsanto/Dekalb	DKS 28-05	E	13-Aug	20.9	8.9	1298	23.2	47.7
Warner Seeds, Inc.	W-7012	ML	8-Sep	19.9	10.6	1201	21.5	53.5
Mycogen Seeds	1G688	M	5-Sep	23.4	12.4	1185	21.2	51.7
Advanta US	XG 30001	M	22-Aug	18.2	10.9	1122	20.0	52.1
Advanta US	Alta AG 2105	M	25-Aug	20.9	9.7	1033	18.5	50.8
Armour Seed	Maverick	M	31-Aug	21.2	11.4	872	15.6	51.4
Advanta US	XG 30002	M	25-Aug	19.5	11.3	709	12.7	54.0
Texas A&M Agrilife Res.	ATx2752xRTx430	ML	16-Sep	24.1	10.2	696	12.4	53.3
Mycogen Seeds	1G 855	L	15-Sep	24.3	11.8	681	12.2	46.2
Mycogen Seeds	1G 741	ML	2-Sep	21.1	10.9	520	9.3	51.5
Advanta US	XG 30003	M	7-Sep	20.0	11.7	403	7.2	50.2
	Trial Mean		26-Aug	20.8	10.7	1619	28.9	53.0
	LSD		8.0	3.3	1.0	745	13.3	5.1
	LSD P >		0.05	0.05	0.05	0.05	0.05	0.05
	CV		2.1	9.8	5.7	28.3	28.3	5.9
	F Test		<0.0001	0.0018	<0.0001	<0.0001	<0.0001	0.0106

* Plant height is measured from the ground to the top of the leaf canopy.

Table 4A. New Mexico 2014 Irrigated Grain Sorghum Performance Test - Agricultural Science Center at Tucumcari

Investigators: L.M. Lauriault, J. Box, P.L. Cooksey, S. Jennings, J. Jennings, and G. Roberts

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: 28-May Harvest Dates: 24-Oct Production Inputs <hr/> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 20%; text-align: center;">Rate</th> <th style="width: 20%; text-align: center;">Date</th> </tr> </thead> <tbody> <tr> <td colspan="3">Fertilizer:</td> </tr> <tr> <td>Nitrogen</td> <td style="text-align: center;">12 lb/a</td> <td style="text-align: center;">carryover</td> </tr> <tr> <td>Nitrogen</td> <td style="text-align: center;">100 lb/a</td> <td style="text-align: center;">9-Jul</td> </tr> <tr> <td>P2O5</td> <td style="text-align: center;">lb/a</td> <td></td> </tr> </tbody> </table> Pesticides (herbicides and insecticides): <table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 30%;">Brawl</td> <td style="width: 20%; text-align: center;">1 pt/a pt/a</td> <td style="width: 50%; text-align: center;">4-Jun</td> </tr> </tbody> </table>		Rate	Date	Fertilizer:			Nitrogen	12 lb/a	carryover	Nitrogen	100 lb/a	9-Jul	P2O5	lb/a		Brawl	1 pt/a pt/a	4-Jun	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;"></th> <th style="width: 20%; text-align: center;">Average Temp. °F</th> <th style="width: 20%; text-align: center;">Precip. in.</th> <th style="width: 20%; text-align: center;">Irrigation in.</th> </tr> </thead> <tbody> <tr><td>January</td><td style="text-align: center;">40.0</td><td style="text-align: center;">0.01</td><td style="text-align: center;">-</td></tr> <tr><td>February</td><td style="text-align: center;">41.0</td><td style="text-align: center;">0.03</td><td style="text-align: center;">-</td></tr> <tr><td>March</td><td style="text-align: center;">49.0</td><td style="text-align: center;">0.22</td><td style="text-align: center;">-</td></tr> <tr><td>April</td><td style="text-align: center;">58.0</td><td style="text-align: center;">0.21</td><td style="text-align: center;">-</td></tr> <tr><td>May</td><td style="text-align: center;">66.0</td><td style="text-align: center;">2.42</td><td style="text-align: center;">5.47</td></tr> <tr><td>June</td><td style="text-align: center;">76.0</td><td style="text-align: center;">4.00</td><td style="text-align: center;">3.23</td></tr> <tr><td>July</td><td style="text-align: center;">79.0</td><td style="text-align: center;">2.54</td><td style="text-align: center;">3.93</td></tr> <tr><td>August</td><td style="text-align: center;">79.0</td><td style="text-align: center;">0.82</td><td style="text-align: center;">5.21</td></tr> <tr><td>September</td><td style="text-align: center;">70.0</td><td style="text-align: center;">2.73</td><td style="text-align: center;">2.00</td></tr> <tr><td>October</td><td style="text-align: center;">63.0</td><td style="text-align: center;">0.19</td><td style="text-align: center;">1.00</td></tr> <tr><td>November</td><td style="text-align: center;">45.0</td><td style="text-align: center;">0.37</td><td style="text-align: center;">-</td></tr> <tr><td>December</td><td style="text-align: center;">40.0</td><td style="text-align: center;">0.38</td><td style="text-align: center;">-</td></tr> </tbody> </table> <table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 60%;">Seasonal Precipitation</td> <td style="width: 40%; text-align: right;">13.9 in.</td> </tr> <tr> <td>Total Irrigation</td> <td style="text-align: right;">20.8 in.</td> </tr> </tbody> </table> Date of Last Spring Frost: 15-Apr Date of First Fall Frost: 11-Nov Frost Free Period: 210 days		Average Temp. °F	Precip. in.	Irrigation in.	January	40.0	0.01	-	February	41.0	0.03	-	March	49.0	0.22	-	April	58.0	0.21	-	May	66.0	2.42	5.47	June	76.0	4.00	3.23	July	79.0	2.54	3.93	August	79.0	0.82	5.21	September	70.0	2.73	2.00	October	63.0	0.19	1.00	November	45.0	0.37	-	December	40.0	0.38	-	Seasonal Precipitation	13.9 in.	Total Irrigation	20.8 in.
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Table 4B. New Mexico 2014 Irrigated Grain Sorghum Performance Test - Agricultural Science Center at Tucumcari

Brand/Company Name	Hybrid/Variety Name	Maturity Class	Immature Heads	Moisture	Yield	Yield	Test Weight
			%	%	lb/A	bu/A	lb/bu
Sorghum Partners	NK5418	ME	3.3	8.2	4371	78.1	59.0
Sorghum Partners	X445	ME	5.3	9.0	3712	66.3	57.9
Sorghum Partners	K35-Y5	ME	10.0	8.3	3689	65.9	59.1
Sorghum Partners	NK7829	ML	0.0	9.4	3556	63.5	58.3
Sorghum Partners	KS585	M	7.5	8.7	3466	61.9	62.0
Sorghum Partners	KS310	E	37.5	9.3	3104	55.4	59.6
Warner Seeds, Inc.	W-7012	ML	0.5	9.3	2848	50.9	58.3
Sorghum Partners	K73-J6	L	2.5	9.5	2570	45.9	58.6
Sorghum Partners	SP3303	ME	47.5	9.3	2370	42.3	58.8
	Trial Mean		12.7	9.0	3298	58.9	59.1
	LSD		17.5	0.89	997	17.8	2.4
	LSD P >		0.05	0.05	0.05	0.05	0.05
	CV		94.5	6.8	20.7	20.7	2.7
	F Test		0.0001	0.0536	0.0095	0.0095	0.0414

Table 5A. New Mexico 2014 Forage Corn 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: 19-Jun Harvest Date: 9-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 style="padding-left: 20px;">Nitrogen</td> <td style="text-align: center;">220 lb/a</td> <td style="text-align: center;">17-Jun</td> </tr> <tr> <td style="padding-left: 40px;">P₂O₅</td> <td style="text-align: center;">40 lb/a</td> <td style="text-align: center;">17-Jun</td> </tr> <tr> <td style="padding-left: 40px;">S</td> <td style="text-align: center;">38 lb/a</td> <td style="text-align: center;">17-Jun</td> </tr> <tr> <td style="padding-left: 40px;">Zn</td> <td style="text-align: center;">3 qt/a</td> <td style="text-align: center;">17-Jun</td> </tr> <tr> <td colspan="3">Herbicides:</td> </tr> <tr> <td style="padding-left: 20px;">Bicep Lite II Mag</td> <td style="text-align: center;">3 pt/a</td> <td style="text-align: center;">20-Jun</td> </tr> <tr> <td style="padding-left: 20px;">Round Up Power Max</td> <td style="text-align: center;">32 oz/ac</td> <td style="text-align: center;">22-Jul</td> </tr> <tr> <td style="padding-left: 40px;">Brawl</td> <td style="text-align: center;">1 pt/ac</td> <td style="text-align: center;">22-Jul</td> </tr> <tr> <td colspan="3">Insecticides:</td> </tr> <tr> <td style="padding-left: 20px;">Onager</td> <td style="text-align: center;">16 oz/ac</td> <td style="text-align: center;">21-Jul</td> </tr> <tr> <td style="padding-left: 20px;">Prevethon</td> <td style="text-align: center;">20 oz/ac</td> <td style="text-align: center;">11-Aug</td> </tr> </tbody> </table>		Rate	Date	Fertilizer:			Nitrogen	220 lb/a	17-Jun	P ₂ O ₅	40 lb/a	17-Jun	S	38 lb/a	17-Jun	Zn	3 qt/a	17-Jun	Herbicides:			Bicep Lite II Mag	3 pt/a	20-Jun	Round Up Power Max	32 oz/ac	22-Jul	Brawl	1 pt/ac	22-Jul	Insecticides:			Onager	16 oz/ac	21-Jul	Prevethon	20 oz/ac	11-Aug	<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;">35.0</td><td></td><td></td></tr> <tr><td>February</td><td style="text-align: center;">38.4</td><td></td><td></td></tr> <tr><td>March</td><td style="text-align: center;">45.1</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;">62.9</td><td></td><td></td></tr> <tr><td>June</td><td style="text-align: center;">73.2</td><td style="text-align: center;">3.1</td><td style="text-align: center;">1.4</td></tr> <tr><td>July</td><td style="text-align: center;">75.0</td><td style="text-align: center;">2.2</td><td style="text-align: center;">6.3</td></tr> <tr><td>August</td><td style="text-align: center;">75.0</td><td style="text-align: center;">0.6</td><td style="text-align: center;">7.2</td></tr> <tr><td>September</td><td style="text-align: center;">67.0</td><td style="text-align: center;">2.7</td><td style="text-align: center;">2.8</td></tr> <tr><td>October*</td><td style="text-align: center;">60.0</td><td style="text-align: center;">0.0</td><td style="text-align: center;">0.7</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="4">*October 1-9</td></tr> <tr><td colspan="2">Seasonal Precipitation:</td><td style="text-align: center;">8.6</td><td></td></tr> <tr><td colspan="2">Total Irrigation:</td><td style="text-align: center;">18.4</td><td></td></tr> <tr><td colspan="2">Date of Last Spring Frost:</td><td style="text-align: center;">14-May</td><td></td></tr> <tr><td colspan="2">Date of First Fall Frost:</td><td style="text-align: center;">11-Nov</td><td></td></tr> <tr><td colspan="2">Frost Free Period:</td><td style="text-align: center;">181 days</td><td></td></tr> </tbody> </table>		Average Temp. °F	Precip. in.	Irrigation in.	January	35.0			February	38.4			March	45.1			April	53.6			May	62.9			June	73.2	3.1	1.4	July	75.0	2.2	6.3	August	75.0	0.6	7.2	September	67.0	2.7	2.8	October*	60.0	0.0	0.7	November				December				*October 1-9				Seasonal Precipitation:		8.6		Total Irrigation:		18.4		Date of Last Spring Frost:		14-May		Date of First Fall Frost:		11-Nov		Frost Free Period:		181 days	
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Table 5B. New Mexico 2014 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	
B-H Genetics	BH 8830 VTTP	9.8	26.8	63.4	8.4	40.5	58.7	32.1	2.8	66.9	0.689	3219	31600
B-H Genetics	BH 8732 VTTP	9.3	29.3	68.2	8.7	45.6	58.6	24.5	3.4	64.4	0.662	3045	28290
Winfield/Croplan	8750 RH	9.1	29.3	68.8	8.9	44.9	60.4	24.9	3.7	65.2	0.670	3113	28403
B-H Genetics	BH 8660 VTTP	9.1	26.7	65.9	8.5	39.8	58.6	34.3	2.8	66.6	0.685	3198	29084
B-H Genetics	BH 8735 VT2P	9.0	29.0	68.9	8.6	43.7	59.7	29.5	3.0	66.1	0.680	3172	28754
CPS Dyna-Gro	D 59 HR50	9.0	28.2	67.9	8.5	42.2	59.7	30.8	3.0	66.9	0.690	3233	29149
Mycogen Seeds	TMF 2H747	8.9	29.1	69.5	8.6	44.2	58.2	26.9	3.7	64.6	0.663	3053	26990
Winfield/Croplan	7927 VT3P	8.9	28.3	68.7	9.1	45.8	58.8	22.6	4.1	63.4	0.650	2975	26294
B-H Genetics	X 14042 HXRR	8.7	29.9	70.7	8.7	47.2	59.3	21.5	3.8	63.4	0.650	2974	26069
B-H Genetics	BH 7810 VT2P	8.7	24.0	63.7	8.0	39.6	62.1	33.7	2.8	68.8	0.710	3390	29656
Golden Acres Genetics	G 8551	8.7	28.2	69.1	8.5	50.0	59.3	21.3	4.1	64.0	0.657	3022	26330
Monsanto/Dekalb	DKC 67-88	8.7	27.4	68.3	9.0	44.6	58.5	27.5	3.3	65.7	0.675	3130	27117
B-H Genetics	BH 8700 SS	8.7	25.8	66.5	8.6	39.9	59.6	33.0	2.8	67.7	0.698	3289	28451
Golden Acres Genetics	G 7663	8.6	26.7	67.7	8.8	42.9	60.1	27.9	3.6	66.0	0.679	3169	27274
Monsanto/Dekalb	DKC 70-01	8.5	28.2	69.9	9.0	44.6	55.8	26.4	3.3	63.7	0.653	2966	25093
Mycogen Seeds	TMF 2L825	8.4	27.5	69.3	8.6	47.7	57.9	21.3	4.0	62.5	0.640	2899	24406
CPS Dyna-Gro	D 55 VP77	8.4	25.9	67.4	9.1	42.7	58.7	26.9	3.9	65.3	0.671	3106	26190
B-H Genetics	BH 8630 VTTP	8.4	24.2	65.5	8.2	44.7	58.0	28.0	3.1	64.4	0.661	3036	25333
B-H Genetics	BH 8977 RR/HX	8.2	26.5	68.9	8.0	45.2	60.7	28.8	2.9	66.5	0.685	3212	26449
Monsanto/Dekalb	DKC 68-92	8.2	26.0	68.3	8.5	43.8	59.3	28.3	3.0	65.8	0.677	3148	25915
CPS Dyna-Gro	D 57 VP75	8.2	26.0	68.5	8.9	44.5	58.7	24.9	3.5	64.4	0.661	3042	24920
B-H Genetics	BH 8900 VIP 3111	8.1	24.4	66.9	8.9	41.2	60.2	28.9	3.3	65.9	0.678	3165	25556
Monsanto/Dekalb	DKC 66-40	8.0	25.5	68.3	8.9	44.4	57.6	24.4	3.8	63.6	0.652	2976	23973
CPS Dyna-Gro	D 58 QC72	8.0	26.9	70.1	9.4	44.9	59.2	25.6	3.4	65.5	0.674	3129	25088
Golden Acres Genetics	G 7601	8.0	25.6	68.8	9.3	44.9	60.4	23.3	4.1	64.6	0.663	3069	24466
Masters Choice	MCT 6894	8.0	23.3	65.8	8.4	42.5	59.8	30.1	3.0	66.3	0.682	3189	25398
Winfield/Croplan	8512 VT2P	7.8	24.0	67.6	9.4	41.1	59.7	28.2	4.2	65.8	0.676	3149	24551
Mycogen Seeds	TMF 2L874	7.8	29.3	73.4	9.7	48.2	59.1	19.2	4.2	62.6	0.641	2916	22750
B-H Genetics	BH 8783 VIP 3111	7.8	24.2	67.9	9.1	42.3	59.9	28.4	3.8	66.1	0.680	3173	24641
Mycogen Seeds	TMF 2H919	7.5	23.2	67.5	9.0	46.0	59.4	25.0	3.4	65.7	0.675	3139	23567
Mycogen Seeds	F2F 817	7.4	26.3	71.8	9.6	45.1	63.1	24.2	3.3	66.9	0.689	3257	24150
Masters Choice	MCT 6583	7.4	21.5	65.6	8.5	40.9	59.6	30.3	3.1	66.8	0.688	3222	23945
Masters Choice	MCT 6753	7.4	23.2	68.3	8.9	42.2	58.9	29.7	3.0	66.5	0.685	3193	23558
	Trial Mean	7.7	26.4	68.1	8.8	43.9	59.3	27.0	3.4	65.4	0.672	3120	26164
	LSD	1.0	3.0	3.4	0.8	3.8	1.8	6.7	NS	2.7	0.030	205	4064
	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	8.4	6.9	3.1	5.6	5.3	1.8	15.1	20.9	2.5	2.7	4.0	9.5
	F Test	0.0007	<0.0001	0.0002	0.0049	<0.0001	<0.0001	0.0009	0.2129	0.0019	0.0018	0.0015	0.0059

Table 6B. New Mexico 2014 Forage Corn Performance Test - Agricultural Science Center at Farmington

Results

Brand/Company Name	Hybrid/Variety Name	Moisture					CP	NDFD				TDN	Milk/Ton	Milk/Acre
		Dry Forage	Green Forage	at Harvest	Plant Height	Ear Height		48hr	Starch	Ash				
		t/a	t/a	%	in	in	%	%	%	%	%	lb/t	lb/a	
CPS Dyna-Gro Seed	D57VP75 (VT3P)	13.5	34.9	61.4	99	42	9.1	38.0	59.0	32.5	5.1	64.4	2740	37103
CPS Dyna-Gro Seed	D58QC72	13.4	34.7	61.5	101	39	9.8	35.4	55.9	35.5	4.8	65.1	2818	37699
CPS Dyna-Gro Seed	D59HR50 (HX/RR2)	13.3	36.0	63.0	114	48	9.6	37.5	57.5	33.9	5.5	64.4	2751	36568
CPS Dyna-Gro Seed	D55VP77 (VT3P)	11.9	30.1	60.4	86	41	9.2	35.4	57.1	37.7	4.9	65.0	2802	33432
	Trial Mean	13.0	33.9	61.6	100	42	9.4	36.6	57.4	34.9	5.1	64.7	2778	36200
	LSD	NS	NS	NS	6.2	5.2	NS	NS	1.1	NS	NS	NS	NS	NS
	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	9.7	8.4	2.9	3.9	7.7	4.4	5.7	1.2	9.4	8.8	2.0	3.7	11.7
	F Test	0.2988	0.0667	0.2650	<0.0001	0.0174	0.1265	0.2342	0.0011	0.2098	0.2343	0.7797	0.6626	0.5201

Table 7A. New Mexico 2014 Forage Sorghum Performance Test - Agricultural Science Center at Artesia

Investigators: R. Flynn, R. Pacheco

Test Description

Location:	Management Practices:	Growing Conditions:																																																																						
County/Area: Eddy Longitude: -104.38 Latitude: 32.75 Elevation: 3353 ft. Soil Name: Pima Soil Texture: Silty clay loam Soil Depth: 60 in.	Previous Crop: Cotton Planting Date: 6-Jun Harvest Date: 15-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 style="text-align: center;">50 lb/a</td> <td style="text-align: center;">carryover</td> </tr> <tr> <td>Nitrogen</td> <td style="text-align: center;">130 lb/a</td> <td style="text-align: center;">24-May</td> </tr> <tr> <td>P₂O₅</td> <td style="text-align: center;">80 lb/a</td> <td style="text-align: center;">24-May</td> </tr> <tr> <td>K₂O</td> <td style="text-align: center;">40 lb/a</td> <td style="text-align: center;">24-May</td> </tr> </tbody> </table> Herbicides: *Herbicide injury due to miscommunication resulted in some stunted plants. Insecticides: None		Rate	Date	Fertilizer:			Nitrogen	50 lb/a	carryover	Nitrogen	130 lb/a	24-May	P ₂ O ₅	80 lb/a	24-May	K ₂ O	40 lb/a	24-May	<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></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 style="text-align: center;">4.80</td></tr> <tr><td>May</td><td style="text-align: center;">68.7</td><td style="text-align: center;">0.85</td><td></td></tr> <tr><td>June</td><td style="text-align: center;">80.7</td><td style="text-align: center;">1.12</td><td style="text-align: center;">4.80</td></tr> <tr><td>July</td><td style="text-align: center;">80.7</td><td style="text-align: center;">2.21</td><td style="text-align: center;">4.80</td></tr> <tr><td>August</td><td style="text-align: center;">77.8</td><td style="text-align: center;">1.09</td><td style="text-align: center;">10.05</td></tr> <tr><td>September</td><td style="text-align: center;">69.9</td><td style="text-align: center;">7.37</td><td></td></tr> <tr><td>October</td><td style="text-align: center;">62.2</td><td style="text-align: center;">0.50</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> </tbody> </table> <hr/> †Oct 1-15 Seasonal Precipitation 13.1 in. Total Irrigation 24.5 in. Date of Last Spring Frost: 16-Apr Date of First Fall Frost: 11-Nov Frost Free Period: 209 days		Average Temp. °F	Precip. in.	Irrigation in.	January				February				March				April			4.80	May	68.7	0.85		June	80.7	1.12	4.80	July	80.7	2.21	4.80	August	77.8	1.09	10.05	September	69.9	7.37		October	62.2	0.50		November				December			
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Test Design: Replications: 3 Plot Length: 25 ft. Rows per Plot: 2 Row Spacing: 40 in. Seeding Rate: 27000 seeds/a Plant Population: 26519 plants/a																																																																								

Table 7B. New Mexico 2014 Forage Sorghum Performance Test - Agricultural Science Center at Artesia

Results

Brand/Company Name	Hybrid/Variety Name	Sorghum [†] Type	Maturity [§] Group	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 %								
Winfield/Croplan	BMR 108 (BD)	BMR	M	5.4	20.2	73.3	9.6	44.2	64.7	5.4	60.5	0.552	2365	12737
CPS Dyna-Gro Seed	705F	Conv	ME	5.3	18.9	72.0	9.2	47.5	58.8	4.9	61.5	0.580	2511	13176
Winfield/Croplan	BMR 3631 (BD)	BMR	M	5.0	19.2	74.2	9.4	47.0	66.9	5.1	58.8	0.524	2196	10889
Advanta US	AF7401	BMR	L	4.6	17.8	73.9	9.7	44.4	65.1	5.4	60.0	0.544	2318	10789
Warner Seeds, Inc.	Sweet Bee BMR	BMR	M	4.2	19.0	77.6	9.5	53.3	66.8	5.8	58.8	0.521	2180	9243
Advanta US	AF7101	BMR	E	4.0	13.6	70.6	8.6	51.6	63.2	5.3	55.7	0.493	1976	7881
CPS Dyna-Gro	F75FS13	Conv	M	3.2	10.0	67.5	10.0	44.9	56.8	4.7	61.7	0.587	2543	8265
Advanta US	AF7102	BMR	M	3.1	10.1	68.0	9.7	42.9	63.3	5.4	63.2	0.589	2599	8089
CPS Dyna-Gro	F75FS28 BMR	BMR	M	2.6	9.0	71.1	9.1	47.9	63.5	5.1	57.8	0.519	2148	5536
Advanta US	AF7202	BMR	M	2.5	7.3	65.5	9.5	43.9	64.1	5.5	64.1	0.598	2661	6612
Trial Mean				4.0	14.5	71.4	9.4	46.8	63.3	5.3	60.2	0.555	2350	9322
LSD				1.5	6.9	4.9	NS	4.7	4.4	NS	3.5	0.049	306	3435
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				20.0	20.8	3.2	4.8	4.1	3.4	6.9	3.5	4.4	6.7	23.5
F Test				0.0006	<0.0001	0.0001	0.1102	<0.0001	0.0002	0.0646	0.0029	0.0002	0.0005	0.0048

[†] Sorghum Type: Conv = Conventional, BMR = Brown Midrib, BD = Brachytic Dwarf, SxS = Sorghum-Sudangrass Hybrid

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

Table 8A. New Mexico 2014 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: 24-Jun Harvest Date: 16-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 style="text-align: center;">160 lb/a</td> <td style="text-align: center;">23-Jun</td> </tr> <tr> <td>P₂O₅</td> <td style="text-align: center;">45 lb/a</td> <td style="text-align: center;">23-Jun</td> </tr> <tr> <td>S</td> <td style="text-align: center;">27 lb/ac</td> <td style="text-align: center;">23-Jun</td> </tr> <tr> <td>Zn</td> <td style="text-align: center;">3 qt/a</td> <td style="text-align: center;">23-Jun</td> </tr> </tbody> </table> Herbicides: Bicep Lite II Mag 3 pt/ac 24-Jun Aatrex 1.5 pt/ac 31-Jul Insecticides: None		Rate	Date	Fertilizer:			Nitrogen	160 lb/a	23-Jun	P ₂ O ₅	45 lb/a	23-Jun	S	27 lb/ac	23-Jun	Zn	3 qt/a	23-Jun	<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;">35.0</td><td></td><td></td></tr> <tr><td>February</td><td style="text-align: center;">38.4</td><td></td><td></td></tr> <tr><td>March</td><td style="text-align: center;">45.1</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;">62.9</td><td></td><td></td></tr> <tr><td>June</td><td style="text-align: center;">73.2</td><td style="text-align: center;">3.1</td><td style="text-align: center;">0.90</td></tr> <tr><td>July</td><td style="text-align: center;">75.0</td><td style="text-align: center;">2.2</td><td style="text-align: center;">2.00</td></tr> <tr><td>August</td><td style="text-align: center;">75.0</td><td style="text-align: center;">0.6</td><td style="text-align: center;">8.70</td></tr> <tr><td>September</td><td style="text-align: center;">67.0</td><td style="text-align: center;">2.7</td><td style="text-align: center;">1.50</td></tr> <tr><td>October</td><td style="text-align: center;">60.0</td><td style="text-align: center;">0.0</td><td style="text-align: center;">0.00</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> <hr/> Seasonal Precipitation: 8.6 in. Total Irrigation: 13.1 in. Date of Last Spring Frost: 14-May Date of First Fall Frost: 11-Nov Frost Free Period: 181 days		Average Temp. °F	Precip. in.	Irrigation in.	January	35.0			February	38.4			March	45.1			April	53.6			May	62.9			June	73.2	3.1	0.90	July	75.0	2.2	2.00	August	75.0	0.6	8.70	September	67.0	2.7	1.50	October	60.0	0.0	0.00	November				December			
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Test Design: Replications: 3 Plot Length: 20 ft. Rows per Plot: 2 Row Spacing: 30 in. Seeding Rate: 75,000 seed/a																																																																								

Table 8B. New Mexico 2014 Irrigated Forage Sorghum Performance Test - Agricultural Science Center at Clovis

Results

Brand/Company Name	Hybrid/Variety Name	Sorghum [†] Type	Maturity [§] Group	Moisture			CP %	NDF %	NDFD 48hr %	Ash %	TDN %	NE _L Mcal/lb	Milk/Ton lb/t	Milk/Acre lb/a	
				Dry Forage t/a	Green Forage t/a	at Harvest %									
Sorghum Partners	SPX 903	Conv	PS	7.2	26.6	72.9	7.7	65.1	59.2	4.0	56.5	0.573	2478	17889	
Sorghum Partners	1990	Conv	PS	7.1	26.6	73.2	8.3	61.7	60.1	4.8	58.4	0.594	2620	18558	
Sorghum Partners	SPX 901	Conv	PS	7.0	25.8	73.0	7.5	64.7	59.2	3.8	56.8	0.576	2498	17434	
CPS Dyna-Gro	F 75 FS 13	Conv	M	7.0	21.5	67.4	10.3	48.1	58.2	5.0	63.0	0.646	2940	20480	
Sorghum Partners	Sordan Headless (SxS)	Conv	PS	6.9	26.8	74.2	7.6	65.2	57.4	4.2	55.5	0.563	2396	16606	
Sorghum Partners	SPX 902	Conv	PS	6.9	25.7	73.1	7.3	65.4	58.9	3.8	56.5	0.574	2479	17155	
Browning Seed Inc.	Silage Master	Conv	ML	6.8	22.9	70.3	8.6	49.2	58.8	4.0	59.3	0.605	2681	18221	
CPS Dyna-Gro	705 F	Conv	ME	6.6	22.3	70.3	9.7	46.8	56.3	4.2	62.4	0.639	2874	18988	
Sorghum Partners	SPX 904	Conv	PS	6.5	24.5	73.3	7.0	70.4	57.0	3.7	55.7	0.565	2403	15680	
Sorghum Partners	SPX-29313	Conv	L	6.5	23.4	72.4	7.5	62.6	55.6	3.2	54.5	0.551	2304	14797	
Sorghum Partners	SS 405	Conv	L	6.5	22.5	70.9	8.1	60.9	55.6	3.2	57.8	0.588	2543	16491	
Sorghum Partners	NK 300	Conv	M	6.5	20.4	68.0	9.1	54.3	59.3	4.5	62.1	0.636	2882	18778	
Winfield/Croplan	3551	Conv	*	6.3	20.2	68.6	9.5	45.5	58.1	4.4	64.2	0.659	3025	18980	
Sorghum Partners	X 942 BMR (SxS)	BMR	PS	6.1	28.5	78.7	10.0	59.3	58.7	6.1	55.8	0.565	2423	14725	
DuPont Pioneer	849 F	Conv	ML	6.0	16.6	63.4	9.3	45.7	55.9	3.4	63.7	0.654	2967	17924	
Sorghum Partners	Trudan Headless (SxS)	Conv	PS	5.9	20.1	70.6	7.5	64.3	57.2	3.8	55.7	0.565	2406	14207	
Advanta	AF 7101	BMR	E	5.9	15.0	60.6	9.4	44.1	61.6	3.6	67.0	0.690	3253	19081	
Warner Seed	Sweet Bee BMR	BMR	ML	5.8	21.5	72.9	9.9	46.9	65.3	5.4	62.9	0.645	2994	17405	
Sorghum Partners	SDH 2942 BMR (SxS)	BMR	PS	5.8	24.8	76.6	7.8	60.8	63.2	4.7	57.2	0.581	2566	14880	
Advanta	AF 7401	BMR	L	5.7	19.8	71.3	10.1	48.3	62.3	5.5	62.5	0.640	2938	16720	
Sorghum Partners	SD 1741 BMR (SxS)	BMR	PS	5.7	18.2	68.9	8.3	57.4	61.3	3.9	58.7	0.598	2654	15034	
Browning Seed Inc.	Sweet Sioux BMR (SxS)	BMR	M	5.6	17.8	68.5	8.9	52.6	63.1	4.3	59.8	0.610	2747	15377	
CPS Dyna-Gro	F 75 FS28 BMR	BMR	M	5.6	15.6	64.5	9.2	47.0	65.6	3.3	68.5	0.707	3396	18830	
Browning Seed Inc.	Tridan (SxS)	Conv	M	5.3	13.7	61.5	8.2	52.0	55.7	3.0	62.2	0.637	2856	15127	
Sorghum Partners	SPX 3903	Conv	L	5.2	21.4	75.6	10.0	48.4	65.5	5.7	62.7	0.643	2979	15618	
DuPont Pioneer	841 F	Conv	M	5.2	19.2	73.1	10.3	49.6	58.9	5.1	62.4	0.639	2903	15287	
Sorghum Partners	SPX 3902	Conv	L	5.1	18.5	72.4	9.7	48.6	65.4	4.4	61.3	0.627	2875	14700	
Advanta	AF 7202	BMR	M	5.0	14.2	64.6	9.1	40.9	59.6	3.6	66.8	0.688	3221	16201	
Winfield/Croplan	BMR 3631 (BD)	BMR	*	5.0	20.0	74.8	9.9	49.1	64.6	5.0	61.4	0.627	2874	14401	
Browning Seed Inc.	Bundle King	Conv	M	4.9	15.0	67.6	9.0	46.4	58.7	3.6	65.1	0.669	3095	15026	
Sorghum Partners	SPX 3952 (SxS)	Conv	M	4.7	15.9	70.3	9.2	50.7	63.0	4.4	59.7	0.609	2743	12912	
Winfield/Croplan	BMR 108 (BD)	BMR	*	4.6	17.1	73.0	9.9	45.6	60.1	4.9	62.7	0.642	2930	13515	
Advanta	AF 7102	BMR	M	4.2	13.2	68.6	9.1	43.8	62.9	4.9	65.8	0.676	3175	13385	
Browning Seed Inc.	Cadan 99 B (SxS)	Conv	ME	3.9	9.3	58.3	7.9	53.2	53.5	3.0	60.5	0.618	2715	10460	
Browning Seed Inc.	Sweet Sioux WMR (SxS)	Conv	M	3.5	9.3	62.6	7.5	60.0	53.8	2.9	58.7	0.598	2587	9005	
Trial Mean				5.8	19.8	69.9	8.8	53.6	59.7	4.2	60.7	0.620	2783	15997	
LSD				1.4	4.5	2.8	0.8	5.9	2.4	0.8	2.3	0.026	178	4258	
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				15.2	14.0	2.5	5.4	6.7	2.4	11.7	2.3	2.6	3.9	16.3	
F Test				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

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

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

Table 9A. New Mexico 2014 Dryland Forage Sorghum 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>Test Design: Replications: 3 Plot Length: 20 ft. Rows per Plot: 2 Row Spacing: 30 in. Seeding Rate: 50000 seed/a</p>	<p>Management Practices: Previous Crop: fallow Planting Date: 20-Jun Harvest Date: 10-Oct</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>75 lb/a</td> <td>19-Jun</td> </tr> <tr> <td>P₂O₅</td> <td>30 lb/a</td> <td>19-Jun</td> </tr> <tr> <td>S</td> <td>12 lb/ac</td> <td>19-Jun</td> </tr> <tr> <td>Zn</td> <td>2 qt/a</td> <td>19-Jun</td> </tr> <tr> <td colspan="3">Herbicides:</td> </tr> <tr> <td>Bicep Lite II Mag</td> <td>3 pt/ac</td> <td>20-Jun</td> </tr> <tr> <td colspan="3">Insecticides:</td> </tr> <tr> <td>None</td> <td></td> <td></td> </tr> </tbody> </table>		Rate	Date	Fertilizer:			Nitrogen	75 lb/a	19-Jun	P ₂ O ₅	30 lb/a	19-Jun	S	12 lb/ac	19-Jun	Zn	2 qt/a	19-Jun	Herbicides:			Bicep Lite II Mag	3 pt/ac	20-Jun	Insecticides:			None			<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>35.0</td><td></td><td></td></tr> <tr><td>February</td><td>38.4</td><td></td><td></td></tr> <tr><td>March</td><td>45.1</td><td></td><td></td></tr> <tr><td>April</td><td>53.6</td><td></td><td></td></tr> <tr><td>May</td><td>62.9</td><td></td><td></td></tr> <tr><td>June</td><td>73.2</td><td>3.1</td><td></td></tr> <tr><td>July</td><td>75.0</td><td>2.2</td><td></td></tr> <tr><td>August</td><td>75.0</td><td>0.6</td><td></td></tr> <tr><td>September</td><td>67.0</td><td>2.7</td><td></td></tr> <tr><td>October</td><td>60.0</td><td>0.0</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>8.6 in.</td> <td></td> </tr> <tr> <td>Total Irrigation:</td> <td></td> <td>0.0 in.</td> <td></td> </tr> <tr> <td>Date of Last Spring Frost:</td> <td>14-May</td> <td></td> <td></td> </tr> <tr> <td>Date of First Fall Frost:</td> <td>11-Nov</td> <td></td> <td></td> </tr> <tr> <td>Frost Free Period:</td> <td>181 days</td> <td></td> <td></td> </tr> </tbody> </table>		Average Temp. °F	Precip. in.	Irrigation in.	January	35.0			February	38.4			March	45.1			April	53.6			May	62.9			June	73.2	3.1		July	75.0	2.2		August	75.0	0.6		September	67.0	2.7		October	60.0	0.0		November				December				Seasonal Precipitation:		8.6 in.		Total Irrigation:		0.0 in.		Date of Last Spring Frost:	14-May			Date of First Fall Frost:	11-Nov			Frost Free Period:	181 days		
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Table 9B. New Mexico 2014 Dryland Forage Sorghum Performance Test - Agricultural Science Center at Clovis

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 Partners	SPX-29313	Conv	L	3.5	13.6	74.1	8.8	53.2	64.2	5.0	56.5	0.574	2525	8952	
Sorghum Partners	SD 1741 BMR (SxS)	BMR	PS	3.3	11.4	71.6	9.4	48.4	69.6	5.3	60.8	0.621	2872	9393	
Sorghum Partners	Sordan Headless (SxS)	Conv	PS	3.1	12.6	75.1	9.8	52.3	61.8	5.9	55.4	0.561	2426	7633	
Sorghum Partners	SS 405	Conv	L	3.1	11.2	72.0	9.1	50.7	61.4	4.7	55.6	0.563	2433	7639	
Sorghum Partners	NK 300	Conv	M	3.0	9.5	67.9	10.5	44.9	63.5	5.9	58.1	0.591	2628	8016	
Browning Seed Inc.	Tridan (SxS)	Conv	M	2.8	7.7	63.9	9.4	44.8	59.3	4.1	61.4	0.628	2834	7834	
DuPont Pioneer	849 F	Conv	ML	2.8	8.1	66.0	10.3	44.4	61.6	5.5	60.8	0.621	2807	7808	
Warner Seed	Sweet Bee BMR	BMR	ML	2.7	10.2	73.2	10.5	50.0	66.9	6.9	57.1	0.580	2585	7065	
Sorghum Partners	SPX 901	Conv	PS	2.7	10.5	74.8	10.9	52.4	63.5	6.4	56.7	0.576	2533	6803	
Winfield/Croplan	3551	Conv	*	2.5	7.8	67.5	11.0	44.5	61.5	6.1	56.8	0.576	2520	6375	
Advanta	AF 7202	BMR	M	2.5	7.0	64.7	10.2	40.3	66.4	5.2	62.8	0.643	2988	7732	
Sorghum Partners	SPX 3952 (SxS)	Conv	M	2.4	8.1	70.5	10.5	44.8	69.0	6.0	59.1	0.603	2750	6625	
CPS Dyna-Gro	F 75 FS 13	Conv	M	2.4	8.3	71.6	10.2	49.2	64.0	6.0	57.1	0.580	2561	6100	
Sorghum Partners	Trudan Headless (SxS)	Conv	PS	2.3	8.7	72.9	9.3	51.9	62.6	5.2	56.5	0.573	2507	5897	
Sorghum Partners	SPX 3903	Conv	L	2.3	8.6	72.9	11.4	49.2	70.3	7.0	58.9	0.600	2740	6476	
Sorghum Partners	SPX 903	Conv	PS	2.3	9.6	75.7	11.0	55.0	65.6	6.8	58.0	0.590	2639	6101	
DuPont Pioneer	841 F	Conv	M	2.2	8.1	72.7	11.6	50.5	62.6	6.9	55.1	0.558	2412	5441	
Sorghum Partners	1990	Conv	PS	2.1	8.8	75.9	11.5	52.7	64.3	7.0	56.0	0.568	2489	5274	
Advanta	AF 7102	BMR	M	2.1	7.3	71.7	10.9	48.1	66.8	6.7	57.3	0.582	2598	5461	
Winfield/Croplan	BMR 108 (BD)	BMR	*	2.1	7.3	71.5	10.2	49.3	68.3	6.2	58.3	0.594	2686	5604	
Advanta	AF 7101	BMR	E	2.1	7.1	71.0	10.5	47.3	67.7	6.4	58.0	0.590	2657	5624	
Browning Seed Inc.	Cadan 99 B (SxS)	Conv	ME	2.1	5.6	64.9	9.6	48.4	58.3	4.5	59.7	0.609	2702	5780	
Browning Seed Inc.	Sweet Sioux BMR (SxS)	BMR	M	2.1	7.1	71.6	10.3	48.7	69.4	6.1	59.4	0.605	2769	5811	
Advanta	AF 7401	BMR	L	2.0	7.4	72.9	10.4	47.5	66.9	6.3	56.8	0.577	2569	5229	
CPS Dyna-Gro	F 75 FS28 BMR	BMR	M	2.0	6.0	67.3	9.9	43.8	67.6	4.7	62.5	0.640	2981	6140	
Browning Seed Inc.	Silage Master	Conv	ML	2.0	7.1	72.0	9.6	47.8	66.4	5.7	56.9	0.578	2568	5099	
Sorghum Partners	SPX 904	Conv	PS	2.0	7.5	73.1	10.4	55.0	63.8	6.4	56.4	0.573	2513	7609	
Sorghum Partners	SPX 3902	Conv	L	2.0	7.2	72.6	10.9	46.3	67.3	6.6	56.5	0.573	2544	5062	
Winfield/Croplan	BMR 3631 (BD)	BMR	*	2.0	6.8	71.0	10.6	46.9	68.0	6.1	58.3	0.593	2681	5294	
Browning Seed Inc.	Sweet Sioux WMR (SxS)	Conv	M	1.9	5.2	63.7	9.3	46.9	59.3	4.4	60.0	0.612	2729	5372	
Sorghum Partners	X 942 BMR (SxS)	BMR	PS	1.9	8.0	76.3	12.1	49.0	66.2	7.5	56.5	0.573	2536	4743	
CPS Dyna-Gro	705 F	Conv	ME	1.9	6.6	71.9	10.6	48.2	63.1	6.5	55.5	0.562	2440	4549	
Browning Seed Inc.	Bundle King	Conv	M	1.7	5.6	70.0	9.5	46.8	62.8	5.1	60.8	0.621	2817	4922	
Sorghum Partners	SPX 902	Conv	PS	1.7	6.9	75.5	11.3	50.9	64.7	7.1	55.8	0.566	2478	4196	
Sorghum Partners	SDH 2942 BMR (SxS)	BMR	PS	1.7	6.7	75.0	10.9	50.8	67.6	7.1	55.8	0.566	2501	4165	
Trial Mean				2.3	8.1	71.3	10.4	48.6	64.9	6.0	57.9	0.589	2629	6224	
LSD				0.8	2.7	3.2	0.9	4.3	3.2	1.0	3.6	0.040	263	2705	
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				22.3	20.7	2.7	5.5	5.5	3.0	10.0	3.8	4.2	6.1	26.7	
F Test				0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0003	0.0003	0.0002	0.0134	

[†] Sorghum Type: Conv = Conventional, BMR = Brown Midrib, BD = Brachytic Dwarf, SxS = Sorghum-Sudangrass Hybrid

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

*Company did not indicate maturity rating

Table 10A. New Mexico 2014 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:	fallow		<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>54.8</td> <td>0.13</td> <td></td> </tr> <tr> <td>May</td> <td>62.3</td> <td>0.24</td> <td>3.00</td> </tr> <tr> <td>June</td> <td>75.3</td> <td>0.17</td> <td>3.00</td> </tr> <tr> <td>July</td> <td>79.1</td> <td>3.38</td> <td>3.00</td> </tr> <tr> <td>August</td> <td>72.9</td> <td>2.37</td> <td></td> </tr> <tr> <td>September</td> <td>71.4</td> <td>0.83</td> <td>3.00</td> </tr> <tr> <td>October</td> <td>58.2</td> <td>0.63</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 colspan="2"></td> <td>7.8 in.</td> <td colspan="2"></td> </tr> <tr> <td colspan="2">Total Irrigation</td> <td colspan="2"></td> <td>12.0 in.</td> <td colspan="2"></td> </tr> <tr> <td colspan="2">Date of Last Spring Frost:</td> <td colspan="2"></td> <td>30-Apr</td> <td colspan="2"></td> </tr> <tr> <td colspan="2">Date of First Fall Frost:</td> <td colspan="2"></td> <td>14-Oct</td> <td colspan="2"></td> </tr> <tr> <td colspan="2">Frost Free Period:</td> <td colspan="2"></td> <td>167 days</td> <td colspan="2"></td> </tr> </tbody> </table>				Average Temp.	Precip.	Irrigation		°F	in.	in.	January				February				March				April	54.8	0.13		May	62.3	0.24	3.00	June	75.3	0.17	3.00	July	79.1	3.38	3.00	August	72.9	2.37		September	71.4	0.83	3.00	October	58.2	0.63		November				December				Seasonal Precipitation				7.8 in.			Total Irrigation				12.0 in.			Date of Last Spring Frost:				30-Apr			Date of First Fall Frost:				14-Oct			Frost Free Period:				167 days		
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Table 10B. New Mexico 2014 Irrigated Forage Sorghum Performance Test - Agricultural Science Center at Los Lunas

Results

Brand/Company Name	Hybrid/Variety Name	Sorghum [†] Type	Maturity [§] Group	Moisture			CP %	NDF %	NDFD 48hr %	Ash %	TDN %	NE _L Mcal/lb	Milk/Ton lb/t	Milk/Acre lb/a	
				Dry Forage t/a	Green Forage t/a	at Harvest %									
Sorghum Partners	1990	Conv	PS	11.6	40.3	71.2	6.7	65.6	58.8	4.7	54.6	0.553	2339	27153	
Sorghum Partners	Sordan Headless (SxS)	Conv	PS	11.6	40.9	71.7	7.9	59.6	57.4	4.8	54.2	0.543	2301	26687	
Sorghum Partners	Trudan Headless (SxS)	Conv	PS	9.8	33.3	70.7	6.9	63.8	55.5	4.0	54.1	0.547	2276	22271	
Browning Seed, Inc.	Exp. Apache	Conv	L	9.4	27.4	65.8	7.3	59.0	57.9	4.2	57.8	0.590	2563	24107	
Browning Seed, Inc.	Exp. Avenger	BMR	ML	9.0	37.3	75.8	8.6	55.9	66.1	5.6	57.5	0.583	2606	23491	
Sorghum Partners	SS405	Conv	L	7.6	25.8	70.6	5.7	62.6	56.8	3.7	53.3	0.537	2230	16965	
Sorghum Partners	SDH 2942 BMR	BMR	PS	7.4	33.1	77.6	7.0	60.0	64.6	5.0	56.2	0.570	2508	18525	
Forage First	FS-5	Conv	M	7.2	27.5	73.8	7.9	56.9	59.4	4.6	59.6	0.607	2702	19524	
CPS Dyna-Gro Seed	F75FS28 BMR	BMR	M	6.6	22.7	70.9	7.0	51.8	70.5	3.5	59.5	0.607	2784	18340	
Winfield/Croplan	Greentreat 1921 (SxS)	BMR	PS	6.5	33.0	80.3	9.7	61.1	61.9	7.1	56.9	0.580	2532	16442	
Browning Seed, Inc.	Silage Master	Conv	ML	6.3	20.6	69.5	7.1	50.8	61.6	4.9	55.5	0.560	2428	15161	
Browning Seed, Inc.	Bundle King	Conv	M	5.8	20.2	71.2	7.5	50.2	63.8	4.8	60.5	0.617	2804	16352	
Sorghum Partners	NK300	Conv	M	5.8	17.3	66.7	6.4	61.6	61.2	6.0	57.5	0.587	2573	14826	
Winfield/Croplan	BMR 108 (BD)	BMR	M	5.1	18.4	72.1	8.7	55.4	69.1	7.3	63.2	0.647	3041	15586	
Sorghum Partners	SPX3952 (SxS)	Conv	M	5.1	18.8	72.7	8.7	53.5	70.1	5.7	59.0	0.600	2746	14101	
DuPont Pioneer	849F	Conv	ML	4.7	18.5	74.6	7.7	60.4	60.1	4.9	54.7	0.553	2362	11121	
DuPont Pioneer	841F	Conv	M	4.2	17.5	76.0	8.2	56.5	61.6	5.5	53.9	0.547	2313	9653	
Winfield/Croplan	BMR 3631 (BD)	BMR	M	3.8	15.5	75.8	8.3	55.3	69.7	6.5	58.9	0.600	2735	10252	
CPS Dyna-Gro Seed	705F	Conv	ME	3.7	11.9	68.7	8.2	56.6	59.7	5.7	60.5	0.617	2772	10264	
Warner Seeds, Inc.	Sweet Bee BMR	BMR	M	3.6	14.6	75.5	8.5	59.9	69.7	7.1	59.7	0.610	2797	10040	
Trial Mean				6.7	24.7	72.6	7.7	57.8	62.8	5.3	57.3	0.583	2571	17043	
LSD				1.1	2.2	3.8	1.4	4.5	2.9	1.1	3.1	0.035	230	3234	
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				9.9	5.3	3.1	10.8	4.7	2.8	12.2	3.2	3.6	5.4	11.5	
F Test				<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

[†] Sorghum Type: Conv = Conventional, BMR = Brown Midrib, BD = Brachytic Dwarf, SxS = Sorghum-Sudangrass Hybrid

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

Table 11A. New Mexico 2014 Irrigated Forage Sorghum & Sorghum Sudangrass (Single Cut) Performance Test - Agricultural Science Center at Tucumcari

Investigators: L.M. Lauriault, J. Box, P.L. Cooksey, S. Jennings, J. Jennings, and G. Roberts

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: 28-May Harvest Dates: 28-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">Fertilizer:</td> </tr> <tr> <td>Nitrogen</td> <td style="text-align: center;">12 lb/a</td> <td style="text-align: center;">carryover</td> </tr> <tr> <td>Nitrogen</td> <td style="text-align: center;">130 lb/a</td> <td style="text-align: center;">9-Jul</td> </tr> <tr> <td>P₂O₅</td> <td style="text-align: center;">35 lb/a</td> <td style="text-align: center;">9-Jul</td> </tr> <tr> <td>Nitrogen</td> <td style="text-align: center;">lb/a</td> <td></td> </tr> </tbody> </table> Pesticides (herbicides and insecticides): Brawl 1 pt/a 4-Jun		Rate	Date	Fertilizer:			Nitrogen	12 lb/a	carryover	Nitrogen	130 lb/a	9-Jul	P ₂ O ₅	35 lb/a	9-Jul	Nitrogen	lb/a		<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;">40.0</td><td style="text-align: center;">0.01</td><td style="text-align: center;">-</td></tr> <tr><td>February</td><td style="text-align: center;">41.0</td><td style="text-align: center;">0.03</td><td style="text-align: center;">-</td></tr> <tr><td>March</td><td style="text-align: center;">49.0</td><td style="text-align: center;">0.22</td><td style="text-align: center;">-</td></tr> <tr><td>April</td><td style="text-align: center;">58.0</td><td style="text-align: center;">0.21</td><td style="text-align: center;">-</td></tr> <tr><td>May</td><td style="text-align: center;">66.0</td><td style="text-align: center;">2.42</td><td style="text-align: center;">5.47</td></tr> <tr><td>June</td><td style="text-align: center;">76.0</td><td style="text-align: center;">4.00</td><td style="text-align: center;">3.23</td></tr> <tr><td>July</td><td style="text-align: center;">79.0</td><td style="text-align: center;">2.54</td><td style="text-align: center;">3.93</td></tr> <tr><td>August</td><td style="text-align: center;">79.0</td><td style="text-align: center;">0.82</td><td style="text-align: center;">5.21</td></tr> <tr><td>September</td><td style="text-align: center;">70.0</td><td style="text-align: center;">2.73</td><td style="text-align: center;">2.00</td></tr> <tr><td>October</td><td style="text-align: center;">63.0</td><td style="text-align: center;">0.19</td><td style="text-align: center;">1.00</td></tr> <tr><td>November</td><td style="text-align: center;">45.0</td><td style="text-align: center;">0.37</td><td style="text-align: center;">-</td></tr> <tr><td>December</td><td style="text-align: center;">40.0</td><td style="text-align: center;">0.38</td><td style="text-align: center;">-</td></tr> </tbody> </table> Seasonal Precipitation █ 13.2 in. Total Irrigation 20.8 in. Date of Last Spring Frost: 15-Apr Date of First Fall Frost: 11-Nov Frost Free Period: 210 days		Average Temp. °F	Precip. in.	Irrigation in.	January	40.0	0.01	-	February	41.0	0.03	-	March	49.0	0.22	-	April	58.0	0.21	-	May	66.0	2.42	5.47	June	76.0	4.00	3.23	July	79.0	2.54	3.93	August	79.0	0.82	5.21	September	70.0	2.73	2.00	October	63.0	0.19	1.00	November	45.0	0.37	-	December	40.0	0.38	-
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Table 11B. New Mexico 2014 Irrigated Forage Sorghum & Sorghum Sudangrass (Single Cut) Performance Test - Agricultural Science Center at Tucumcari

Results

Brand/Company Name	Hybrid/Variety Name	Sorghum [†] Type	Maturity [§] Group	Dry Forage	Green Forage	Harvest Moisture	CP %	NDFD		Ash %	TDN %	NE _e Mcal/lb	Milk/Ton lb/t	Milk/Acre lb/a
				t/a	t/a	%		NDF %	48hr %					
Advanta US	AS6501 (SxS)	BMR	PS	8.0	25.6	68.7	10.3	53.0	73.8	5.4	59.6	0.608	2819	22556
Advanta US	AS6401 (SxS)	BMR	ML	7.3	22.2	67.0	10.5	54.3	75.4	6.0	60.9	0.622	2923	21409
DuPont Pioneer	841F	Conv	M	6.8	17.3	60.3	10.9	52.3	74.5	5.6	60.2	0.614	2865	19655
DuPont Pioneer	849F	Conv	ML	6.5	17.2	62.7	10.9	54.4	72.4	5.8	59.9	0.611	2829	18180
Advanta US	AF7401	BMR	L	5.3	17.3	69.0	10.3	52.6	74.7	5.5	59.9	0.611	2842	15103
Advanta US	AS6402 (SxS)	BMR	L	4.6	13.1	64.7	9.3	55.3	68.7	4.6	56.4	0.573	2551	11700
Advanta US	AF7101	BMR	E	4.4	11.1	60.4	11.1	55.0	72.0	5.9	60.3	0.616	2856	12554
Advanta US	AF7202	BMR	M	4.3	11.7	63.5	10.2	54.8	72.1	5.6	59.3	0.605	2788	11933
Advanta US	AF7102	BMR	M	4.2	11.5	64.3	10.1	54.4	72.4	5.1	59.7	0.609	2816	11733
	Trial Mean			5.7	16.3	64.5	10.4	54.0	72.9	5.5	59.6	0.608	2816	16092
	LSD			1.4	3.3	3.4	NS	NS	NS	NS	2.1	0.024	108	4026
	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			17.0	13.7	3.6	8.2	4.8	4.9	12.8	2.4	2.6	4.4	17.4
	F Test			0.0001	0.0001	0.0001	0.1616	0.6738	0.3183	0.2016	0.0159	0.0156	0.0223	0.0001

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

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

Table 12A. New Mexico 2014 Irrigated Forage Sorghum & Sorghum Sudangrass (Multi-Cut) Performance Test - Agricultural Science Center at Tucumcari

Investigators: L.M. Lauriault, J. Box, P.L. Cooksey, S. Jennings, J. Jennings, and G. Roberts

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: 3-Jun Harvest Dates: 20-Aug 27-Oct <u>Production Inputs</u> <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>12 lb/a</td> <td>carryover</td> </tr> <tr> <td>Nitrogen</td> <td>65 lb/a</td> <td>9-Jul</td> </tr> <tr> <td>P₂O₅</td> <td>35 lb/a</td> <td>9-Jul</td> </tr> </tbody> </table> Pesticides (herbicides and insecticides): Brawl 1 pt/a 06/04/14		Rate	Date	Fertilizer:			Nitrogen	12 lb/a	carryover	Nitrogen	65 lb/a	9-Jul	P ₂ O ₅	35 lb/a	9-Jul	<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>40.0</td><td>0.01</td><td>-</td></tr> <tr><td>February</td><td>41.0</td><td>0.03</td><td>-</td></tr> <tr><td>March</td><td>49.0</td><td>0.22</td><td>-</td></tr> <tr><td>April</td><td>58.0</td><td>0.21</td><td>-</td></tr> <tr><td>May</td><td>66.0</td><td>2.42</td><td>5.47</td></tr> <tr><td>June</td><td>76.0</td><td>4.00</td><td>2.73</td></tr> <tr><td>July</td><td>79.0</td><td>2.54</td><td>3.48</td></tr> <tr><td>August</td><td>79.0</td><td>0.82</td><td>3.46</td></tr> <tr><td>September</td><td>70.0</td><td>2.73</td><td>2.49</td></tr> <tr><td>October</td><td>63.0</td><td>0.19</td><td>1.00</td></tr> <tr><td>November</td><td>45.0</td><td>0.37</td><td>-</td></tr> <tr><td>December</td><td>40.0</td><td>0.38</td><td>-</td></tr> </tbody> </table> Seasonal Precipitation  13.2 in. Total Irrigation 18.6 in. Date of Last Spring Frost: 15-Apr Date of First Fall Frost: 11-Nov Frost Free Period: 210 days		Average				Temp.	Precip.	Irrigation		°F	in.	in.	January	40.0	0.01	-	February	41.0	0.03	-	March	49.0	0.22	-	April	58.0	0.21	-	May	66.0	2.42	5.47	June	76.0	4.00	2.73	July	79.0	2.54	3.48	August	79.0	0.82	3.46	September	70.0	2.73	2.49	October	63.0	0.19	1.00	November	45.0	0.37	-	December	40.0	0.38	-
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Table 12B. New Mexico 2014 Irrigated Forage Sorghum & Sorghum Sudangrass (Multi-Cut) Performance Test - Agricultural Science Center at Tucumcari

Results

Brand/Company Name	Hybrid/Variety Name	Type ¹	Harvest 1					Harvest 2					Total	
			Dry Forage	Green Forage	Harvest Moisture	Milk/Ton	Milk/Acre	Dry Forage	Green Forage	Harvest Moisture	Milk/Ton	Milk/Acre	Dry Forage	Milk/Acre
			t/a	t/a	%	lb/t	lb/a	t/a	t/a	%	lb/t	lb/a	t/a	lb/a
DuPont Pioneer	849F	FS	4.1	18.5	77.9	2676	10877	1.8	9.6	80.6	2844	5170	5.9	16047
Advanta US	AF7102	FS	4.2	20.0	78.7	2757	11675	1.6	7.8	78.8	2940	4830	5.9	16505
Advanta US	AS6402 (SxS)	SxS	3.9	16.4	76.0	2720	10689	1.8	9.1	80.4	2799	5002	5.7	15691
DuPont Pioneer	841F	FS	3.4	15.7	78.0	2764	9522	2.0	10.3	79.9	2863	5847	5.5	15368
Advanta US	AS6401 (SxS)	SxS	3.8	16.8	78.0	2775	10698	1.7	8.8	80.1	2760	4820	5.5	15518
Advanta US	AF7202	FS	3.7	14.8	75.1	2772	10223	1.6	8.1	79.5	2772	4542	5.3	14764
Advanta US	AS6501 (SxS)	SxS	3.7	16.2	77.2	2768	10181	1.6	7.9	79.6	2947	4711	5.3	14892
Advanta US	AF7101	FS	3.3	15.1	78.0	2703	8909	1.8	9.1	80.0	2909	5192	5.1	14101
Advanta US	AF7401	FS	3.5	14.9	76.8	2612	9040	1.6	8.2	80.1	2796	4569	5.1	13608
Trial Mean			3.7	16.5	77.3	2727	10202	1.7	8.8	79.9	2847	4964	5.5	15166
LSD			NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
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			18.3	16.4	3.0	5.4	18.8	24.3	25.6	1.7	4.5	24.7	16.3	16.3
F Test			0.0631	0.1518	0.4729	0.7853	0.5369	0.8996	0.7761	0.7778	0.3189	0.8866	0.8782	0.7997

¹FS and SxS signify forage sorghum and sorghum x sudangrass, respectively.

Table 12C. New Mexico 2014 Irrigated Forage Sorghum & Sorghum Sudangrass (Multi-Cut) Performance Test - Agricultural Science Center at Tucumcari

Results

Brand/Company Name	Hybrid/Variety Name	Type ¹	Harvest 1							Harvest 2						
			NDFD							NDFD						
			CP	NDF	48hr	Starch	Ash	TDN	NE _i	CP	NDF	48hr	Starch	Ash	TDN	NE _i
%	%	%	%	%	%	% Mcal/lb	%	%	%	%	%	%	%	% Mcal/lb		
DuPont Pioneer	849F	FS	13.5	51.2	67.6	2.6	6.8	58.3	0.593	8.5	48.5	68.6	11.9	5.1	60.5	0.618
Advanta US	AF7102	FS	12.8	50.7	69.5	3.5	7.2	59.2	0.604	8.5	48.7	67.4	14.2	4.8	62.0	0.634
Advanta US	AS6402	SxS	13.5	50.4	69.3	2.7	6.9	58.7	0.598	8.8	48.3	67.6	11.6	5.1	60.0	0.612
DuPont Pioneer	841F	FS	13.2	50.6	70.4	2.6	7.1	59.2	0.603	8.7	50.7	68.0	10.5	5.3	60.9	0.622
Advanta US	AS6401	SxS	12.4	51.7	70.0	3.3	6.6	59.4	0.606	8.8	48.1	65.3	12.7	4.8	59.7	0.609
Advanta US	AF7202	FS	13.5	49.1	71.3	3.1	7.3	59.2	0.604	8.4	50.2	65.0	12.6	4.8	59.9	0.611
Advanta US	AS6501	SxS	13.4	51.3	69.5	2.8	7.1	59.4	0.605	8.6	48.9	68.3	13.9	5.0	62.0	0.634
Advanta US	AF7101	FS	12.5	50.4	69.9	3.4	6.7	58.4	0.595	8.8	46.3	64.7	17.3	4.7	61.8	0.633
Advanta US	AF7401	FS	12.8	49.8	68.7	2.7	6.6	57.3	0.582	8.7	47.6	67.0	12.8	4.8	60.0	0.613
	Trial Mean		13.1	50.5	69.6	3.0	6.9	58.8	0.599	8.6	48.6	66.9	13.0	4.9	60.7	0.621
	LSD		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	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		10.2	5.1	4.6	34.5	9.9	3.0	3.3	6.8	5.8	5.2	30.6	12.8	2.8	3.1
	F Test		0.8910	0.9319	0.8913	0.8174	0.8166	0.7333	0.7408	0.9589	0.5782	0.6761	0.4811	0.9282	0.3253	0.3291

¹FS and SxS signify forage sorghum and sorghum x sudangrass, respectively.

Table 13A. New Mexico 2014 Sorghum Sudangrass Performance Test - Agricultural Science Center at Artesia

Investigators: R. Flynn, R. Pacheco

Test Description

Location:	Management Practices:	Growing Conditions:																																																																																																		
County/Area: Eddy Longitude: -104.38 Latitude: 32.75 Elevation: 3353 ft. Soil Name: Pima Soil Texture: Silty clay loam Soil Depth: 60 in.	Previous Crop: Cotton Planting Date: 6-Jun Harvest Date: 15-Oct Production Inputs <hr/> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 20%; text-align: center;">Rate</th> <th style="width: 20%; text-align: center;">Date</th> </tr> </thead> <tbody> <tr> <td colspan="3">Fertilizer:</td> </tr> <tr> <td>Nitrogen</td> <td>50 lb/a</td> <td>carryover</td> </tr> <tr> <td>Nitrogen</td> <td>130 lb/a</td> <td>7-Jul</td> </tr> <tr> <td>P₂O₅</td> <td>80 lb/a</td> <td>7-Jul</td> </tr> <tr> <td>K₂O</td> <td>40 lb/a</td> <td>7-Jul</td> </tr> </tbody> </table> Herbicides: *Herbicide injury due to miscommunication resulted in some stunted plants. Insecticides: None		Rate	Date	Fertilizer:			Nitrogen	50 lb/a	carryover	Nitrogen	130 lb/a	7-Jul	P ₂ O ₅	80 lb/a	7-Jul	K ₂ O	40 lb/a	7-Jul	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 15%; text-align: center;">Average Temp. °F</th> <th style="width: 15%; text-align: center;">Precip. in.</th> <th style="width: 10%; text-align: center;">Irrigation 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>4.80</td></tr> <tr><td>May</td><td>68.7</td><td>0.85</td><td></td></tr> <tr><td>June</td><td>80.7</td><td>1.12</td><td>4.80</td></tr> <tr><td>July</td><td>80.7</td><td>2.21</td><td>4.80</td></tr> <tr><td>August</td><td>77.8</td><td>1.09</td><td>10.05</td></tr> <tr><td>September</td><td>69.9</td><td>7.37</td><td></td></tr> <tr><td>October</td><td>62.2</td><td>0.50</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="4">†Oct 1-15</td></tr> <tr><td colspan="2">Seasonal Precipitation</td><td>13.1 in.</td><td></td></tr> <tr><td colspan="2">Total Irrigation</td><td>24.5 in.</td><td></td></tr> <tr><td colspan="4"> </td></tr> <tr><td colspan="2">Date of Last Spring Frost:</td><td>16-Apr</td><td></td></tr> <tr><td colspan="2">Date of First Fall Frost:</td><td>11-Nov</td><td></td></tr> <tr><td colspan="2">Frost Free Period:</td><td>209 days</td><td></td></tr> </tbody> </table>		Average Temp. °F	Precip. in.	Irrigation in.	January				February				March				April			4.80	May	68.7	0.85		June	80.7	1.12	4.80	July	80.7	2.21	4.80	August	77.8	1.09	10.05	September	69.9	7.37		October	62.2	0.50		November				December				†Oct 1-15				Seasonal Precipitation		13.1 in.		Total Irrigation		24.5 in.						Date of Last Spring Frost:		16-Apr		Date of First Fall Frost:		11-Nov		Frost Free Period:		209 days	
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Test Design: Replications: 3 Plot Length: 25 ft. Rows per Plot: 2 Row Spacing: 40 in. Seeding Rate: 27000 seeds/a Plant Population: 25991 plants/a																																																																																																				

Table 13B. New Mexico 2014 Sorghum Sudangrass Performance Test - Agricultural Science Center at Artesia

Results

Brand/Company Name	Hybrid/Variety Name	Sorghum [†] Type	Maturity [§] Group	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
CPS Dyna-Gro Seed	FullGraze	Conv	L	4.3	18.6	77.1	9.1	55.9	66.0	5.9	58.1	0.514	2127	10250
Advanta US	AS6402	BMR	L	4.3	17.8	76.0	8.5	56.3	65.2	5.1	58.1	0.516	2136	10239
CPS Dyna-Gro Seed	FullGraze BMR	BMR	L	4.2	18.5	77.1	8.6	57.3	67.3	5.4	60.5	0.539	2295	10791
Advanta US	AS6501	BMR	PS	3.5	16.3	77.9	9.8	54.9	67.0	6.4	58.4	0.515	2138	8425
CPS Dyna-Gro Seed	Danny Boy BMR	BMR	PS	3.3	14.1	76.1	8.7	57.7	61.0	5.3	55.5	0.497	1989	7461
Advanta US	AS6401	BMR	ML	2.7	11.3	76.1	9.2	55.5	67.9	5.8	58.9	0.517	2158	6478
	Trial Mean			3.7	16.1	76.7	9.0	56.3	65.7	5.7	58.3	0.516	2141	8941
	LSD			NS	NS	NS	NS	NS	NS	NS	2.2	0.018	132	NS
	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			30.9	33.6	2.2	8.4	3.5	3.8	10.0	2.7	2.4	4.3	31.3
	F Test			0.4429	0.5250	0.7543	0.4668	0.5785	0.0594	0.1739	0.0399	0.0399	0.0410	0.3727

Appendix A

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

New Mexico 2014 Grain Corn Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Relative Maturity
DuPont Pioneer	P9697 AM	96
8100 S. 15th	P9789 AMX	97
Lincoln, NE 68512	P0157 AM	101
Dan Berning	P0365 AM	103
402 467 2745	P0419 AMX	104
	P0506 AM	105
Mycogen Seeds	2P659	103
P.O. Box 1050	2D598	104
Ralls, TX 79357	2T498	99
Ben Benton	2Y479	98
888 521 7333	2K395	94
	2T619 (X14504)	103
	X13512	103
	2V489 (X14402)	99
Roth Seed Co., Inc.		
354 State St.	RSC-4024-3000GT	105
Phillipsburgh, KS 67661	RSC-3500-3000GT	104
Shannon Roth	RSC-4030-3000GT Artesian	99
785 543 5551	RSC-5400-3000GT	105

New Mexico 2014 Forage Corn Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Relative Maturity
B-H Genetics	BH 7810VT2P	108
5933 FM 1157	BH 8630VTTP	116
Ganado, TX 77962	BH 8660VTTP	116
Travis Janak	BH 8700SS	115
361 771 2755	BH 8732VTTP	117
	BH 8735VT2P	117
	BH 8830VTTP	118
	BH 8783VIP3111	116
	BH 8900VIP3111	118
	X14042HXRR	119
	BH 8977RR/HX	117
CPS Dyna-Gro Seed	D59HR50	119
3492 Long Prairie Rd., Ste 200	D57VP75	117
Flower Mound, TX 75028	D55VP77	115
Shawn Carter	D58QC72	118
972 691 9680		
Golden Acres Genetics	G8551	118
P.O. Box 20787	G7601	117
Waco, TX 76702	G7663	117
James Allison		
512 793 5205		
Masters Choice	MCT 6583	115
3010 State Rt 146 East	MCT 6753	117
Anna, IL 62906	MCT 6894	118
Kevin Koone		
618-833-6552		
Monsanto/Dekalb	DKC70-01	120
11151 W. Rockwell Rd	DKC68-92	118
Canyon, TX 79015	DKC67-88	117
Kyle Lawles	DKC66-40	116
806-445-4716		

New Mexico 2014 Forage Corn Hybrid Performance Test, Cont.

Company/Brand Name	Hybrid/Variety Name	Relative Maturity
Mycogen Seeds	TMF2H747	113
P.O. Box 1050	TMF2H919	122
Ralls, TX 79357	TMF2L825	117
Ben Benton	TMF2L874	118
888 521 7333	F2F817	116
Winfield/Croplan	7927 VT3P	117
P.O. Box 2	8750 RH	118
Olton, TX 79064	8512 VT2P	118
Jonathan Folsom		
806 638 4198		

New Mexico 2014 Grain Sorghum Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Maturity Group*
Chromatin, Inc.	X445	ME
8509 Venita Ave.	KS310	E
Lubbock, TX 79424	NK5418	ME
Ling Zhang	SP3425	ME
806-577-4384	KS585	M
	K35-Y5	ME
	SP3303	ME
	K73-J6	L
Mycogen Seeds	1G688	ML
P.O. Box 1050	1G741	ML
Ralls, TX 79357	1G855	L
Ben Benton	1G557	E
888 521 7333	E33573	ML
	E33761	ML
Warner Seeds, Inc.	W-7012	ML
P.O. Box 1877		
Hereford, TX 79045		
Cheb Kruger		
806 364 4470		

*E=early, ME=medium early, ML=medium late, L=late

New Mexico 2014 Forage Sorghum Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Maturity Group*	Brown Midrib
Advanta US	AF7401	L	Y
P.O. Box 2685-301 S. Polk, Suite 350	AF7102	M	Y
Amarillo, TX 79105	AF7202	M	Y
Shan Podduturi	AF7101	E	Y
806-445-6282			
Browning Seed, Inc.	Cadan 99B (SxS)	ME	N
3101 S. I-27	Tridan (SxS)	M	N
Plainview, TX 79072	Sweet Sioux WMR (SxS)	M	N
Rodney Smith	Sweet Sioux BMR (SxS)	M	Y
806 293 5271	Bundle King	M	N
	Silage Master	ML	N
Chromatin, Inc.	SS405	L	N
8509 Venita Ave.	1990	PS	N
Lubbock, TX 79424	NK300	M	N
Ling Zhang	SD1741BMR (SxS)	PS	Y
806-577-4384	SPX901	PS	N
	SPX902	PS	N
Sorghum Partners, LLC	SPX903	PS	N
P.O. Box 189	SPX904	PS	N
New Deal, TX 79350	SPX3952; SP6205 BD	M	N
(806) 746-5566	SPX3903	L	N
David L. Thomas	SPX3902	L	N
	SPX-29313	L	N
	Trudan Headless (SxS)	PS	N
	Sudan Headless (SxS)	PS	N
	SDH 2942 BMR (SxS)	PS	Y
	X942BMR (SxS)	PS	Y
	SPX 6131 BMR (SxS)	PS	Y
CPS Dyna-Gro Seed	705F	ME	N
3492 Long Prairie Rd., Ste 200	F75FS13	M	N
Flower Mound, TX 75028	F75FS28 BMR	M	Y
Shawn Carter			
972 691 9680			

New Mexico 2014 Forage Sorghum Hybrid Performance Test, Cont.

Company/Brand Name	Hybrid/Variety Name	Maturity Group*	Brown Midrib
DuPont Pioneer	841F	M	N
8100 S. 15th	849F	ML	N
Lincoln, NE 68512			
Bill McClure			
402 328 4055			
Forage First	FS-5	M	N
2541 Commerce St.			
LaCrosse, WI 54603			
(608)783-9560			
Warner Seeds, Inc.	Sweet Bee BMR	M	Y
P.O. Box 1877			
Hereford, TX 79045			
Cheb Kruger			
806 364 4470			
Winfield/Croplan	BMR 3631 (BD)	**	Y
P.O. Box 2	BMR 108 (BD)	**	Y
Olton, TX 79064	3551	**	N
Jonathan Folsom	Greentreat 1921* (SxS)	PS	Y
806 638 4198			

SxS = sorghum x sudan hybrid; BD = brachytic dwarf

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

**Company did not indicate maturity rating

New Mexico 2014 Sorghum X Sudangrass Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Maturity Group*	Brown Midrib
Advanta US	AS6401	ML	Y
P.O. Box 2685-301 S. Polk, Suite 350	AS6402	L	Y
Amarillo, TX 79105	AS6501	PS	Y
Shan Podduturi			
806-445-6282			
CPS Dyna-Gro Seed	Danny Boy BMR	PS	Y
3492 Long Prairie Rd., Ste 200	FullGraze	L	N
Flower Mound, TX 75028	FullGraze BMR	L	Y
Shawn Carter			
972 691 9680			

*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 RVF 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.