

New Mexico 2013 Corn and Sorghum Performance Tests



Agricultural Experiment
Station Cooperative Extension
Service

**College of Agricultural, Consumer and Environmental
Sciences**

**New Mexico
2013
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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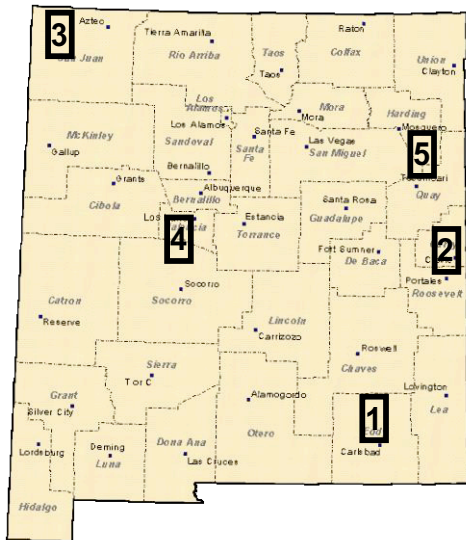
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INTRODUCTION

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 2013 (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.

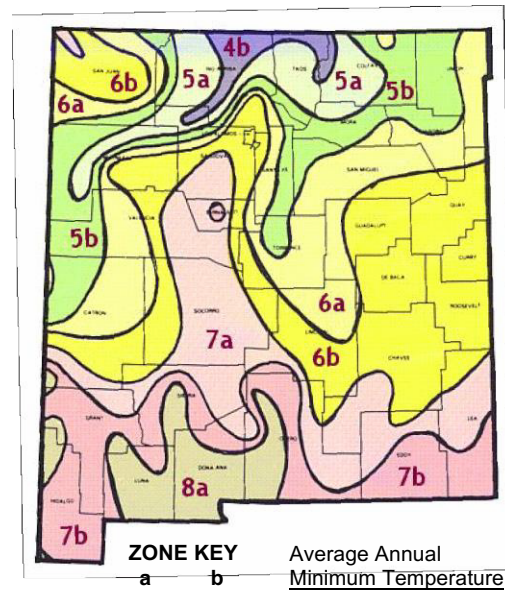


Table 1. Historical average monthly precipitation (inches) and temperatures (°F) for cooperating agricultural science centers.

	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	16.89	8.25	8.93	15.90
Average Temperature (°F)					
January	40.4	37.9	30.4	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	73.8	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/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 2013 ~~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 2014 Corn and Sorghum Performance Tests will be mailed to seed companies in February 2014. Additional 2014 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 2013 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 26 entries. Mean grain yield was 231 bu/ac and yields were different and average test weight was 58 lb/bu. (Tables 2A-B). Differences were observed for all measured parameters except final plant population.

Grain Sorghum

A dryland grain sorghum test was conducted at the Clovis science center in 2013. It should be noted that the dryland test at Clovis was irrigated once after planting in order to aid in establishment and incorporate herbicide. The researchers recognize that this is not a true 'dryland' representation, but also recognize that no data would be collected if the test did not establish due to drought after planting. A one-time irrigation after planting was deemed more logical than a complete crop disaster yielding no information. 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 contained 31 entries in all; mean yield was 61 bu/A (3440 lb/A) and yields ranged from 26 to 80 bu/A (Tables 3A-B). Despite dry conditions, yields were considered excellent for the year. A full soil profile on previously fallowed ground, a few timely rains, and adequate N fertility contributed to good yields.

Forage Corn

Forage corn tests were conducted at the Agricultural Science Centers at Artesia, Clovis, and Farmington. The Artesia forage corn test consisted of 13 entries. Mean dry forage yield was 9.9 ton/ac and yield and forage quality differences were observed for several parameters (Tables 4A-B). Wet yields averaged 32.8 ton/ac.

There were 24 entries in the Clovis forage corn test. Mean dry forage yield was 9.2 ton/A and wet yields averaged 26.1 ton/A (Tables 5A-B). Yields ranged from 24 to 30 ton/A. 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. Despite dry conditions in 2013, yields were respectable with more moderate inputs. Hybrids differed in all yield and nutrient composition parameters except for ash content.

Eight hybrids were evaluated in the Farmington forage corn test. Dry forage yield averaged 12.7 ton/ac and yields were similar among hybrids for dry yields, but differed for wet yields (Tables 6A-B). Differences were observed for certain nutritive value estimates.

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 Tukumcari.

There were 5 entries in the irrigated forage sorghum test at Artesia. Dry forage yield ranged from 5.9 to 6.6 ton/ac and mean wet yield was 34.7 ton/ac (Tables 7A-B). Forage yield and quality estimates were not different among the entries. Artesia also conducted a separate sorghum x sudangrass test (Tables 12A-C). All plots were harvested twice. There were 7 entries in the test. Mean total, dry forage yield was 5.5 ton/A and very few differences were observed and only on the first cutting.

At Clovis, there were 17 entries in the irrigated forage sorghum test. Mean forage yields were 7.7 and 21.4 ton/ac for dry and green yields, respectively, and differences were observed for all yield and nutritive parameters (Tables 8A-B). Wet yields of a couple of entries exceeded 30 ton/ac, which is excellent considering the dry growing conditions of 2013. A separate dryland forage sorghum trial including 15 entries was conducted at Clovis; and one cutting was obtained. Total dry forage yield averaged 4.4 ton/ac for the year (Tables 9A-B) and wet yields averaged 14.6 ton/ac as a result of timely rains.

The Los Lunas forage sorghum test contained 14 entries. Good growing conditions resulted in excellent yields (Tables 10A-B). Dry forage yield averaged 9.1 ton/ac (27.3 mean wet yield). Fresh weights exceeded 35 ton/ac in certain varieties; however, yields were highly variable and ranged from 18.1 to 38.5 ton/ac. Differences were observed for both yield components and several quality parameters. Four entries were included in a sorghum x sudangrass test at Los Lunas (Tables 13A-C). Plots were harvested twice during the season and total dry yield averaged 6.3 ton/ac with the second cutting having higher yields (harvested at later maturity).

At Tukumcari, 9 forage sorghums were entered in an irrigated test (Tables 11A-B). Yields averaged 2.4 and 6.8 ton/ac for dry and wet yields, respectively. Yields among the entries were not different, but several quality parameters were. An additional combination test of both sorghum x sudangrass hybrids and forage sorghums was conducted at Tukumcari (Tables 14A-C). This test was harvested twice. Total yields in this test were similar to those observed in the forage sorghum test and averaged 2.9 ton/ac. Yield and quality were affected by harvest timing.

Table 2A. New Mexico 2013 Grain Corn Performance Test - Agricultural Science Center at Farmington

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

Test Description

Location:	Management Practices:	Growing Conditions:																																																																																																																																																
County/Area: San Juan Longitude: -108.306 Latitude: 36.6812 Elevation: 5,640 ft. Soil Name: Wall Soil Texture: sandy loam Soil Depth: > 75 in.	Previous Crop: 2012 fallow, 2011 potatoes Planting Date: 14-May Harvest Date: 5-Nov <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>15 lb/a</td> <td>13-Feb</td> </tr> <tr> <td>Nitrogen</td> <td>30 lb/a</td> <td>28-May</td> </tr> <tr> <td>Nitrogen</td> <td>25 lb/a</td> <td>3-Jun</td> </tr> <tr> <td>Nitrogen</td> <td>20 lb/a</td> <td>10-Jun</td> </tr> <tr> <td>Nitrogen</td> <td>20 lb/a</td> <td>17-Jun</td> </tr> <tr> <td>Nitrogen</td> <td>20 lb/a</td> <td>24-Jun</td> </tr> <tr> <td>Nitrogen</td> <td>25 lb/a</td> <td>2-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>20 lb/a</td> <td>9-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>25 lb/a</td> <td>17-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>30 lb/a</td> <td>22-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>8 lb/a</td> <td>30-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>12 lb/a</td> <td>5-Aug</td> </tr> <tr> <td>Nitrogen</td> <td>20 lb/a</td> <td>13-Aug</td> </tr> <tr> <td>Total Nitrogen</td> <td>270 lb/a</td> <td></td> </tr> <tr> <td>P₂O₅</td> <td>78 lb/a</td> <td>13-Feb</td> </tr> <tr> <td>K₂O</td> <td>90 lb/a</td> <td>13-Feb</td> </tr> <tr> <td>ZnSO₄</td> <td>7.5 lb/a</td> <td>13-Feb</td> </tr> <tr> <td colspan="3">Herbicides:</td> </tr> <tr> <td>Bicep Lite II Mag</td> <td>1.5 qt/a</td> <td>21-May</td> </tr> <tr> <td>2,4-D</td> <td>3 oz/a</td> <td>21-May</td> </tr> <tr> <td>Status</td> <td>5 oz/a</td> <td>20-Jun</td> </tr> <tr> <td>Prowl H₂O</td> <td>1 qt/a</td> <td>20-Jun</td> </tr> </tbody> </table>		Rate	Date	Fertilizer:			Nitrogen	15 lb/a	13-Feb	Nitrogen	30 lb/a	28-May	Nitrogen	25 lb/a	3-Jun	Nitrogen	20 lb/a	10-Jun	Nitrogen	20 lb/a	17-Jun	Nitrogen	20 lb/a	24-Jun	Nitrogen	25 lb/a	2-Jul	Nitrogen	20 lb/a	9-Jul	Nitrogen	25 lb/a	17-Jul	Nitrogen	30 lb/a	22-Jul	Nitrogen	8 lb/a	30-Jul	Nitrogen	12 lb/a	5-Aug	Nitrogen	20 lb/a	13-Aug	Total Nitrogen	270 lb/a		P ₂ O ₅	78 lb/a	13-Feb	K ₂ O	90 lb/a	13-Feb	ZnSO ₄	7.5 lb/a	13-Feb	Herbicides:			Bicep Lite II Mag	1.5 qt/a	21-May	2,4-D	3 oz/a	21-May	Status	5 oz/a	20-Jun	Prowl H ₂ O	1 qt/a	20-Jun	<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></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>59.8</td> <td>0.23</td> <td>3.0</td> </tr> <tr> <td>June</td> <td>72.8</td> <td>0.00</td> <td>6.9</td> </tr> <tr> <td>July</td> <td>76.5</td> <td>0.54</td> <td>7.5</td> </tr> <tr> <td>August</td> <td>73.2</td> <td>1.34</td> <td>6.9</td> </tr> <tr> <td>September</td> <td>70.2</td> <td>3.29</td> <td>2.7</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 colspan="2">Seasonal Precipitation</td> <td>5.4 in.</td> <td></td> </tr> <tr> <td colspan="2">Total Irrigation</td> <td>27.0 in.</td> <td></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">5-Oct</td> </tr> <tr> <td colspan="2">Frost Free Period:</td> <td colspan="2">155 days</td> </tr> </tbody> </table>		Average Temp. °F	Precip. in.	Irrigation in.	January				February				March				April				May	59.8	0.23	3.0	June	72.8	0.00	6.9	July	76.5	0.54	7.5	August	73.2	1.34	6.9	September	70.2	3.29	2.7	October				November				December				Seasonal Precipitation		5.4 in.		Total Irrigation		27.0 in.		Date of Last Spring Frost:		3-May		Date of First Fall Frost:		5-Oct		Frost Free Period:		155 days	
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Test Design: Replications: 3 Plot Length: 20 ft. Rows per Plot: 4 Row Spacing: 30 in. Seeding Rate: 40,000 seeds/a Harvest area: 2 row 20 feet long																																																																																																																																																		

Table 2B. New Mexico 2013 Grain Corn Performance Test - Agricultural Science Center at Farmington

Results

Brand/Company Name	Hybrid/Variety Name	Grain Yield bu/a	Moisture	Test Weight lb/bu	Plant Height in	Ear Height in	Silk Date	Plant Population
			at Harvest %					
Pioneer Hi-Bred Int.	P0193 YHR	272.4	14.2	55.9	108	48	26-Jul	38,333
Fontanelle Hybrids	03A413	265.1	15.2	57.7	108	53	31-Jul	37,171
Roth Seed Co. Inc.	RSC 4024 3000 GT	262.1	14.2	54.8	105	49	29-Jul	37,171
Fontanelle Hybrids	6V209 RBC	256.3	13.4	58.1	105	50	27-Jul	35,864
Fontanelle Hybrids	99A263	251.2	13.9	57.1	99	47	29-Jul	38,188
Roth Seed Co. Inc.	RSC 4016 3000 GT	251.2	14.4	57.3	119	55	30-Jul	34,993
Triumph Seed Co.	5425 RA	250.6	14.9	56.9	112	55	29-Jul	39,640
Fontanelle Hybrids	06V563	250.1	14.6	57.1	107	52	29-Jul	35,284
Pioneer Hi-Bred Int.	P0365 YHR	247.4	13.6	59.3	107	44	30-Jul	36,590
Triumph Seed Co.	3465 S	245.4	15.4	56.4	108	54	30-Jul	33,832
Triumph Seed Co.	9811 S	238.7	13.5	58.4	108	51	29-Jul	35,138
Roth Seed Co. Inc.	RSC 3100 VT3 PRO	234.8	16.9	54.4	105	45	31-Jul	37,171
Triumph Seed Co.	9946 RA	234.0	14.1	57.6	98	44	31-Jul	36,736
Fontanelle Hybrids	01A083	229.9	14.8	59.9	110	43	25-Jul	34,703
Fontanelle Hybrids	03A403	228.3	13.8	58.0	100	48	31-Jul	38,188
Roth Seed Co. Inc.	RSC 4022 RR	227.8	15.0	56.9	103	49	2-Aug	35,719
Roth Seed Co. Inc.	RSC 3500 3000 GT	226.4	14.0	57.2	113	51	30-Jul	34,703
Pioneer Hi-Bred Int.	PO636 HR	223.3	14.5	57.8	107	49	29-Jul	37,026
Pioneer Hi-Bred Int.	P9305 YHR	223.1	12.9	58.2	97	45	26-Jul	38,042
Pioneer Hi-Bred Int.	P9973 YXR	220.6	14.3	55.8	102	48	27-Jul	34,993
Fontanelle Hybrids	4A503 RBC	209.2	13.4	59.9	95	46	27-Jul	36,736
Triumph Seed Co.	9865 RA	206.4	14.3	57.1	99	46	31-Jul	38,333
Triumph Seed Co.	5423 RA	203.0	15.0	58.1	106	49	29-Jul	37,462
Triumph Seed Co.	TRX39331S	197.6	12.1	58.5	97	40	28-Jul	35,429
Fontanelle Hybrids	4A447 RBC	192.5	12.9	59.5	90	41	26-Jul	35,864
Pioneer Hi-Bred Int.	P9690 YHR	168.5	12.7	56.9	90	44	27-Jul	35,574
	Trial Mean	231.4	14.2	57.5	104	48	29-Jul	36,495
	LSD	46.7	0.8	1.1	11	7	-	NS
	LSD P >	0.10	0.05	0.05	0.05	0.05	-	0.05
	CV	12.3	3.8	1.2	6.6	9.2	-	7.0
	F Test	0.0072	<0.0001	<0.0001	0.0005	0.0028	-	0.5704

Table 3A. New Mexico 2013 Dryland Grain Sorghum Performance Test - Agricultural Science Center at Clovis

Investigators: M.A. Marsalis, A. Scott, and B. Niece

Test Description

Location:	Management Practices:	Growing Conditions:		
County/Area: Curry	Previous Crop: fallow	<hr/>		
Longitude: -103.22	Planting Date: 19-Jun	Average		
Latitude: 34.60	Harvest Date: 24-Oct	Temp.	Precip.	Irrigation
Elevation: 4435 ft.		°F	in.	in.
Soil Name: Olton				
Soil Texture: clay loam	<u>Production Inputs</u>			
Soil Depth: >60 in.	<u>Rate</u>			
	<u>Date</u>			
	Fertilizer:			
	Nitrogen 33 lb/a			
	Nitrogen 50 lb/a			
	P ₂ O ₅ 25 lb/a			
	S 8 lb/a			
	Zn 2 qt/a			
	Herbicides:			
	Bicep Lite Mag II 3 pt/a			
	Permit 1 oz/a			
	MeeToo-Lachlor II 1 pt/a			
	Insecticides:			
	None			
Test Design:				
Replications: 3				
Plot Length: 20 ft.				
Rows per Plot: 2				
Row Spacing: 30 in.				
Seeding Rate: 29,000 seed/a				
Notes: 0.75" (7/21) and 0.35" (7/24) for emergence				
		January		
		February		
		March		
		April		
		May		
		June 74.7	1.67	1.1 [†]
		July 74.0	3.26	
		August 75.0	1.49	
		September 69.0	4.25	
		October 55.0	0.12	
		November		
		<u>December</u>		
		†Emergence irrigations		
		Seasonal Precipitation:	10.79 in.	
		Total Irrigation:	1.10 in.	
		Date of Last Spring Frost:	3-May	
		Date of First Fall Frost:	19-Oct	
		Frost Free Period:	169 days	

Table 3B. New Mexico 2013 Dryland Grain Sorghum Performance Test - Agricultural Science Center at Clovis

Brand/Company Name	Hybrid/Variety Name	Maturity Class	Head Date	Plant Height	Head Exertion	Moisture	Yield	Yield	Test Weight
				in.	in.	%	lb/A	bu/A	lb/bu
DuPont/Pioneer	85Y40	M	20-Aug	27.0	2.0	14.2	4509	80.5	55.8
DuPont/Pioneer	85G01	M	16-Aug	24.3	0.0	12.2	4191	74.8	54.7
Advanta US, Inc	AG2115	M	16-Aug	24.0	3.3	11.5	4075	72.8	54.5
Terral Seed	RV 9782	ML	17-Aug	22.7	1.0	11.4	4036	72.1	53.2
Advanta US, Inc	XG1323	ME	17-Aug	21.0	3.7	17.2	3859	68.9	52.2
Monsanto Company	DeKalb DKS44-20	M	15-Aug	25.3	1.0	12.7	3844	68.6	53.9
Sorghum Partners, LLC	NK7633	ML	20-Aug	24.7	2.3	13.9	3836	68.5	51.1
Terral Seed	RV 9562	M	19-Aug	24.3	0.7	10.9	3821	68.2	53.0
DuPont/Pioneer	85G03	M	21-Aug	23.7	0.0	13.8	3801	67.9	50.8
Advanta US, Inc	XG1123	ME	17-Aug	24.3	1.0	16.2	3772	67.4	47.6
Sorg. Part./Chromatin	KS 585	M	17-Aug	22.7	1.0	10.7	3750	67.0	52.5
Browning Seed Inc.	775 W	ME	18-Aug	23.3	3.0	12.4	3656	65.3	52.3
Advanta US, Inc	XG1213	ME	15-Aug	22.0	1.0	13.9	3649	65.2	53.5
Sorghum Partners, LLC	NK 5418	M	14-Aug	23.0	4.3	9.8	3630	64.8	50.4
Triumph Seed Co. Inc.	TRX 85131	ML	21-Aug	28.3	0.3	16.5	3622	64.7	51.3
Tx. A&M AgriLife Res.	ATx399 x RTx430	ML	22-Aug	23.0	0.0	13.3	3536	63.1	51.1
DuPont/Pioneer	86G32	ME	13-Aug	25.0	2.3	9.4	3518	62.8	51.0
Monsanto Company	DeKalb DKS37-07	ME	14-Aug	22.0	2.7	11.2	3441	61.4	50.7
Sorg. Part./Chromatin	KS 310	E	8-Aug	20.0	4.7	9.0	3405	60.8	55.6
Monsanto Company	DeKalb DKS29-28	E	11-Aug	19.7	5.3	9.0	3405	60.8	53.3
Advanta US, Inc	XG2113	M	18-Aug	22.7	4.7	12.9	3359	60.0	54.1
Monsanto Company	DeKalb DKS26-60	E	5-Aug	19.0	6.7	8.7	3282	58.6	52.0
Sorghum Partners, LLC	SP6929	ML	14-Aug	21.7	4.3	14.9	3255	58.1	53.9
Triumph Seed Co. Inc.	TR 4941	M	22-Aug	23.0	0.3	16.8	3244	57.9	52.9
Sorg. Part./Chromatin	SP 3425	ME	13-Aug	21.3	2.3	8.8	3079	55.0	52.1
Browning Seed Inc.	Challenger BMX	M	21-Aug	23.7	0.3	16.0	3072	54.9	47.4
Tx. A&M AgriLife Res.	ATx2752 x RTx430	ML	20-Aug	24.7	0.0	14.9	2858	51.0	50.0
Sorg. Part./Chromatin	251	E	4-Aug	19.7	7.0	8.4	2834	50.6	53.9
Monsanto Company	DeKalb DKS28-05	E	7-Aug	20.3	5.3	8.7	2756	49.2	54.4
Triumph Seed Co. Inc.	TR 4955	ML	22-Aug	27.3	1.0	14.2	2071	37.0	43.8
Tx. A&M AgriLife Res.	ATx378 x RTx430	ML	23-Aug	24.7	0.0	15.9	1483	26.5	41.2
	Trial Mean		16-Aug	23.2	2.3	12.6	3440	61.4	51.7
	LSD			2.0	3.2	2.5	833	14.9	3.0
	LSD P >			0.05	0.05	0.05	0.05	0.05	0.05
	CV			2.3	8.3	65.3	14.8	14.8	3.5
	F Test			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Table 4A. New Mexico 2013 Forage Corn Performance Test - Agricultural Science Center at Artesia

Investigators: R.P. 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: Harkey Soil Texture: very fine sandy loam Soil Depth: 70 in.	Previous Crop: Cotton Planting Date: 29-May Harvest Date: 9-Sep <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;">72 lb/a</td> <td style="text-align: center;">carryover</td> </tr> <tr> <td>Nitrogen</td> <td style="text-align: center;">80 lb/a</td> <td style="text-align: center;">21-Jun</td> </tr> <tr> <td>P₂O₅</td> <td style="text-align: center;">60 lb/a</td> <td style="text-align: center;">21-Jun</td> </tr> </tbody> </table> Herbicides: <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td>Gramoxone</td> <td style="text-align: center;">3 pt/a</td> <td style="text-align: center;">29-Apr</td> </tr> <tr> <td>Huskie</td> <td style="text-align: center;">16 oz/a</td> <td style="text-align: center;">4-Jun</td> </tr> </tbody> </table> Insecticides: <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td>Oberon 4SC</td> <td style="text-align: center;">8 oz/a</td> <td style="text-align: center;">21-Jun</td> </tr> </tbody> </table>		Rate	Date	Fertilizer:			Nitrogen	72 lb/a	carryover	Nitrogen	80 lb/a	21-Jun	P ₂ O ₅	60 lb/a	21-Jun	Gramoxone	3 pt/a	29-Apr	Huskie	16 oz/a	4-Jun	Oberon 4SC	8 oz/a	21-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></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 style="text-align: center;">59.4</td><td style="text-align: center;">0.00</td><td style="text-align: center;">8.43</td></tr> <tr><td>May</td><td style="text-align: center;">70.0</td><td style="text-align: center;">0.73</td><td style="text-align: center;">9.50</td></tr> <tr><td>June</td><td style="text-align: center;">81.4</td><td style="text-align: center;">0.10</td><td style="text-align: center;">9.72</td></tr> <tr><td>July</td><td style="text-align: center;">78.1</td><td style="text-align: center;">3.20</td><td style="text-align: center;">5.75</td></tr> <tr><td>August</td><td style="text-align: center;">79.9</td><td style="text-align: center;">0.06</td><td style="text-align: center;">2.05</td></tr> <tr><td>September</td><td></td><td></td><td></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 colspan="4"><hr/></td></tr> <tr> <td>Seasonal Precipitation</td> <td></td> <td style="text-align: center;">4.1 in.</td> <td></td> </tr> <tr> <td>Total Irrigation</td> <td></td> <td style="text-align: center;">35.5 in.</td> <td></td> </tr> <tr><td colspan="4"><hr/></td></tr> <tr> <td>Date of Last Spring Frost:</td> <td></td> <td colspan="2" style="text-align: center;">4-May</td> </tr> <tr> <td>Date of First Fall Frost:</td> <td></td> <td colspan="2" style="text-align: center;">19-Oct</td> </tr> <tr> <td>Frost Free Period:</td> <td></td> <td colspan="2" style="text-align: center;">168 days</td> </tr> </tbody> </table>		Average Temp. °F	Precip. in.	Irrigation in.	January				February				March				April	59.4	0.00	8.43	May	70.0	0.73	9.50	June	81.4	0.10	9.72	July	78.1	3.20	5.75	August	79.9	0.06	2.05	September				October				November				December				<hr/>				Seasonal Precipitation		4.1 in.		Total Irrigation		35.5 in.		<hr/>				Date of Last Spring Frost:		4-May		Date of First Fall Frost:		19-Oct		Frost Free Period:		168 days	
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Table 4B. New Mexico 2013 Forage Corn Performance Test - Agricultural Science Center at Artesia

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	%	%	%	% NDF	%	%	%	Mcal/lb		
Triumph Seed Co., Inc.	1358 S	11.6	38.2	74.5	8.1	40.5	58.4	33.1	3.2	66.6	0.686	3198	37113
Mycogen Seeds	TMF 2L825	10.9	37.8	75.7	7.4	43.8	57.7	29.3	2.6	65.1	0.670	3087	33551
Mycogen Seeds	TMF 2L874	10.8	38.5	76.5	8.5	43.8	60.0	26.4	3.0	65.3	0.671	3116	33692
Triumph Seed Co., Inc.	1801 H	10.6	36.9	75.8	7.5	45.7	57.6	27.0	2.8	64.6	0.664	3051	32413
CPS Dyna-Gro Seed	D59HR50	10.1	34.7	75.6	8.4	43.0	58.3	29.3	3.0	65.8	0.677	3140	31576
CPS Dyna-Gro Seed	D57VP75 (CX12117)	9.9	30.6	72.2	8.4	39.0	58.6	33.2	3.0	67.3	0.693	3247	32293
Triumph Seed Co., Inc.	1725 H	9.6	31.4	73.8	7.9	42.7	59.0	31.6	2.9	66.4	0.684	3191	30743
Golden Acres Genetics	Golden Acres G8551	9.5	31.3	74.4	8.4	43.8	60.6	29.3	2.9	67.0	0.690	3244	30675
Golden Acres Genetics	Golden Acres G7601	9.1	29.6	73.9	8.5	41.5	58.7	32.2	3.1	66.6	0.685	3198	29199
Mycogen Seeds	TMF 2H918	9.1	29.8	74.2	8.3	45.3	58.8	26.7	2.4	65.3	0.671	3106	28383
Mycogen Seeds	TMF 2H747	9.0	31.5	76.2	7.8	41.8	58.5	32.4	2.7	66.6	0.685	3197	28683
CPS Dyna-Gro Seed	D55GT73	8.9	30.2	75.3	8.8	42.8	59.3	29.1	3.2	66.2	0.681	3176	28140
CPS Dyna-Gro Seed	CX50VP43	8.9	25.9	70.3	8.3	38.6	58.6	36.5	2.8	67.3	0.693	3247	28756
	Trial Mean	9.9	32.8	74.5	8.2	42.5	58.8	30.5	2.9	66.15	0.681	3169	31171
	LSD	NS	7.8	2.4	0.6	3.4	1.4	4.3	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	17.6	16.4	2.0	4.9	5.5	1.6	9.9	15.4	1.9	2.0	3.0	17.6
	F Test	0.4159	0.0344	<0.0010	0.0006	0.0022	0.0070	0.0006	0.4924	0.0733	0.0733	0.0804	0.5291

Table 5A. New Mexico 2013 Forage Corn Performance Test - Agricultural Science Center at Clovis

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

Test Description

Location:	Management Practices:	Growing Conditions:			
County/Area: Curry	Previous Crop: fallow	<u>Average</u>			
Longitude: -103.22	Planting Date: 14-May	<u>Temp.</u>	<u>Precip.</u>	<u>Irrigation</u>	
Latitude: 34.60	Harvest Date: 9-Sep	°F	in.	in.	
Elevation: 4435 ft.		January			
Soil Name: Olton		February			
Soil Texture: clay loam		March			
Soil Depth: >60 in.		April	52.4	0.00	0.07
		May	64.0	0.45	3.10
		June	74.7	1.67	5.15
		July	74.0	3.26	4.90
		August	75.0	1.49	4.97
		September†	69.0	0.06	1.00
		October			
		November			
		<u>December</u>			
		†September 1-9			
		Seasonal Precipitation:		6.9 in.	
		Total Irrigation:		19.2 in.	
		Date of Last Spring Frost:		3-May	
		Date of First Fall Frost:		19-Oct	
		Frost Free Period:		169 days	
Test Design:	Production Inputs				
Replications: 3	<u>Rate</u>	<u>Date</u>			
Plot Length: 20 ft.	Fertilizer:				
Rows per Plot: 2	Nitrogen 11 lb/a	carryover			
Row Spacing: 30 in.	Nitrogen 240 lb/a	14-May			
Seeding Rate: 27000 seed/a	P ₂ O ₅ 60 lb/a	14-May			
	S 40 lb/a	14-May			
	Zn 3 qt/a	14-May			
	Herbicides:				
	Bicep Lite II Mag 3 pt/a	15-May			
	Brawl 1 pt/a	24-Jun			
	Insecticides:				
	Onager 14 oz/ac	24-Jun			
	Prevathon 14 oz/ac	24-Jun			
	Oberon 8 oz/ac	4-Aug			
	Prevathon 20 oz/ac	4-Aug			

Table 5B. New Mexico 2013 Forage Corn Performance Test - Agricultural Science Center at Clovis

Results

Brand/Company Name	Hybrid/Variety Name	Moisture			CP	NDFD			Ash	TDN	NE _i	Milk/Ton	Milk/Acre
		Dry Forage	Green Forage	at Harvest		48hr	Starch	NE _i					
		t/a	t/a	%	%	%	%	%	%	Mcal/lb	lb/t	lb/a	
Triumph Seed Co.	1358 S	10.2	28.7	64.4	9.0	42.6	60.1	27.2	4.2	65.9	0.677	3159	32231
Golden Acres Genetics	G8551	10.1	26.4	61.5	8.6	45.7	61.6	25.4	4.2	66.6	0.686	3227	32715
Mycogen Seeds	TMF2H747	10.1	28.5	64.7	8.6	42.4	60.0	29.8	3.7	66.3	0.682	3187	32066
Mycogen Seeds	TMF2L874	9.6	29.9	67.8	9.7	44.0	60.8	24.3	3.8	66.0	0.679	3173	30565
Mycogen Seeds	TMF2L825	9.6	29.0	66.9	8.5	45.4	59.0	23.8	3.9	64.0	0.656	3014	28852
CPS Dyna-Gro	D57VP75 (CX12117)	9.6	26.3	63.5	9.2	39.8	60.0	30.5	3.4	67.4	0.694	3267	31272
B-H Genetics	BH 8700 VTTP	9.6	25.8	62.9	9.2	38.1	59.9	31.5	3.9	67.7	0.698	3292	31526
B-H Genetics	XP 8910 RR	9.4	26.5	64.5	9.0	43.5	60.9	27.2	4.5	66.5	0.685	3214	30267
Triumph Seed Co.	1801 H	9.4	28.3	66.8	8.8	45.7	59.8	24.1	3.8	65.2	0.671	3112	29290
B-H Genetics	BH 8630 VTTP	9.3	24.2	61.6	8.8	44.3	59.9	26.5	4.1	65.9	0.678	3158	29339
CPS Dyna-Gro	CX50VP43	9.3	22.9	59.4	9.1	40.0	60.3	30.5	4.1	67.5	0.695	3276	30345
B-H Genetics	X 13177 RRLF	9.1	25.6	64.2	8.7	45.7	61.6	25.7	3.9	66.6	0.685	3225	29318
B-H Genetics	XP 8890 RR	9.1	23.8	61.8	9.2	43.8	60.8	27.0	3.8	66.7	0.687	3229	29375
Mycogen Seeds	TMF2H918	9.1	27.1	66.5	9.4	45.9	59.0	22.0	3.9	63.9	0.656	3009	27308
B-H Genetics	BH 8830 VTTP	9.0	24.2	62.7	9.1	40.4	58.1	31.0	3.4	67.2	0.692	3234	29273
Golden Acres Genetics	G7601	9.0	26.1	65.6	9.2	42.3	60.4	26.5	3.8	66.0	0.679	3171	28450
B-H Genetics	BH 8732 VTTP	8.9	26.0	65.5	9.1	42.3	60.1	26.9	3.8	66.1	0.680	3174	28380
Triumph Seed Co.	1725 H	8.9	25.8	65.6	8.7	45.7	60.2	25.5	4.1	66.0	0.679	3168	28075
B-H Genetics	BH 8895 VT2P	8.7	25.0	65.3	8.8	40.9	61.5	30.6	4.0	67.5	0.696	3290	28511
CPS Dyna-Gro	D59HR50	8.6	26.1	67.0	9.3	44.1	60.6	26.0	4.3	66.2	0.681	3185	27377
CPS Dyna-Gro	D55GT73	8.6	25.2	66.0	9.5	42.1	61.8	28.2	3.8	67.8	0.699	3313	28393
B-H Genetics	BH 8977 RR/HX	8.5	25.6	66.6	8.9	45.2	61.1	25.4	4.0	66.1	0.681	3188	27184
B-H Genetics	X 13176 RRLF	8.4	25.0	66.2	9.3	46.2	61.4	21.9	4.4	64.4	0.661	3064	25843
B-H Genetics	X 12111 LF	8.2	23.9	65.8	8.9	47.0	59.6	22.9	4.1	64.8	0.665	3077	25149
Trial Mean		9.2	26.1	64.7	9.0	43.5	60.4	26.7	4.0	66.2	0.681	3184	29213
LSD		0.7	2.1	2.5	0.5	3.2	1.7	4.1	NS	1.8	0.020	139	2824
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		4.8	4.9	2.4	3.1	4.5	1.7	9.3	9.4	1.7	1.8	2.6	5.9
F Test <0.0001 <0.0001 <0.0001 0.0001 <0.0001 0.0058 <0.0001 0.1035 0.0006 0.0007 0.0012 <0.0001													

Table 6A. New Mexico 2013 Forage Corn Performance Test - Agricultural Science Center at Farmington

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

Test Description

<p>Location: County/Area: San Juan Longitude: -108.306 Latitude: 36.6812 Elevation: 5,640 ft. Soil Name: Wall Soil Texture: sandy loam Soil Depth: > 75 in.</p> <p>Test Design: Replications: 4 Plot Length: 20 ft. Rows per Plot: 4 Row Spacing: 30 in.</p> <p>Seeding Rate: 40,000 seeds/a Harvest area: 1 row 10 feet long</p>	<p>Management Practices: Previous Crop: 2012 fallow, 2011 potatoes Planting Date: 14-May Harvest Date: 25-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>15 lb/a</td> <td>13-Feb</td> </tr> <tr> <td>Nitrogen</td> <td>30 lb/a</td> <td>28-May</td> </tr> <tr> <td>Nitrogen</td> <td>25 lb/a</td> <td>3-Jun</td> </tr> <tr> <td>Nitrogen</td> <td>20 lb/a</td> <td>10-Jun</td> </tr> <tr> <td>Nitrogen</td> <td>20 lb/a</td> <td>17-Jun</td> </tr> <tr> <td>Nitrogen</td> <td>20 lb/a</td> <td>24-Jun</td> </tr> <tr> <td>Nitrogen</td> <td>25 lb/a</td> <td>2-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>20 lb/a</td> <td>9-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>25 lb/a</td> <td>17-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>30 lb/a</td> <td>22-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>8 lb/a</td> <td>30-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>12 lb/a</td> <td>5-Aug</td> </tr> <tr> <td>Nitrogen</td> <td>20 lb/a</td> <td>13-Aug</td> </tr> <tr> <td>Total Nitrogen</td> <td>270 lb/a</td> <td></td> </tr> <tr> <td>P₂O₅</td> <td>78 lb/a</td> <td>13-Feb</td> </tr> <tr> <td>K₂O</td> <td>90 lb/a</td> <td>13-Feb</td> </tr> <tr> <td>ZnSO₄</td> <td>7.5 lb/a</td> <td>13-Feb</td> </tr> <tr> <td colspan="3">Herbicides:</td> </tr> <tr> <td>Bicep Lite II Mag</td> <td>1.5 qt/a</td> <td>21-May</td> </tr> <tr> <td>2,4-D</td> <td>3 oz/a</td> <td>21-May</td> </tr> <tr> <td>Status</td> <td>5 oz/a</td> <td>20-Jun</td> </tr> <tr> <td>Prowl H₂O</td> <td>1 qt/a</td> <td>20-Jun</td> </tr> </tbody> </table>		Rate	Date	Fertilizer:			Nitrogen	15 lb/a	13-Feb	Nitrogen	30 lb/a	28-May	Nitrogen	25 lb/a	3-Jun	Nitrogen	20 lb/a	10-Jun	Nitrogen	20 lb/a	17-Jun	Nitrogen	20 lb/a	24-Jun	Nitrogen	25 lb/a	2-Jul	Nitrogen	20 lb/a	9-Jul	Nitrogen	25 lb/a	17-Jul	Nitrogen	30 lb/a	22-Jul	Nitrogen	8 lb/a	30-Jul	Nitrogen	12 lb/a	5-Aug	Nitrogen	20 lb/a	13-Aug	Total Nitrogen	270 lb/a		P ₂ O ₅	78 lb/a	13-Feb	K ₂ O	90 lb/a	13-Feb	ZnSO ₄	7.5 lb/a	13-Feb	Herbicides:			Bicep Lite II Mag	1.5 qt/a	21-May	2,4-D	3 oz/a	21-May	Status	5 oz/a	20-Jun	Prowl H ₂ O	1 qt/a	20-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></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>59.8</td> <td>0.23</td> <td>3.0</td> </tr> <tr> <td>June</td> <td>72.8</td> <td>0.00</td> <td>6.9</td> </tr> <tr> <td>July</td> <td>76.5</td> <td>0.54</td> <td>7.5</td> </tr> <tr> <td>August</td> <td>73.2</td> <td>1.34</td> <td>6.9</td> </tr> <tr> <td>September</td> <td>70.2</td> <td>3.29</td> <td>2.7</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 colspan="2">Seasonal Precipitation</td> <td>5.4 in.</td> <td></td> </tr> <tr> <td colspan="2">Total Irrigation</td> <td>27.0 in.</td> <td></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">5-Oct</td> </tr> <tr> <td colspan="2">Frost Free Period:</td> <td colspan="2">155 days</td> </tr> </tbody> </table>		Average Temp. °F	Precip. in.	Irrigation in.	January				February				March				April				May	59.8	0.23	3.0	June	72.8	0.00	6.9	July	76.5	0.54	7.5	August	73.2	1.34	6.9	September	70.2	3.29	2.7	October				November				December				Seasonal Precipitation		5.4 in.		Total Irrigation		27.0 in.		Date of Last Spring Frost:		3-May		Date of First Fall Frost:		5-Oct		Frost Free Period:		155 days	
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Table 6B. New Mexico 2013 Forage Corn Performance Test - Agricultural Science Center at Farmington

Results

Brand/Company Name	Hybrid/Variety Name	Moisture					Plant Height	Ear Height	CP	NDF	NDFD		Ash	TDN	Milk/Ton	Milk/Acre
		Dry Forage	Green Forage	at Harvest	48hr	Starch										
		t/a	t/a	%	in	in	%	%	%	%	%	%	lb/t	lb/a		
Mycogen Seeds	TMF2H747	14.6	39.6	63.0	121	64	7.1	45.8	55.3	26.2	5.1	64.7	2810	40983		
Mycogen Seeds	TMF2H918	13.4	37.8	64.5	120	64	8.2	44.5	57.1	25.3	4.9	66.4	2924	39176		
Mycogen Seeds	TMF2L825	13.2	38.7	65.9	119	62	7.4	46.8	55.1	22.8	5.3	64.0	2755	36364		
Mycogen Seeds	TMF2L874	13.0	41.1	68.4	126	65	7.9	46.3	55.8	24.3	5.1	65.8	2889	37411		
CPS Dyna-Gro	D59HR50	12.7	36.2	64.8	119	61	8.1	42.5	57.0	27.8	5.2	66.9	2962	37646		
CPS Dyna-Gro	D57VP75	12.1	31.3	61.4	114	56	7.7	39.7	57.1	30.4	4.8	66.7	2942	35472		
CPS Dyna-Gro	CX50VP43	11.4	25.1	54.3	98	56	7.9	36.0	57.9	34.3	4.9	65.3	2824	32226		
CPS Dyna-Gro	D55GT73	11.0	28.6	62.0	107	51	7.9	38.4	57.9	31.1	4.7	67.7	3020	32703		
	Trial Mean	12.7	34.8	63.0	115	60	7.8	42.5	56.7	27.8	5.0	66.0	2891	36498		
	LSD	NS	6.2	3.7	8.5	NS	NS	3.8	NS	4.1	NS	2.2	163	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	13.3	12.1	4.0	5.0	14.4	6.5	6.2	3.0	10.1	9.3	2.3	3.8	12.7		
	F Test	0.1362	<0.0001	<0.0001	<0.0001	0.3234	0.0951	<0.0001	0.1361	0.0005	0.6460	0.0438	0.0451	0.1676		

Table 7A. New Mexico 2013 Forage Sorghum Performance Test - Agricultural Science Center at Artesia

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

Test Description

<p>Location:</p> <p>County/Area: Eddy Longitude: -104.38 Latitude: 32.75 Elevation: 33.53 ft. Soil Name: Pima Soil Texture: Silt loam Soil Depth: 60 in.</p> <p>Test Design:</p> <p>Replications: 4 Plot Length: 30 ft. Rows per Plot: 2 Row Spacing: 40 in.</p> <p>Seeding Rate: 95000 seeds/a</p>	<p>Management Practices:</p> <p>Previous Crop: pearl millet Planting Date: 28-May Harvest Date: 26-Sep</p> <p><u>Production Inputs</u></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>93 lb/a</td> <td>carryover</td> </tr> <tr> <td>Nitrogen</td> <td>102 lb/a</td> <td>17-Jun</td> </tr> <tr> <td>P₂O₅</td> <td>80 lb/a</td> <td>17-Jun</td> </tr> </tbody> </table> <p>Herbicides:</p> <table border="1"> <tbody> <tr> <td>Glyphosate + Quest</td> <td>4 pt/a</td> <td>1-May</td> </tr> <tr> <td>Gramoxone</td> <td>3 pt/a</td> <td>28-May</td> </tr> </tbody> </table> <p>Insecticides:</p> <p>None</p>		Rate	Date	Fertilizer:			Nitrogen	93 lb/a	carryover	Nitrogen	102 lb/a	17-Jun	P ₂ O ₅	80 lb/a	17-Jun	Glyphosate + Quest	4 pt/a	1-May	Gramoxone	3 pt/a	28-May	<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></td><td></td><td></td></tr> <tr><td>February</td><td></td><td></td><td></td></tr> <tr><td>March</td><td>52.6</td><td>0.00</td><td>4.48</td></tr> <tr><td>April</td><td>59.4</td><td>0.00</td><td></td></tr> <tr><td>May</td><td>70.0</td><td>0.73</td><td></td></tr> <tr><td>June</td><td>81.4</td><td>0.10</td><td>5.00</td></tr> <tr><td>July</td><td>78.1</td><td>3.20</td><td></td></tr> <tr><td>August</td><td>79.9</td><td>0.06</td><td>4.75</td></tr> <tr><td>September†</td><td>72.2</td><td>3.65</td><td></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> </tbody> </table> <p>Seasonal Precipitation: 7.7 in. Irrigation: 14.2 in.</p> <p>Date of Last Spring Frost: 4-May Date of First Fall Frost: 19-Oct Frost Free Period: 168 days</p>		Average Temp. °F	Precip. in.	Irrigation in.	January				February				March	52.6	0.00	4.48	April	59.4	0.00		May	70.0	0.73		June	81.4	0.10	5.00	July	78.1	3.20		August	79.9	0.06	4.75	September†	72.2	3.65		October				November				December			
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Table 7B. New Mexico 2013 Forage Sorghum Performance Test - Agricultural Science Center at Artesia

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	%	%	%	% NDF	%	%	%	Mcal/lb	lb/t	lb/a	
Browning Seed, Inc.	Silage Master	6.6	35.6	71.7	7.7	50.0	60.6	19.3	4.7	62.3	0.638	2910	19196	
Browning Seed, Inc.	Bundle King	6.6	35.6	74.4	7.7	54.2	54.2	54.2	5.2	61.3	0.626	2850	18865	
CPS Dyna-Gro	DG 705 F	6.3	36.4	72.1	8.2	50.7	50.7	50.7	4.8	62.1	0.636	2883	18239	
CPS Dyna-Gro	FX 12152	6.2	32.3	76.7	7.4	54.3	54.3	54.3	4.8	60.0	0.613	2761	17168	
CPS Dyna-Gro	FX 12151	5.9	33.4	72.9	8.2	49.9	49.9	49.9	4.7	62.6	0.641	2925	17477	
	Trial Mean	6.3	34.7	73.6	7.9	51.8	53.9	45.7	4.8	61.7	0.631	2866	18189	
	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	18.9	21.6	3.7	7.9	10.1	14.8	42.2	11.6	4.3	4.6	6.8	23.7	
	F Test	0.9234	0.9292	0.1093	0.3609	0.5875	0.5853	0.4783	0.6820	0.6565	0.6565	0.7682	0.9531	

Table 8A. New Mexico 2013 Irrigated Forage Sorghum Performance Test - Agricultural Science Center at Clovis

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

Test Description

Location:	Management Practices:	Growing Conditions:																																																																																																																																		
County/Area: Curry Longitude: -103.22 Latitude: 34.60 Elevation: 4435 ft. Soil Name: Olton Soil Texture: clay loam Soil Depth: >60 in.	Previous Crop: fallow Planting Date: 20-May Harvest Date: 30-Sep <u>Production Inputs</u> <table border="1"> <thead> <tr> <th></th> <th style="text-align: center;"><u>Rate</u></th> <th style="text-align: center;"><u>Date</u></th> </tr> </thead> <tbody> <tr> <td colspan="3">Fertilizer:</td> </tr> <tr> <td>Nitrogen</td> <td>75 lb/a</td> <td>carryover</td> </tr> <tr> <td>Nitrogen</td> <td>125 lb/a</td> <td>20-May</td> </tr> <tr> <td>P₂O₅</td> <td>55 lb/a</td> <td>20-May</td> </tr> <tr> <td>S</td> <td>20 lb/a</td> <td>20-May</td> </tr> <tr> <td>Zn</td> <td>2 qt/a</td> <td>20-May</td> </tr> <tr> <td colspan="3">Herbicides:</td> </tr> <tr> <td>Aatrex</td> <td>2 pt/a</td> <td>21-May</td> </tr> <tr> <td>Yukon</td> <td>5 oz/a</td> <td>18-Jun</td> </tr> <tr> <td>Brawl</td> <td>1 pt/a</td> <td>18-Jun</td> </tr> <tr> <td colspan="3">Insecticides:</td> </tr> <tr> <td>Oberon 4 SC</td> <td>8 oz/a</td> <td>4-Aug</td> </tr> <tr> <td>Prevathon</td> <td>20 oz/a</td> <td>4-Aug</td> </tr> </tbody> </table>		<u>Rate</u>	<u>Date</u>	Fertilizer:			Nitrogen	75 lb/a	carryover	Nitrogen	125 lb/a	20-May	P ₂ O ₅	55 lb/a	20-May	S	20 lb/a	20-May	Zn	2 qt/a	20-May	Herbicides:			Aatrex	2 pt/a	21-May	Yukon	5 oz/a	18-Jun	Brawl	1 pt/a	18-Jun	Insecticides:			Oberon 4 SC	8 oz/a	4-Aug	Prevathon	20 oz/a	4-Aug	<table border="1"> <thead> <tr> <th></th> <th style="text-align: center;"><u>Average</u></th> <th></th> <th></th> </tr> <tr> <th></th> <th style="text-align: center;"><u>Temp.</u></th> <th style="text-align: center;"><u>Precip.</u></th> <th style="text-align: center;"><u>Irrigation</u></th> </tr> <tr> <th></th> <th style="text-align: center;">°F</th> <th style="text-align: center;">in.</th> <th style="text-align: center;">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 style="text-align: center;">64.0</td><td style="text-align: center;">0.45</td><td style="text-align: center;">1.15</td></tr> <tr><td>June</td><td style="text-align: center;">74.7</td><td style="text-align: center;">1.67</td><td style="text-align: center;">0.70</td></tr> <tr><td>July</td><td style="text-align: center;">74.0</td><td style="text-align: center;">3.26</td><td style="text-align: center;">4.00</td></tr> <tr><td>August</td><td style="text-align: center;">75.0</td><td style="text-align: center;">1.49</td><td style="text-align: center;">4.60</td></tr> <tr><td>September</td><td style="text-align: center;">69.0</td><td style="text-align: center;">4.25</td><td style="text-align: center;">1.30</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><u>December</u></td><td></td><td></td><td></td></tr> <tr><td colspan="4"> </td></tr> <tr> <td>Seasonal Precipitation:</td> <td></td> <td style="text-align: center;">11.1 in.</td> <td></td> </tr> <tr> <td>Total Irrigation:</td> <td></td> <td style="text-align: center;">11.8 in.</td> <td></td> </tr> <tr><td colspan="4"> </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;">19-Oct</td> <td></td> </tr> <tr> <td>Frost Free Period:</td> <td></td> <td style="text-align: center;">169 days</td> <td></td> </tr> </tbody> </table>		<u>Average</u>				<u>Temp.</u>	<u>Precip.</u>	<u>Irrigation</u>		°F	in.	in.	January				February				March				April				May	64.0	0.45	1.15	June	74.7	1.67	0.70	July	74.0	3.26	4.00	August	75.0	1.49	4.60	September	69.0	4.25	1.30	October				November				<u>December</u>								Seasonal Precipitation:		11.1 in.		Total Irrigation:		11.8 in.						Date of Last Spring Frost:		3-May		Date of First Fall Frost:		19-Oct		Frost Free Period:		169 days	
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Test Design:

Replications: 3
 Plot Length: 20 ft.
 Rows per Plot: 2
 Row Spacing: 30 in.
 Seeding Rate: 75000 seed/a

Table 8B. New Mexico 2013 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 %								
Sorg. Part./Chromatin	1990	Conv	L	11.5	44.9	74.3	8.5	60.1	64.0	5.3	58.4	0.595	2658	30612
Sorg. Part./Chromatin	SS 405	Conv	L	10.0	23.9	58.4	9.0	46.8	58.3	4.5	63.1	0.647	2949	29744
Sorg. Part./Chromatin	Trudan Headless	Conv	PS	9.5	31.2	69.4	9.2	52.4	61.3	5.2	59.7	0.609	2728	26033
Forage First	FS-5	Conv	M	9.3	22.9	60.6	8.9	43.4	61.7	4.9	63.0	0.645	2966	26659
Warner Seeds	2-Way	Conv	M	8.4	22.3	62.4	8.4	48.5	66.1	6.1	63.4	0.650	3032	25647
CPS Dyna-Gro	FX12151	Conv	L	8.0	19.6	59.3	9.0	47.0	64.3	5.7	63.0	0.645	2986	23944
Browning Seed, Inc.	Silage Master	Conv	ML	7.4	22.4	67.0	8.7	46.4	63.1	5.2	64.1	0.658	3055	22674
DuPont/Pioneer	849F	Conv	ML	7.1	19.5	63.7	8.6	53.3	63.5	5.9	60.9	0.622	2829	20183
CPS Dyna-Gro	705F	Conv	ME	7.1	18.5	61.7	8.9	47.5	64.5	5.6	63.9	0.656	3059	21681
Browning Seed, Inc.	Bundle King	Conv	M	7.0	20.4	65.7	9.1	45.6	65.5	5.7	63.1	0.647	3005	21146
Sorg. Part./Chromatin	X840	Conv	L	6.9	15.2	54.6	10.0	45.7	67.3	6.1	65.3	0.671	3179	22081
CPS Dyna-Gro	FX12152	BMR	ML	6.8	20.0	65.8	9.2	44.7	68.9	5.1	67.5	0.696	3352	22864
Sorg. Part./Chromatin	NK300	Conv	ME	6.7	17.1	60.6	8.6	46.2	63.9	5.5	63.3	0.649	3006	20240
Sorg. Part./Chromatin	NK8416	Conv	L	6.5	14.3	54.6	10.1	46.5	67.2	6.3	65.0	0.668	3155	20441
Sorg. Part./Chromatin	NK9916	Conv	L	6.2	14.1	55.7	9.7	48.4	66.4	6.3	63.2	0.648	3022	18806
DuPont/Pioneer	841F	Conv	M	6.1	20.7	70.8	9.7	47.6	66.1	5.6	66.4	0.684	3251	19691
Warner Seeds	2-Way BMR Sterile	BMR	M	5.4	16.5	67.5	9.1	44.8	66.8	5.9	62.1	0.636	2945	15703
Trial Mean				7.7	21.4	63.1	9.1	47.9	64.6	5.6	63.3	0.649	3011	22832
LSD				1.9	4.5	4.4	0.8	4.9	2.8	0.8	2.3	0.025	159	6287
LSD P >				0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
CV				15.0	12.6	4.2	5.4	6.2	2.6	8.8	2.2	2.4	3.2	16.6
F Test				<0.0001	<0.0001	<0.0001	0.0023	<0.0001	<0.0001	0.0036	<0.0001	<0.0001	<0.0001	0.0025

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

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

Table 9A. New Mexico 2013 Dryland Forage Sorghum Performance Test - Agricultural Science Center at Clovis

Investigators: M.A. Marsalis, 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: 1-Oct <u>Production Inputs</u> <table border="1"> <thead> <tr> <th></th> <th style="text-align: center;"><u>Rate</u></th> <th style="text-align: center;"><u>Date</u></th> </tr> </thead> <tbody> <tr> <td colspan="3">Fertilizer:</td> </tr> <tr> <td>Nitrogen</td> <td>25 lb/a</td> <td>carryover</td> </tr> <tr> <td>Nitrogen</td> <td>75 lb/a</td> <td>17-Jun</td> </tr> <tr> <td>P₂O₅</td> <td>25 lb/a</td> <td>17-Jun</td> </tr> <tr> <td>Zn</td> <td>2 qt/a</td> <td>17-Jun</td> </tr> <tr> <td colspan="3">Herbicides:</td> </tr> <tr> <td>Permit</td> <td>1 oz/a</td> <td>12-Jul</td> </tr> <tr> <td>MeeToo-Lachlor II</td> <td>1 pt/a</td> <td>12-Jul</td> </tr> <tr> <td>Aatrex</td> <td>2 pt/a</td> <td>20-Jun</td> </tr> <tr> <td colspan="3">Insecticides:</td> </tr> <tr> <td colspan="3" style="text-align: center;">None</td> </tr> </tbody> </table>		<u>Rate</u>	<u>Date</u>	Fertilizer:			Nitrogen	25 lb/a	carryover	Nitrogen	75 lb/a	17-Jun	P ₂ O ₅	25 lb/a	17-Jun	Zn	2 qt/a	17-Jun	Herbicides:			Permit	1 oz/a	12-Jul	MeeToo-Lachlor II	1 pt/a	12-Jul	Aatrex	2 pt/a	20-Jun	Insecticides:			None			<table border="1"> <thead> <tr> <th></th> <th style="text-align: center;"><u>Average</u></th> <th></th> <th></th> </tr> <tr> <th></th> <th style="text-align: center;"><u>Temp.</u></th> <th style="text-align: center;"><u>Precip.</u></th> <th style="text-align: center;"><u>Irrigation</u></th> </tr> <tr> <th></th> <th style="text-align: center;">°F</th> <th style="text-align: center;">in.</th> <th style="text-align: center;">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></td><td></td><td></td></tr> <tr><td>June</td><td style="text-align: center;">74.7</td><td style="text-align: center;">1.67</td><td></td></tr> <tr><td>July</td><td style="text-align: center;">74.0</td><td style="text-align: center;">3.26</td><td></td></tr> <tr><td>August</td><td style="text-align: center;">75.0</td><td style="text-align: center;">1.49</td><td></td></tr> <tr><td>September</td><td style="text-align: center;">69.0</td><td style="text-align: center;">4.25</td><td></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 style="text-align: center;">10.7 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;">19-Oct</td> <td></td> </tr> <tr> <td>Frost Free Period:</td> <td></td> <td style="text-align: center;">169 days</td> <td></td> </tr> </tbody> </table>		<u>Average</u>				<u>Temp.</u>	<u>Precip.</u>	<u>Irrigation</u>		°F	in.	in.	January				February				March				April				May				June	74.7	1.67		July	74.0	3.26		August	75.0	1.49		September	69.0	4.25		October				November				December				Seasonal Precipitation:		10.7 in.		Total Irrigation:		0.0 in.		Date of Last Spring Frost:		3-May		Date of First Fall Frost:		19-Oct		Frost Free Period:		169 days	
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Table 9B. New Mexico 2013 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 Mcal/lb	Milk/Ton lb/t	Milk/Acre lb/a
				Dry Forage t/a	Green Forage t/a	at Harvest %								
Sorg. Part./Chromatin	SS 405	Conv	L	5.0	19.2	74.0	10.2	51.2	65.2	5.5	61.9	0.633	2916	14667
DuPont/Pioneer	849F	Conv	ML	5.0	14.6	66.0	10.0	45.6	65.1	5.2	66.1	0.680	3220	16103
Sorg. Part./Chromatin	NK300	Conv	ME	4.9	13.9	64.5	10.2	42.7	65.7	5.2	66.1	0.681	3225	15931
CPS Dyna-Gro	705F	Conv	ME	4.9	14.9	67.3	11.0	44.3	63.7	5.5	64.0	0.657	3055	14899
Sorg. Part./Chromatin	1990	Conv	L	4.8	23.2	79.5	10.8	57.8	70.9	6.6	62.0	0.635	2971	14120
Sorg. Part./Chromatin	Trudan Headless	Conv	PS	4.7	18.8	75.2	9.7	57.4	65.1	5.9	59.5	0.607	2748	12797
Sorg. Part./Chromatin	NK9916	Conv	L	4.5	11.4	59.8	9.6	45.1	67.5	5.5	66.4	0.684	3259	14790
CPS Dyna-Gro	FX12151	Conv	L	4.4	13.3	66.8	10.8	44.9	67.5	5.8	64.0	0.657	3088	13594
Forage First	FS-5	Conv	M	4.2	14.4	70.8	9.4	47.2	64.4	5.4	63.0	0.645	2988	12328
Browning Seed, Inc.	Silage Master	Conv	ML	4.2	15.1	72.1	10.0	45.3	68.3	5.7	62.3	0.638	2973	12608
DuPont/Pioneer	841F	Conv	M	4.2	14.2	70.5	11.0	46.8	66.9	6.0	62.8	0.644	2998	12521
Sorg. Part./Chromatin	NK8416	Conv	L	4.1	10.5	60.9	10.4	42.8	68.9	5.7	66.4	0.683	3266	13669
Browning Seed, Inc.	Bundle King	Conv	M	3.6	11.4	68.0	9.8	47.9	68.3	5.9	63.1	0.646	3027	11009
Sorg. Part./Chromatin	X840	Conv	L	3.6	10.3	64.7	10.8	44.1	66.8	5.9	65.1	0.669	3158	11445
CPS Dyna-Gro	FX12152	BMR	ML	3.3	13.3	74.9	11.3	50.0	71.9	6.4	61.6	0.630	2945	9790
Trial Mean				4.4	14.6	69.0	10.3	47.5	67.1	5.8	63.6	0.653	3056	13351
LSD				1.0	2.1	4.3	1.1	4.4	3.4	NS	2.4	0.027	161	3366
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				13.0	8.5	3.4	6.5	5.6	3.0	11.4	2.3	2.5	3.1	15.1
F Test				0.0144	<0.0001	<0.0001	0.0326	<0.0001	0.0009	0.3879	<0.0001	<0.0001	<0.0001	0.0230

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

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

Table 10A. New Mexico 2013 Irrigated Forage Sorghum Performance Test - Agricultural Science Center at Los Lunas

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

Test Description

Location:		Management Practices:			Growing Conditions:			
County/Area:	Valencia	Previous Crop:	fallow		Average			
Longitude:	-106.45	Planting Date:	14-May		Temp.	Precip.	Irrigation	
Latitude:	34.46	Harvest Date:	19-Sep		°F	in.	in.	
Elevation:	4840 ft.							
Soil Name:	Gila							
Soil Texture:	loam							
Soil Depth:	60 in.							
		<u>Production Inputs</u>			January			
		<u>Rate</u>	<u>Date</u>		February			
		Fertilizer:			March			
					April	56.2	0.23	
					May	65.6	0.00	3.00
					June	77.4	0.11	6.00
					July	77.2	4.14	3.00
					August	75.9	1.11	3.00
					September	69.5	2.54	
					October			
					November			
					<u>December</u>			
					Seasonal Precipitation		8.1 in.	
					Total Irrigation		15.0 in.	
					Date of Last Spring Frost: 3-May			
					Date of First Fall Frost: 28-Sep			
					Frost Free Period: 148 days			
Test Design:		Herbicides:						
Replications:	3	Unison (2,4-D) 4 pt/a 14-Jun						
Plot Length:	20 ft.	Insecticides:						
Rows per Plot:	2	None						
Row Spacing:	30 in.							
Seeding Rate:	80,000 seed/a							

Table 10B. New Mexico 2013 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 _i Mcal/lb	Milk/ Ton	Milk/ Acre
				Dry Forage t/a	Green Forage t/a	at Harvest %								
Sorghum Partners/ Chromatin Forage First	SS 405	N	L	14.4	35.2	59.2	7.8	48.9	55.5	5.7	55.9	0.570	2407	34447
Sorghum Partners/ Chromatin	FS-5	N	M	12.7	36.4	65.3	8.5	46.7	56.6	6.2	56.8	0.573	2475	31314
Sorghum Partners/ Chromatin	Trudan Headless	N	PS	11.4	38.5	70.5	7.0	55.7	54.9	5.9	52.9	0.533	2183	24809
CPS Dyna-Gro	DG 705 F	N	ME	10.8	26.9	60.0	8.3	42.7	58.2	5.7	62.6	0.640	2910	31372
Sorghum Partners/ Chromatin	NK 300	N	ME	10.0	23.9	58.1	7.6	48.6	58.2	6.1	59.7	0.610	2704	27243
Warner Seeds, Inc.	2 Way	N	M	8.4	32.8	74.5	7.3	52.4	57.4	6.7	53.7	0.540	2263	18965
Browning Seed, Inc.	Silage Master	N	ML	8.3	23.3	64.4	8.2	39.1	58.5	5.5	62.4	0.640	2901	24098
Browning Seed, Inc.	Bundle king	N	ML	8.2	28.4	71.3	7.0	51.6	58.0	6.4	55.9	0.567	2430	20066
Forage First	Brach. Dwarf Leafy-108	Y	M	8.1	22.7	64.3	8.7	42.2	61.8	6.5	63.4	0.650	2998	24337
Pioneer Hi-Bred Int.	849 F	N	ML	7.7	28.9	73.2	7.2	57.3	56.4	6.6	52.1	0.523	2138	16579
Sorghum Partners/ Chromatin	NK 9916	N	L	7.4	18.9	60.9	9.1	45.5	60.9	6.4	63.0	0.643	2965	21870
Warner Seeds, Inc.	2 Way BMR Sterile	Y	M	7.4	25.5	71.1	7.4	47.3	59.7	6.6	53.6	0.543	2279	16939
Sorghum Partners/ Chromatin	NK 8416	N	L	6.4	18.1	64.9	8.1	56.5	61.2	7.3	59.4	0.607	2706	17190
Pioneer Hi-Bred Int.	841 F	N	M	5.8	23.0	74.5	8.5	60.2	57.7	7.2	54.6	0.550	2334	13642
Trial Mean				9.1	27.3	66.6	7.9	49.6	58.2	6.3	57.6	0.585	2549	23062
LSD				1.6	3.6	4.0	NS	10.6	NS	0.9	5.1	0.059	371	6100
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				10.5	7.9	3.6	16.6	12.7	5.1	8.4	5.2	6.0	8.7	15.8
F Test				<0.0001	<0.0001	<0.0001	0.6806	0.0087	0.1887	0.0077	0.0001	0.0002	<0.0001	<0.0001

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

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

Table 11A. New Mexico 2013 Irrigated Forage Sorghum Performance Test - Agricultural Science Center at Tucumcari

Investigators: L.M. Lauriault, J. Box, P.L. Cooksey, S. Jennings, J. Jennings, and C. Henson

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: Small grain forage Planting Date: 23-May Harvest Dates: 28-Oct</p> <p><u>Production Inputs</u></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>23 lb/a</td> <td>carryover</td> </tr> <tr> <td>Nitrogen</td> <td>100 lb/a</td> <td>30-May</td> </tr> <tr> <td>Nitrogen</td> <td>52 lb/a</td> <td>4-Sep</td> </tr> <tr> <td>P2O5</td> <td>39 lb/a</td> <td>30-May</td> </tr> <tr> <td colspan="3">Herbicides:</td> </tr> <tr> <td>Brawl</td> <td>1 pt/a</td> <td>31-May</td> </tr> <tr> <td>Atrazine 4L</td> <td>2.4 pt/a</td> <td>27-Jun</td> </tr> <tr> <td colspan="3">Insecticides:</td> </tr> <tr> <td colspan="3">None</td> </tr> </tbody> </table>		Rate	Date	Fertilizer:			Nitrogen	23 lb/a	carryover	Nitrogen	100 lb/a	30-May	Nitrogen	52 lb/a	4-Sep	P2O5	39 lb/a	30-May	Herbicides:			Brawl	1 pt/a	31-May	Atrazine 4L	2.4 pt/a	27-Jun	Insecticides:			None			<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></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>68.0</td><td>0.82</td><td>0.85</td></tr> <tr><td>June</td><td>80.0</td><td>1.13</td><td>4.90</td></tr> <tr><td>July</td><td>80.0</td><td>1.23</td><td>3.81</td></tr> <tr><td>August</td><td>81.0</td><td>0.92</td><td>2.50</td></tr> <tr><td>September</td><td>73.0</td><td>4.28</td><td>1.00</td></tr> <tr><td>October</td><td>58.0</td><td>0.26</td><td>2.25</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>8.6 in.</td><td></td></tr> <tr><td colspan="2">Total Irrigation</td><td>15.3 in.</td><td></td></tr> <tr><td colspan="2">Date of Last Spring Frost:</td><td>2-May</td><td></td></tr> <tr><td colspan="2">Date of First Fall Frost:</td><td>19-Oct</td><td></td></tr> <tr><td colspan="2">Frost Free Period:</td><td>170 days</td><td></td></tr> </tbody> </table>		Average Temp. °F	Precip. in.	Irrigation in.	January				February				March				April				May	68.0	0.82	0.85	June	80.0	1.13	4.90	July	80.0	1.23	3.81	August	81.0	0.92	2.50	September	73.0	4.28	1.00	October	58.0	0.26	2.25	November				December				Seasonal Precipitation		8.6 in.		Total Irrigation		15.3 in.		Date of Last Spring Frost:		2-May		Date of First Fall Frost:		19-Oct		Frost Free Period:		170 days	
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<p>Test Design:</p> <p>Replications: 4 Plot Length: 30 ft. Rows per Plot: 2 Row Spacing: 30 in.</p> <p>Seeding Rate: 90,000 seed/ac</p>																																																																																																											

Table 11B. New Mexico 2013 Irrigated Forage Sorghum Performance Test - Agricultural Science Center at Tucumcari

Results

Brand/Company Name	Hybrid/Variety Name	Sorghum [†] Maturity [§]		Dry Forage	Green Forage	Harvest Moisture	CP	NDFD			Ash	TDN	NE _i	Milk/Ton	Milk/Acre
		Type	Group	t/a	t/a	%		%	% NDF	%					
Sorghum Partners/Chromatin	1990	Conv	L	3.2	10.7	69.9	9.8	57.8	64.5	1.1	6.7	56.0	0.568	2490	7943
Sorghum Partners/Chromatin	Trudan Headless	Conv	PS	3.1	8.6	63.9	9.4	59.1	60.1	1.7	6.4	54.2	0.550	2321	6997
Sorghum Partners/Chromatin	SS 405	Conv	L	2.6	7.5	64.9	8.8	58.7	61.2	3.1	5.6	55.1	0.558	2399	6297
Browning Seed, Inc.	Bundle King	Conv	ML	2.3	6.4	63.1	9.6	55.2	62.1	2.6	6.4	54.3	0.548	2348	5531
Browning Seed, Inc.	Silage Master	Conv	ML	2.3	7.1	67.2	10.2	54.6	60.7	3.4	6.5	54.2	0.548	2328	5333
Sorghum Partners/Chromatin	NK 300	Conv	ME	2.2	5.9	62.2	11.6	55.3	62.0	0.3	7.3	54.0	0.543	2324	5202
Sorghum Partners/Chromatin	NK 9916	Conv	L	2.1	5.5	61.2	12.1	54.0	60.6	0.1	7.5	53.1	0.535	2246	4811
Sorghum Partners/Chromatin	NK 8416	Conv	L	1.9	4.9	60.9	11.5	54.5	61.7	0.7	7.4	53.5	0.540	2285	4304
Sorghum Partners/Chromatin	X840	Conv	L	1.8	4.8	61.6	12.0	55.1	62.6	0.3	7.7	55.0	0.558	2399	4303
Trial Mean				2.4	6.8	63.9	10.8	56.0	61.7	1.5	6.8	54.4	0.549	2349	5636
LSD				NS	NS	2.6	1.1	1.7	NS	1.4	0.5	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				34.5	37.5	2.8	7.0	2.1	3.0	66.0	4.9	2.9	3.4	5.5	33.0
F Test				0.2664	0.0628	0.0001	0.0001	0.0001	0.0889	0.0001	0.0001	0.3220	0.3730	0.3215	0.1365

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

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

Table 12A. New Mexico 2013 Irrigated Sorghum x Sudangrass 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	Previous Crop: pearl millet	
Longitude: -104.38	Planting Date: 28-May	
Latitude: 32.75	Harvest Date: 23-Jul 4-Oct	
Elevation: 33.53 ft.		
Soil Name: Pima		
Soil Texture: Silt loam		
Soil Depth: 60 in.		
	<u>Production Inputs</u>	
	<u>Rate</u> <u>Date</u>	
	Fertilizer:	
	Nitrogen 93 lb/a carryover	
	Nitrogen 50 lb/a 17-Jun	
	Nitrogen 50 lb/a 41496	
	P ₂ O ₅ 80 lb/a 17-Jun	
	Herbicides:	
	Glyphosate + Quest 4 pt/a 1-May	
	Gramoxone 3 pt/a 28-May	
	Insecticides:	
	None	
Test Design:		
Replications: 4		
Plot Length: 30 ft.		
Rows per Plot: 2		
Row Spacing: 40 in.		
Seeding Rate: 115000 seeds/a		
		<u>Average</u>
		<u>Temp.</u> <u>Precip.</u> <u>Irrigation</u>
		°F in. in.
		January
		February
		March 52.6 0.00 4.48
		April 59.4 0.00
		May 70.0 0.73
		June 81.4 0.10 4.48
		July 78.1 3.20
		August 79.9 0.06 6.90
		September† 72.2 3.65
		October
		November
		<u>December</u>
		Seasonal Precipitation 7.7 in.
		Irrigation 15.9 in.
		Date of Last Spring Frost: 4-May
		Date of First Fall Frost: 19-Oct
		Frost Free Period: 168 days

Table 12B. New Mexico 2013 Irrigated Sorghum x Sudangrass Performance Test - Agricultural Science Center at Artesia

Brand/Company Name	Hybrid/Variety Name	Dry Forage			Green Forage			Moisture		Milk per Ton		Milk per Acre	
		1st Cut	2nd Cut	Total	1st Cut	2nd Cut	Total	1st Cut	2nd Cut	1st Cut	2nd Cut	1st Cut	2nd Cut
		t/a	t/a	t/a	t/a	t/a	t/a	%	%	lb/t	lb/t	lb/ac	lb/ac
Browning Seed, Inc.	Sweet Sioux WMR	2.3	4.0	6.3	18.2	21.0	39.2	92.8	85.0	2530	2188	5747	8650
Browning Seed, Inc.	Sweet Sioux BMR	1.8	4.4	6.2	15.9	23.0	38.9	93.8	85.4	2396	2226	4415	9530
Browning Seed, Inc.	Tridan	1.9	3.8	5.8	17.4	24.9	42.3	94.3	88.7	2692	2462	5239	9368
Browning Seed, Inc.	Cadan 99B	2.0	3.7	5.8	17.1	21.1	38.2	93.7	86.5	2587	2317	5290	8395
CPS Dyna-Gro	FX 12263	1.9	3.8	5.6	17.5	24.5	41.9	95.0	88.6	2557	2398	4735	8854
CPS Dyna-Gro	DannyBoy BMR	1.9	3.3	5.2	17.2	22.8	40.1	95.0	89.5	2471	2343	4655	7700
CPS Dyna-Gro	71F10	1.6	3.4	5.1	15.9	22.2	38.1	95.1	88.4	2443	2328	3992	7890
	Trial Mean	1.8	3.7	5.5	16.8	22.7	39.5	94.7	87.8	2529	2323	4867	8627
	LSD	0.40	NS	NS	NS	NS	NS	2.7	NS	NS	NS	1036	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	17.6	21.9	17.9	15.0	18.4	15.2	1.9	4.0	8.2	12.8	15.1	17.1
	F Test	0.0155	0.4418	0.1535	0.6973	0.8432	0.9034	0.0475	0.3460	0.6016	0.9251	0.0011	0.2671

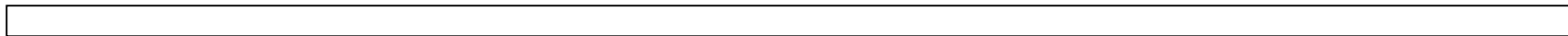
Table 12C. New Mexico 2013 Irrigated Sorghum x Sudangrass Performance Test - Agricultural Science Center at Artesia

Brand/Company Name	Hybrid/Variety Name	Crude Protein		ADF		NDFD 48h		TDN		NE _i		RFQ	
		1st Cut	2nd Cut	1st Cut	2nd Cut	1st Cut	2nd Cut	1st Cut	2nd Cut	1st Cut	2nd Cut	1st Cut	2nd Cut
		%	%	%	%	%	%	%	%	Mcal/lb	Mcal/lb		
Browning Seed, Inc.	Sweet Sioux WMR	12.5	9.1	38.3	41.9	58.2	52.4	57.3	53.3	0.583	0.538	104	85
Browning Seed, Inc.	Sweet Sioux BMR	11.9	8.9	39.4	41.8	57.4	53.4	55.5	53.7	0.563	0.543	98	87
Browning Seed, Inc.	Tridan	12.9	9.3	37.2	40.5	61.9	58.8	59.1	56.3	0.603	0.571	114	101
Browning Seed, Inc.	Cadan 99B	12.9	9.7	37.9	41.1	60.4	56.0	57.8	54.7	0.588	0.553	109	95
CPS Dyna-Gro	FX 12263	12.5	8.9	38.7	41.5	61.4	58.2	57.3	55.5	0.583	0.562	109	98
CPS Dyna-Gro	DannyBoy BMR	12.8	9.6	39.3	41.8	60.5	58.0	56.2	54.8	0.570	0.554	105	97
CPS Dyna-Gro	71F10	12.5	9.4	39.3	41.9	59.9	57.6	55.9	54.6	0.567	0.552	104	96
	Trial Mean	12.7	9.4	38.5	41.4	60.1	56.2	57.1	54.7	0.580	0.550	106	94
	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	8.3	10.6	4.5	4.7	6.7	10.6	4.3	6.3	4.7	6.7	11.4	16.9
	F Test	0.6219	0.7216	0.5191	0.9285	0.7536	0.7160	0.5364	0.9485	0.5364	0.9485	0.6692	0.8539

Table 13B. New Mexico 2013 Irrigated Sorghum x Sudangrass Performance Test - Agricultural Science Center at Los Lunas

Results

Brand/Company Name	Hybrid/Variety Name	Cutting 1					Cutting 2					Total Dry Forage		
		Dry Forage	Green Forage	Moisture		Milk/Ton	Milk/Acre	Dry Forage	Green Forage	Moisture			Milk/Ton	Milk/Acre
				at Harvest	%					at Harvest	%			
		t/a	t/a	%	lb/t	lb/a	t/a	t/a	%	lb/t	lb/a	t/a		
Browning Seed, Inc.	Tridan	3.2	17.0	81.5	2434	7683	4.0	14.7	72.6	2480	9984	7.2		
Browning Seed, Inc.	Sweet Sioux WMR	3.1	18.0	82.9	2579	7932	4.2	15.2	72.2	2607	10938	7.3		
Browning Seed, Inc.	Cadan 99 B	3.1	18.3	83.5	2342	7084	3.4	12.8	73.7	2572	8676	6.4		
Browning Seed, Inc.	Sweet Sioux BMR VI	2.0	15.0	86.6	2741	5489	2.2	12.5	82.5	2988	6496	4.2		
	Trial Mean	2.8	17.1	83.6	2524	7047	3.4	13.8	75.3	2661	9024	6.3		
	LSD	0.8	NS	2.7	NS	NS	0.6	NS	2.0	179	1791	0.8		
	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	14.5	8.1	1.6	9.2	16.2	8.9	9.4	1.3	3.4	9.9	6.4		
	F Test	0.0395	0.0921	0.0167	0.2705	0.1335	0.0007	0.1034	<0.0001	0.0019	0.0042	0.0002		



Results

Brand/Company Name	Hybrid/Variety Name	Cutting 1							Cutting 2						
		NDFD							NDFD						
		CP	ADF	NDF	48hr	Ash	TDN	NE _i	CP	ADF	NDF	48hr	Ash	TDN	NE _i
%	%	%	%	%	%	Mcal/lb	%	%	%	%	%	%	Mcal/lb		
Browning Seed, Inc.	Tridan	11.0	39.7	64.8	55.3	8.6	56.3	0.57	9.9	38.0	62.4	54.3	8.2	57.1	0.58
Browning Seed, Inc.	Sweet Sioux WMR	9.4	38.9	64.1	56.9	7.7	58.2	0.59	10.3	36.9	62.0	56.0	7.8	58.7	0.60
Browning Seed, Inc.	Cadan 99 B	9.4	40.7	66.3	54.0	7.7	55.2	0.56	9.4	38.6	63.3	56.7	8.1	58.1	0.59
Browning Seed, Inc.	Sweet Sioux BMR VI	11.5	38.6	62.6	64.7	12.1	59.5	0.61	11.7	35.7	57.8	67.0	11.9	62.7	0.64
	Trial Mean	10.3	39.5	64.4	57.8	9.0	57.3	0.58	10.3	37.3	61.4	58.5	9.0	59.1	0.60
	LSD	NS	NS	NS	6.1	1.6	NS	NS	1.5	NS	2.0	2.9	1.5	2.2	0.03
	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	12.1	5.0	4.1	5.2	9.0	5.0	5.3	7.2	3.3	1.6	2.5	8.3	1.9	2.3
	F Test	0.1816	0.6166	0.4404	0.0188	0.0016	0.3576	0.3896	0.0425	0.0991	0.0019	0.0002	0.0014	0.0034	0.0060

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

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Results

			t/a	t/a	%	lb/t	lb/a	t/a	t/a	%	lb/t	lb/a	t/a	lb/a
Browning Seed, Inc.	Sweet Sioux WMR	SxS	2.6	8.3	66.7	2528	6748	1.3	4.6	71.4	2722	3928	3.9	11034
Browning Seed, Inc.	Tridan	SxS	2.3	7.7	69.6	2513	6216	1.2	4.6	73.6	2860	3489	3.5	9990
Browning Seed, Inc.	Cadan 99B	SxS	2.4	8.1	69.2	2569	6263	1.0	3.4	70.6	2855	2860	3.4	9123
Sorghum Partners/Chromatin	NK 300	FS	1.8	6.6	72.3	2512	4644	1.1	3.6	68.5	2791	3241	3.0	8060
Sorghum Partners/Chromatin	Trudan Headless	FS	1.8	5.8	68.7	2440	4530	1.0	3.5	68.3	2751	2751	2.9	7381
Browning Seed, Inc.	Bundle King	FS	2.0	6.4	69.4	2435	5066	0.5	1.4	68.0	2841	1334	2.5	6401
Sorghum Partners/Chromatin	SS 405	FS	1.9	7.0	70.2	2417	4639	0.4	1.3	65.8	2562	1052	2.3	5691
Sorghum Partners/Chromatin	1990	FS	1.7	4.7	65.1	2262	3906	0.5	1.5	61.5	2704	1430	2.2	5336
Browning Seed, Inc.	Sweet Sioux BMR	SxS	1.6	5.5	70.3	2554	4148	0.5	1.6	68.0	2932	1465	2.1	5612
	Trial Mean		2.0	6.7	69.0	2469	5098	0.8	2.8	68.4	2781	2336	2.9	7437
	LSD		NS	NS	NS	NS	NS	0.5	2.0	NS	NS	1270	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		44.5	48.0	14.4	8.8	50.4	39.5	47.5	17.5	6.3	37.1	39.0	42.0
	F Test		0.7614	0.7898	0.5412	0.6514	0.7830	0.0014	0.0028	0.1864	0.1979	0.0004	0.2653	0.1627

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

Hybrid/Variety Name	Harvest 1						Harvest 2							
	CP	NDF	NDFD		Ash	TDN	NE _i	CP	NDF	NDFD		Ash	TDN	NE _i
			48hr	Starch						48hr	Starch			

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Results

	%	%	%	%	%	%	Mcal/lb	%	%	%	%	%	%	Mcal/lb
Sweet Sioux WMR	11.4	55.9	64.1	1.4	7.3	56.6	0.575	13.4	57.5	64.8	0.8	7.3	59.2	0.600
Tridan	12.8	52.3	65.6	1.2	8.1	56.2	0.570	13.3	58.8	65.6	1.6	7.1	61.0	0.625
Cadan 99B	12.5	55.0	65.5	0.6	7.9	57.0	0.578	13.9	57.6	65.9	1.6	7.3	60.9	0.623
NK 300	12.5	52.8	65.6	0.9	8.1	56.2	0.570	15.5	56.0	65.7	0.3	8.0	60.1	0.613
Trudan Headless	13.0	52.1	64.8	0.3	8.2	55.3	0.560	14.3	56.6	64.3	1.7	7.5	59.7	0.608
Bundle King	12.8	53.4	64.2	0.6	8.2	55.3	0.558	14.8	56.6	66.1	0.9	8.1	60.7	0.620
SS 405	12.9	53.0	63.5	0.5	8.1	55.1	0.558	13.8	55.9	62.4	1.2	7.6	57.3	0.583
1990	11.8	51.8	60.9	2.1	7.4	53.3	0.538	15.1	55.7	64.1	0.6	8.1	59.0	0.600
Sweet Sioux BMR	13.2	54.3	65.2	0.3	8.1	56.8	0.575	15.4	55.2	68.7	0.5	8.1	61.7	0.633
Trial Mean	12.5	53.4	64.3	0.9	8.0	55.7	0.564	14.4	56.7	65.3	1.0	7.7	60.0	0.612
LSD	NS	NS	NS	NS	NS	NS	NS	1.3	1.4	NS	NS	0.5	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	12.8	6.5	4.2	116.8	9.9	4.9	5.6	6.1	1.7	3.4	62.5	4.6	3.6	3.9
F Test	0.8175	0.7389	0.3513	0.2686	0.6313	0.6815	0.7354	0.0291	0.0006	0.0547	0.0839	0.0031	0.2162	0.1867

Appendix A

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

New Mexico 2013 Grain Corn Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Relative Maturity
DuPont Pioneer		
8100 S. 15th St.	P9973 AMX	99
Lincoln, NE 68512	P9305 YHR	93
(402) 328 4055	P9690 YHR	96
Bill McClure	P0193 YHR	101
	P0636 YHR	106
	P0365 YHR	103
Fontanelle Hybrids		
1955 E. Military	96A113	96
Freemont, NE 68025	99A263	99
(402) 720 0153	5V212 RBC	99
Ken Carlson	4A503 RBC	98
	4A447	95
	02A232	102
	03A403	103
	01A083	101
	03A413	103
	6V209 RBC	103
	06V563	106
Roth Seed Co. Inc.		
354 State St.	RSC- 4024-3000 GT	105
Phillipsburg KS 67661	RSC- 3500-3000 GT	104
(785) 543 5551	RSC- 3100 VT3 PRO	108
Shannon Roth	RSC- 4016-3000 GT	106
	RSC- 4022 VT3 PRO	102
Triumph Seed Co., Inc.		
P.O. Box 1050	9946 RAW	100
Ralls, TX 79357	9811 S	98
(888) 521-7333	9865 RA	98
Ben Benton	5423S	102
	TRX2346SS	102
	5425 RA	103
	TRX39331S	93

New Mexico 2013 Forage Corn Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Relative Maturity
B-H Genetics 5933 FM 1157 Ganado, TX 77962 (361) 771 2755 Travis Janak	BH 8630 VTTP	116
	BH 8700 VTTP	115
	BH 8732 VTTP	118
	BH 8830 VTTP	117
	BH 8895 VT2P	117
	BH 8977 RR/HX	117
	XP 8910 RR	119
	XP 8890 RR	119
	X 12111 LF	116
	X 13176 RRLF	116
	X 13177 RRLF	116
CPS Dyna-Gro Seed 3492 Long Prairie Road, Suite 200 Flower Mound, TX 75022 (972) 691-9680 Shawn Carter	CX50VP43	110
	D55GT73	115
	D57VP75 (CX12117)	117
	D59HR50	119
Golden Acres Genetics P.O. Box 20787 Waco, TX 76702-0787 (512) 793-5205 James Allison	G8551	118
	G7601	117
Mycogen Seeds 1614 Safford Ave. Garden City, KS 67846 (620) 272 0024 Doug Heatwole	TMF2H747	113
	TMF2H918	123
	TMF2L825	117
	TMF2L874	118
Triumph Seed Co., Inc. P.O. Box 1050 Ralls, TX 79357 (888) 521-7333 Ben Benton	1358 S	113
	1801 H	118
	1725 H	117

New Mexico 2013 Grain Sorghum Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Maturity Group*
Browning Seed, Inc. 3101 S. I-27 Plainview, TX 79072-0616 (806) 293 5271 Rodney Smith	Dryland:	
	Browning Challenger BMX	M
	Browning 775 W	ME
	Irrigated	
	Browning Challenger BMX	M
	Browning 775 W	ME
DuPont Pioneer 8100 S. 15th St. Lincoln, NE 68512 (402) 328 4055 Bill McClure	Dryland:	
	85G01	M
	85G03	M
	85Y40	M
	86G32	ME
	Irrigated	
	85G01	M
	85G03	M
	85Y40	M
	86G32	ME
Sorghum Partners/Chromatin 403 S. Monroe New Deal, TX 79350 (806) 777 8330 Mario Carrillo	Dryland	
	251	E
	KS 310	E
	SP 3425	ME
	NK 5418	M
	KS 585	M
	Irrigated	
	251	E
	KS 310	E
	SP 3425	ME
NK 5418	M	
KS 585	M	
Triumph Seed Co., Inc. P.O. Box 1050 Ralls, TX 79357 (806) 253 2584 Jim Irwin	Dryland	
	TR 4941	M
	TRX 85131	ML
	TR 4955	ML
	TR 424	E
	TR 438	ME
	Irrigated	
	TR 4941	M
	TRX 85131	ML
TR 4955	ML	

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

New Mexico 2013 Forage Sorghum Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Maturity Group*	Brown Midrib
Browning Seed, Inc. 3101 S. I-27 Plainview, TX 79072-0616 (806) 293 5271 Rodney Smith	Irrigated:		
	Browning Silage Master	ML	N
	Browning Bundle King	ML	N
	Dryland		
	Browning Silage Master	ML	N
	Browning Bundle King	ML	N
DuPont Pioneer 8100 S. 15th St. Lincoln, NE 68512 (402) 328 4055 Bill McClure	Irrigated:		
	849F	ML	N
	841F	M	N
	Dryland		
	849F	ML	N
	841F	M	N
Dyna-Gro Seed 3492 Long Prairie Road, Suite 200 Flower Mound, TX 75022 (972) 691-9680 Shawn Carter	Irrigated:		
	DG 705F	ME	N
	FX12152	ML	Y
	FX12151	L	N
	Dryland		
	DG 705F	ME	N
FX12152	ML	Y	
FX12151	L	N	
Forage First 2541 Commerce St. LaCrosse, WI 54603 (608)783-9560	Irrigated:		
	FS-5	M	N
	Brachytic Dwarf - Leafy 108	M	Y
Sorghum Partners/Chromatin 403 S. Monroe New Deal, TX 79350 (806) 777 8330 Mario Carrillo	Irrigated & Dryland:		
	X840	L	N
	NK 8416	L	N
	NK 300	ME	N
	NK 9916	L	N
	1990	L	N
	SS 405	L	N
	Trudan Headless	PS	N
Warner Seeds, Inc. PO Box 1877 Hereford, TX 79045 (806) 364 4470 Cheb Krueger	Irrigated:		
	2 Way BMR Sterile	M	Y
	2 Way	M	N

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

New Mexico 2013 Sorghum X Sudangrass Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Maturity Group*	Brown Midrib
Browning Seed, Inc.	Irrigated:		
3101 S. I-27	Browning Cadan 99 B	ME	N
Plainview, TX 79072-0616	Browning Tridan	M	N
(806) 293 5271	Browning Sweet Sioux WMR	M	N
Rodney Smith	Browning Sweet Sioux BMR	M	Y
Dyna-Gro Seed	Irrigated:		
3492 Long Prairie Road, Suite 200	Danny Boy BMR	PS	Y
Flower Mound, TX 75022	FX12263	PS	Y
(972) 691-9680	71F10	L	Y
Shawn Carter			

* 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. $N \text{ Removal} = \text{dry forage (t/a)} \times 2000 \times N (\%)$; 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.