

New Mexico 2012 Corn and Sorghum Performance Tests



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

**New Mexico
2012
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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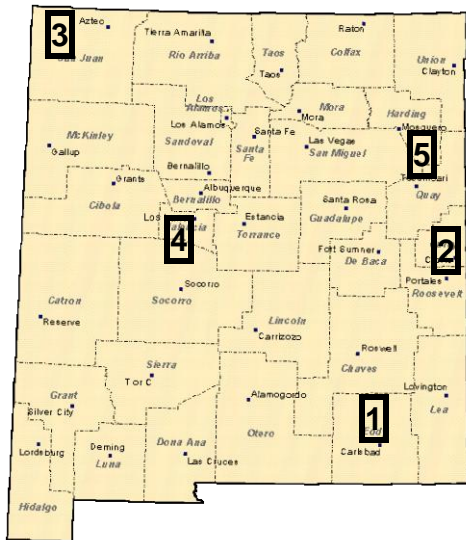
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INTRODUCTION

Performance tests for grain corn, grain sorghum, forage corn, forage sorghum and sorghum sudangrass were conducted at the Agricultural Science Centers at Artesia, Clovis, and Farmington New Mexico in 2012 (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.

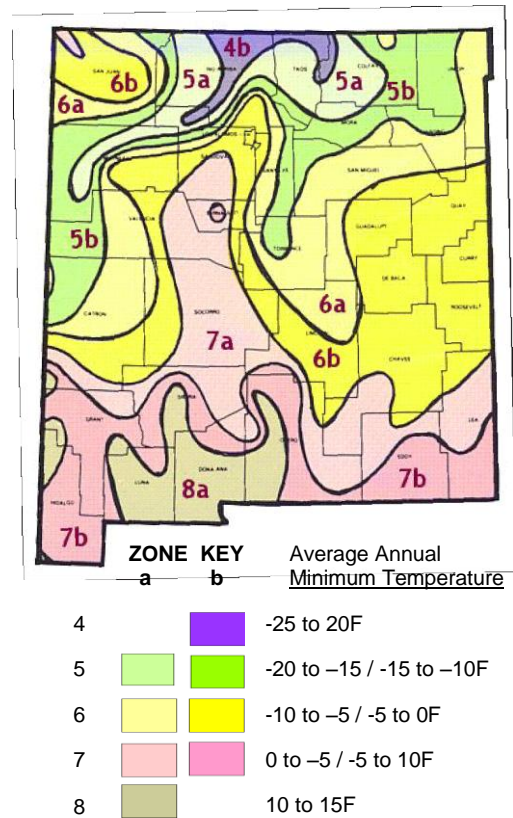


Table 1. Historical average monthly precipitation (inches) and temperatures (°F) for cooperating agricultural science centers.

	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 2012 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 Clovis, 2346 State Road 288, Clovis, NM 88101, (575) 985-2292, [http://clovissc@nmsu.edu](mailto:clovissc@nmsu.edu). Entry forms for the 2013 Corn and Sorghum Performance Tests will be mailed to seed companies in February 2013. Additional 2013 entry forms can be obtained from the address above.

***Note* No tests were conducted at the Tucumcari science center due to a lack of irrigation supply and drought conditions in 2012.**

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 2012 corn and sorghum variety tests are shown in Tables 2-11. 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 Clovis and Farmington.

The Clovis grain corn test contained 8 entries. Mean grain yield was 203 bu/ac and significant yield differences among varieties were observed (Tables 2A-B). Test weights averaged 61 lb/bu for the test.

One grain corn test was conducted at Farmington. The early season grain corn test contained 10 entries. Mean grain yield was 193 bu/ac and yields were different and average test weight was 58 lb/bu. (Tables 3A-B). Farmington's full-season grain corn test was not conducted in 2012.

Grain Sorghum

A dryland grain sorghum test was conducted at the Clovis science center in 2012. 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 30 entries in all; mean yield was 70 bu/A (3946 lb/A) and yields ranged from 56 to 86 bu/A (Tables 4A-B). Despite drought 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 18 entries. Mean dry forage yield was 6.1 ton/ac and yield and forage quality differences were observed for all parameters except crude protein (Tables 5A-B). Wet yields averaged 19.6 ton/ac.

There were 24 entries in the Clovis forage corn test. Mean dry forage yield was 9.0 ton/A and wet yields averaged 28.1 ton/A (Tables 6A-B). Yields ranged from 26 to 33 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 extremely dry conditions in 2012, yields were respectable with more moderate inputs. Hybrids differed in all yield and nutrient composition parameters except for milk/A.

Three hybrids were evaluated in the Farmington forage corn test. Dry forage yield averaged 9.7 ton/ac and yields were similar among hybrids for both dry and wet yields (Tables 7A-B). Differences were observed for TDN and milk/ton estimates.

Forage Sorghum

Entries for irrigated forage sorghum evaluations were accepted at the Agricultural Science Centers at Artesia and Clovis. There were 12 entries in the irrigated forage sorghum test at Artesia. Dry forage yield ranged from 1.7 to 3.2 ton/ac and mean wet yield was 9.4 ton/ac (Tables 8A-B). Forage yields and quality estimates were different among the entries.

At Clovis, there were 20 entries in the irrigated forage sorghum test. Mean forage yields were 7.4 and 24.1 ton/ac for dry and green yields, respectively, and differences were observed for all yield and nutritive parameters (Tables 9A-B). Wet yields exceeded 30 ton/ac, which is excellent considering the dry growing conditions of 2012. A separate dryland forage sorghum trial including the same 20 entries was conducted at Clovis; and one cutting was obtained. Total dry forage yield averaged 3.5 ton/ac for the year (Tables 10A-B) and wet yields averaged 10.5 ton/ac despite stressful growing conditions (i.e., drought).

Sorghum Sudangrass

Entries for sorghum sudangrass tests were accepted by the Agricultural Science Centers at Artesia. All plots were harvested once at Artesia. There were 8 entries in the test. Plots were harvested on September 10, and mean dry forage yield was 1.9 ton/A (Tables 11A-B). No differences were observed for any estimate except TDN.

Table 2A. New Mexico 2012 Grain Corn Performance Test - Agricultural Science Center at Clovis

Investigators: M.A. Marsalis, 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: 27,000 seed/a</p> <p>Notes: Full soil moisture profile to start Cooler/less windy conditions than in 2011</p>	<p>Management Practices: Previous Crop: fallow Planting Date: 25-May Harvest Date: 8-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>44 lb/a</td> <td>carryover</td> </tr> <tr> <td>Nitrogen</td> <td>200 lb/a</td> <td>24-May</td> </tr> <tr> <td>P₂O₅</td> <td>50 lb/a</td> <td>24-May</td> </tr> <tr> <td>S</td> <td>34 lb/a</td> <td>24-May</td> </tr> <tr> <td>Zn</td> <td>1 gal/a</td> <td>24-May</td> </tr> <tr> <td colspan="3">Herbicides:</td> </tr> <tr> <td>Parallel Plus</td> <td>3 pt/a</td> <td>26-May</td> </tr> <tr> <td>MeeToo-Lachlor II</td> <td>4 oz/ac</td> <td>26-May</td> </tr> <tr> <td>Status</td> <td>5 oz/a</td> <td>29-Jun</td> </tr> <tr> <td>MeeToo-Lachlor</td> <td>1 pt/a</td> <td>29-Jun</td> </tr> <tr> <td colspan="3">Insecticides:</td> </tr> <tr> <td>Onager</td> <td>12 oz/ac</td> <td>29-Jun</td> </tr> <tr> <td>Oberon 4SC</td> <td>7 oz/ac</td> <td>8-Aug</td> </tr> <tr> <td>Prevathon</td> <td>20 oz/ac</td> <td>8-Aug</td> </tr> </tbody> </table>		Rate	Date	Fertilizer:			Nitrogen	44 lb/a	carryover	Nitrogen	200 lb/a	24-May	P ₂ O ₅	50 lb/a	24-May	S	34 lb/a	24-May	Zn	1 gal/a	24-May	Herbicides:			Parallel Plus	3 pt/a	26-May	MeeToo-Lachlor II	4 oz/ac	26-May	Status	5 oz/a	29-Jun	MeeToo-Lachlor	1 pt/a	29-Jun	Insecticides:			Onager	12 oz/ac	29-Jun	Oberon 4SC	7 oz/ac	8-Aug	Prevathon	20 oz/ac	8-Aug	<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>59.5</td><td>0.33</td><td>3.00</td></tr> <tr><td>May</td><td>65.5</td><td>2.52</td><td>2.55</td></tr> <tr><td>June</td><td>75.9</td><td>1.31</td><td>4.00</td></tr> <tr><td>July</td><td>77.5</td><td>0.50</td><td>9.75</td></tr> <tr><td>August</td><td>76.0</td><td>1.86</td><td>8.30</td></tr> <tr><td>September</td><td>68.5</td><td>2.06</td><td>2.75</td></tr> <tr><td>October</td><td>57.0</td><td>0.43</td><td></td></tr> <tr><td>November</td><td></td><td></td><td></td></tr> <tr><td>December</td><td></td><td></td><td></td></tr> <tr> <td>Seasonal Precipitation:</td> <td></td> <td>9.01 in.</td> <td></td> </tr> <tr> <td>Total Irrigation:</td> <td></td> <td>30.35 in.</td> <td></td> </tr> <tr> <td>Date of Last Spring Frost:</td> <td></td> <td>16-Apr</td> <td></td> </tr> <tr> <td>Date of First Fall Frost:</td> <td></td> <td>7-Oct</td> <td></td> </tr> <tr> <td>Frost Free Period:</td> <td></td> <td>174 days</td> <td></td> </tr> </tbody> </table>		Average Temp. °F	Precip. in.	Irrigation in.	January				February				March				April	59.5	0.33	3.00	May	65.5	2.52	2.55	June	75.9	1.31	4.00	July	77.5	0.50	9.75	August	76.0	1.86	8.30	September	68.5	2.06	2.75	October	57.0	0.43		November				December				Seasonal Precipitation:		9.01 in.		Total Irrigation:		30.35 in.		Date of Last Spring Frost:		16-Apr		Date of First Fall Frost:		7-Oct		Frost Free Period:		174 days	
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Table 2B. New Mexico 2012 Grain Corn Performance Test - Agricultural Science Center at Clovis

Results

Brand/Company Name	Hybrid/Variety Name	Grain Yield bu/a	Moisture	Test Weight lb/bu	Plant Height in	Ear Height in	Silk Date
			at Harvest %				
Monsanto Co.	DKC 65-19 VT3P	220.8	13.3	62.3	113.0	51.0	27-Jul
Hoegemeyer Hybrid	8803 HX/LL/RR	219.0	17.8	60.4	121.7	56.0	31-Jul
Monsanto Co.	DKC 64-98 VT3P	212.9	14.5	61.1	106.3	50.3	27-Jul
Monsanto Co.	DKC 64-69 VT3P	212.2	14.6	61.7	110.0	47.3	27-Jul
Hoegemeyer Hybrid	1186 HXT/LL/RR	197.6	14.3	60.0	118.3	47.7	31-Jul
Hoegemeyer Hybrid	8389 HXT/LL/RR	194.2	16.7	61.3	120.7	51.7	2-Aug
Hoegemeyer Hybrid	7644 HX/LL/RR	182.5	11.6	58.5	107.3	44.7	25-Jul
Hoegemeyer Hybrid	7876 HXT/LL/RR/CB	181.5	11.8	59.2	113.0	50.0	26-Jul
	Trial Mean	202.6	14.3	60.6	113.8	49.8	28-Jul
	LSD (P > 0.05)	13.3	1.0	1.0	10.7	NS	1.7
	CV	3.75	4.10	0.95	5.30	10.10	0.46
	F Test	<0.0001	<0.0001	<0.0001	0.0474	0.2926	<0.0001

Table 3A. New Mexico 2012 Early Season 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: 2011 fallow, 2010 potatoes Planting Date: 15-May Harvest Date: 5-Nov <hr/> Production Inputs <hr/> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;"></th> <th style="width: 10%; text-align: center;">Rate</th> <th style="width: 10%; text-align: center;">Date</th> </tr> </thead> <tbody> <tr> <td colspan="3">Fertilizer:</td> </tr> <tr> <td>Nitrogen</td> <td>10 lb/a</td> <td>6-Mar</td> </tr> <tr> <td>Nitrogen</td> <td>21 lb/a</td> <td>1-Jun</td> </tr> <tr> <td>Nitrogen</td> <td>21 lb/a</td> <td>13-Jun</td> </tr> <tr> <td>Nitrogen</td> <td>21 lb/a</td> <td>20-Jun</td> </tr> <tr> <td>Nitrogen</td> <td>25 lb/a</td> <td>27-Jun</td> </tr> <tr> <td>Nitrogen</td> <td>17 lb/a</td> <td>3-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>10 lb/a</td> <td>13-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>21 lb/a</td> <td>17-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>21 lb/a</td> <td>25-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>29 lb/a</td> <td>30-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>29 lb/a</td> <td>8-Aug</td> </tr> <tr> <td>Nitrogen</td> <td>29 lb/a</td> <td>13-Aug</td> </tr> <tr> <td>Total Nitrogen</td> <td>254 lb/a</td> <td></td> </tr> <tr> <td>P₂O₅</td> <td>52 lb/a</td> <td>6-Mar</td> </tr> <tr> <td>K₂O</td> <td>60 lb/a</td> <td>6-Mar</td> </tr> <tr> <td>ZnSO₄</td> <td>10 lb/a</td> <td>6-Mar</td> </tr> </tbody> </table> Herbicides: Bicep Lite II Mag 1.5 qt/a 21-May Status 5 oz/a 12-Jun Prowl H ₂ O 1 qt/a 12-Jun		Rate	Date	Fertilizer:			Nitrogen	10 lb/a	6-Mar	Nitrogen	21 lb/a	1-Jun	Nitrogen	21 lb/a	13-Jun	Nitrogen	21 lb/a	20-Jun	Nitrogen	25 lb/a	27-Jun	Nitrogen	17 lb/a	3-Jul	Nitrogen	10 lb/a	13-Jul	Nitrogen	21 lb/a	17-Jul	Nitrogen	21 lb/a	25-Jul	Nitrogen	29 lb/a	30-Jul	Nitrogen	29 lb/a	8-Aug	Nitrogen	29 lb/a	13-Aug	Total Nitrogen	254 lb/a		P ₂ O ₅	52 lb/a	6-Mar	K ₂ O	60 lb/a	6-Mar	ZnSO ₄	10 lb/a	6-Mar	<hr/> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 10%; text-align: center;">Average Temp. °F</th> <th style="width: 10%; 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></td></tr> <tr><td>May</td><td>63.0</td><td>0.08</td><td>5.0</td></tr> <tr><td>June</td><td>74.0</td><td>0.01</td><td>9.0</td></tr> <tr><td>July</td><td>75.5</td><td>1.07</td><td>7.2</td></tr> <tr><td>August</td><td>75.0</td><td>0.15</td><td>7.8</td></tr> <tr><td>September</td><td>67.0</td><td>0.64</td><td>3.6</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> <hr/> <table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 60%;">Seasonal Precipitation</td> <td style="width: 10%;"></td> <td style="width: 10%; text-align: center;">2.0 in.</td> <td style="width: 10%;"></td> </tr> <tr> <td>Total Irrigation</td> <td></td> <td style="text-align: center;">32.6 in.</td> <td></td> </tr> </tbody> </table> Date of Last Spring Frost: 16-Apr Date of First Fall Frost: 25-Oct Frost Free Period: 192 days		Average Temp. °F	Precip. in.	Irrigation in.	January				February				March				April				May	63.0	0.08	5.0	June	74.0	0.01	9.0	July	75.5	1.07	7.2	August	75.0	0.15	7.8	September	67.0	0.64	3.6	October				November				December				Seasonal Precipitation		2.0 in.		Total Irrigation		32.6 in.	
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Test Design: Replications: 3 Plot Length: 19 ft. Rows per Plot: 4 Row Spacing: 30 in. Seeding Rate: 40,000 seeds/a Harvest area: 2 row 20 feet long																																																																																																																				

Table 3B. New Mexico 2012 Early Season Grain Corn Performance Test - Agricultural Science Center at Farmington

Results

Brand/Company Name	Hybrid/Variety Name	Grain Yield	Moisture at Harvest	Test Weight	Plant Height	Ear Height	Silk Date	Plant Population
		bu/a	%	lb/bu	in	in		
Pioneer Hi-Bred Int.	PO636HR	249.1	10.3	58.4	118	55	28-Jul	35,154
Pioneer Hi-Bred Int.	PO193HR	222.5	10.8	56.3	103	41	27-Jul	35,154
Triumph Seed Co.	9946S	210.0	9.8	57.7	108	52	28-Jul	33,014
Triumph Seed Co.	TRX22114R	193.9	11.4	57.4	106	50	28-Jul	34,542
Pioneer Hi-Bred Int.	36V75	190.7	11.4	56.3	104	50	28-Jul	35,307
Triumph Seed Co.	9811X	186.0	10.2	59.5	115	56	27-Jul	35,612
Pioneer Hi-Bred Int.	P9690HR	185.3	9.0	55.5	107	50	25-Jul	36,529
Triumph Seed Co.	5502S	171.2	10.8	57.5	111	58	28-Jul	35,154
Triumph Seed Co.	3212X	167.1	10.7	58.8	109	53	28-Jul	35,765
Triumph Seed Co.	9669S	158.1	9.9	58.1	101	47	29-Jul	31,333
	Trial Mean	193.4	10.4	57.6	108	51	27-Jul	34,756
	LSD	57.0	NS	1.9	NS	NS	-	NS
	LSD P >	0.10	0.05	0.05	0.05	0.05	-	0.05
	CV	17.1	10.0	1.9	7.6	12.5	-	6.9
	F Test	0.0931	0.2197	0.0069	0.3308	0.1628	-	0.3688

Table 4A. New Mexico 2012 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 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: 11-Jun Harvest Date: 2-Nov Production Inputs <hr/> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">Rate</th> <th style="text-align: center;">Date</th> </tr> </thead> <tbody> <tr> <td colspan="3">Fertilizer:</td> </tr> <tr> <td>Nitrogen</td> <td style="text-align: center;">27 lb/a</td> <td style="text-align: center;">Carryover</td> </tr> <tr> <td>Nitrogen</td> <td style="text-align: center;">60 lb/a</td> <td style="text-align: center;">11-Jun</td> </tr> <tr> <td>P₂O₅</td> <td style="text-align: center;">30 lb/a</td> <td style="text-align: center;">11-Jun</td> </tr> <tr> <td>S</td> <td style="text-align: center;">9 lb/a</td> <td style="text-align: center;">11-Jun</td> </tr> <tr> <td>Zn</td> <td style="text-align: center;">1 lb/a</td> <td style="text-align: center;">11-Jun</td> </tr> </tbody> </table> Herbicides: <table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="text-align: center;">Aatrex</td> <td style="text-align: center;">2 pts/a</td> <td style="text-align: center;">13-Jun</td> </tr> <tr> <td style="text-align: center;">Me-too-lachlor</td> <td style="text-align: center;">1.33 pts/a</td> <td style="text-align: center;">13-Jun</td> </tr> </tbody> </table> Insecticides: None		Rate	Date	Fertilizer:			Nitrogen	27 lb/a	Carryover	Nitrogen	60 lb/a	11-Jun	P ₂ O ₅	30 lb/a	11-Jun	S	9 lb/a	11-Jun	Zn	1 lb/a	11-Jun	Aatrex	2 pts/a	13-Jun	Me-too-lachlor	1.33 pts/a	13-Jun	<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></td></tr> <tr><td>May</td><td style="text-align: center;">65.5</td><td style="text-align: center;">2.52</td><td></td></tr> <tr><td>June</td><td style="text-align: center;">75.9</td><td style="text-align: center;">1.31</td><td style="text-align: center;">1.15*</td></tr> <tr><td>July</td><td style="text-align: center;">77.5</td><td style="text-align: center;">0.50</td><td></td></tr> <tr><td>August</td><td style="text-align: center;">76.0</td><td style="text-align: center;">1.86</td><td></td></tr> <tr><td>September</td><td style="text-align: center;">68.5</td><td style="text-align: center;">2.06</td><td></td></tr> <tr><td>October</td><td style="text-align: center;">57.0</td><td style="text-align: center;">0.43</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> * Emergence and herbicide incorporation irrigations. <table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="text-align: right;">Seasonal Precipitation:</td> <td style="text-align: center;">8.7 in.</td> </tr> <tr> <td style="text-align: right;">Total Irrigation:</td> <td style="text-align: center;">1.15 in.</td> </tr> </tbody> </table> <table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="text-align: right;">Date of Last Spring Frost:</td> <td style="text-align: center;">16-Apr</td> </tr> <tr> <td style="text-align: right;">Date of First Fall Frost:</td> <td style="text-align: center;">7-Oct</td> </tr> <tr> <td style="text-align: right;">Frost Free Period:</td> <td style="text-align: center;">174 days</td> </tr> </tbody> </table>		Average Temp. °F	Precip. in.	Irrigation in.	January				February				March				April				May	65.5	2.52		June	75.9	1.31	1.15*	July	77.5	0.50		August	76.0	1.86		September	68.5	2.06		October	57.0	0.43		November				December				Seasonal Precipitation:	8.7 in.	Total Irrigation:	1.15 in.	Date of Last Spring Frost:	16-Apr	Date of First Fall Frost:	7-Oct	Frost Free Period:	174 days
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Notes: Full soil moisture profile to start Cooler/less windy conditions than in 2011																																																																																											

Table 4B. New Mexico 2012 Dryland Grain Sorghum Performance Test - Agricultural Science Center at Clovis

Results

Brand/Company Name	Hybrid	Maturity Class	Head Date	Plant Height in.*	Head Exertion in.**	Moisture %	Yield lb/A	Yield bu/A	Test Weight lb/bu
Tx. Agri. Exp. Stat.	ATx2752 x RTx430	ML	20-Aug	30.4	0.7	12.0	4839	86.4	54.7
B-H Genetics	B-H 5566	M	15-Aug	28.5	1.7	11.2	4578	81.7	58.1
B-H Genetics	B-H 3822	M	12-Aug	30.4	3.2	10.5	4506	80.5	57.8
Triumph Seed Co. Inc.	TR 4941	ML	17-Aug	26.5	2.2	11.8	4503	80.4	58.3
Terral Seed	RV9823	ML	20-Aug	31.8	3.3	12.1	4487	80.1	57.2
Triumph Seed Co. Inc.	TRX85131	ML	18-Aug	29.4	3.8	12.9	4430	79.1	56.5
Monsanto Company	DeKalb DKS37-07	ME	9-Aug	25.9	2.0	9.8	4233	75.6	58.9
Pioneer Hi-Bred Int., Inc	85Y40	M	13-Aug	28.6	1.1	10.5	4200	75.0	59.1
Terral Seed	RV9782	M	10-Aug	26.0	1.7	10.4	4180	74.6	59.1
Terral Seed	RV9803	M	15-Aug	28.3	2.2	10.8	4174	74.5	57.7
Pioneer Hi-Bred Int., Inc	85G03	M	15-Aug	27.0	2.4	10.5	4090	73.0	59.0
B-H Genetics	B-H 5350	ME	15-Aug	26.4	2.0	10.5	4086	73.0	54.1
Tx. Agri. Exp. Stat.	ATx399 x RTx430	ML	16-Aug	28.0	1.4	11.1	4070	72.7	53.6
Terral Seed	RV9562	ME	11-Aug	26.4	3.2	10.0	4056	72.4	59.7
Terral Seed	RV9883	ML	17-Aug	30.2	3.0	10.9	4044	72.2	57.6
Pioneer Hi-Bred Int., Inc	86G32	ME	4-Aug	27.2	0.0	10.1	4025	71.9	58.0
Pioneer Hi-Bred Int., Inc	85G01	M	10-Aug	26.6	0.5	10.2	3962	70.7	58.5
Monsanto Company	DeKalb DKS44-20	M	9-Aug	28.4	0.9	10.3	3921	70.0	60.0
B-H Genetics	B-H 3808	E	10-Aug	25.2	3.4	9.6	3796	67.8	58.6
Triumph Seed Co. Inc.	TR 4951	ML	21-Aug	27.3	4.1	10.8	3756	67.1	55.3
Pioneer Hi-Bred Int., Inc	85G46	M	10-Aug	26.5	1.7	10.2	3616	64.6	60.3
Monsanto Company	Asgrow Pulsar	ME	3-Aug	23.6	2.1	9.8	3601	64.3	59.1
Triumph Seed Co. Inc.	TR 438	ME	6-Aug	25.1	2.9	9.8	3527	63.0	58.2
Triumph Seed Co. Inc.	TR 457	M	12-Aug	26.8	0.5	10.8	3519	62.8	56.5
Triumph Seed Co. Inc.	TR 448	ME	8-Aug	26.2	2.6	10.0	3515	62.8	58.5
Tx. Agri. Exp. Stat.	ATx631 x RTx436	ML	18-Aug	31.9	3.8	11.0	3495	62.4	56.8
B-H Genetics	B-H 5224	ME	10-Aug	26.5	2.0	9.8	3467	61.9	59.2
Monsanto Company	DeKalb DKS28-05	E	2-Aug	23.9	0.4	9.0	3297	58.9	58.3
Tx. Agri. Exp. Stat.	ATx378 x RTx430	ML	23-Aug	28.5	1.3	12.7	3265	58.3	52.9
Monsanto Company	DeKalb DKS29-28	E	1-Aug	21.8	0.5	9.4	3144	56.1	58.5
	Trial Mean		12-Aug	27.3	2.0	10.6	3946	70.5	57.7
	LSD			2.5	3.4	1.5	539	9.6	2.0
	LSD P >		0.05	0.05	0.05	0.05	0.05	0.05	0.05
	CV			0.7	7.5	45.8	3.4	8.4	2.2
	F Test		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

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

** High variability and limited head exertion due to extreme growing conditions.

Table 5A. New Mexico 2012 Forage Corn Performance Test - Agricultural Science Center at Artesia

Investigators: R.P. 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: silt loam Soil Depth: 60 in.	Previous Crop: Cotton Planting Date: 14-Jun Harvest Date: 1-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;">54 lb/a</td> <td style="text-align: center;">carryover</td> </tr> <tr> <td>Nitrogen</td> <td style="text-align: center;">208 lb/a</td> <td style="text-align: center;">9-Jul</td> </tr> <tr> <td>P₂O₅</td> <td style="text-align: center;">81 lb/a</td> <td style="text-align: center;">carryover</td> </tr> <tr> <td>K</td> <td style="text-align: center;">163 lb/a</td> <td style="text-align: center;">carryover</td> </tr> <tr> <td>Zn</td> <td style="text-align: center;">2 lb/a</td> <td style="text-align: center;">carryover</td> </tr> </tbody> </table> Herbicides: Round Up Power Max 22 oz/a 12-Jun Insecticides: None		Rate	Date	Fertilizer:			Nitrogen	54 lb/a	carryover	Nitrogen	208 lb/a	9-Jul	P ₂ O ₅	81 lb/a	carryover	K	163 lb/a	carryover	Zn	2 lb/a	carryover	<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;">43.9</td><td style="text-align: center;">0.00</td><td></td></tr> <tr><td>February</td><td style="text-align: center;">44.3</td><td style="text-align: center;">0.17</td><td></td></tr> <tr><td>March</td><td style="text-align: center;">55.4</td><td style="text-align: center;">0.06</td><td></td></tr> <tr><td>April</td><td style="text-align: center;">64.6</td><td style="text-align: center;">0.02</td><td></td></tr> <tr><td>May</td><td style="text-align: center;">70.9</td><td style="text-align: center;">3.19</td><td></td></tr> <tr><td>June</td><td style="text-align: center;">81.0</td><td style="text-align: center;">0.18</td><td style="text-align: center;">5.89</td></tr> <tr><td>July</td><td style="text-align: center;">80.2</td><td style="text-align: center;">2.33</td><td style="text-align: center;">11.99</td></tr> <tr><td>August</td><td style="text-align: center;">80.4</td><td style="text-align: center;">0.97</td><td style="text-align: center;">11.92</td></tr> <tr><td>September</td><td style="text-align: center;">71.7</td><td style="text-align: center;">1.38</td><td style="text-align: center;">4.67</td></tr> <tr><td>October</td><td style="text-align: center;">61.0</td><td style="text-align: center;">0.26</td><td></td></tr> <tr><td>November</td><td style="text-align: center;">56.4</td><td style="text-align: center;">0.00</td><td></td></tr> <tr><td>December</td><td style="text-align: center;">41.0</td><td style="text-align: center;">0.01</td><td></td></tr> </tbody> </table> <hr/> <table style="width: 100%;"> <tr> <td style="text-align: right;">Seasonal Precipitation</td> <td style="text-align: right;">8.1 in.</td> </tr> <tr> <td style="text-align: right;">Total Irrigation</td> <td style="text-align: right;">34.5 in.</td> </tr> </table> Date of Last Spring Frost: 23-Mar Date of First Fall Frost: 27-Oct Frost Free Period: 218 days		Average Temp. °F	Precip. in.	Irrigation in.	January	43.9	0.00		February	44.3	0.17		March	55.4	0.06		April	64.6	0.02		May	70.9	3.19		June	81.0	0.18	5.89	July	80.2	2.33	11.99	August	80.4	0.97	11.92	September	71.7	1.38	4.67	October	61.0	0.26		November	56.4	0.00		December	41.0	0.01		Seasonal Precipitation	8.1 in.	Total Irrigation	34.5 in.
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Test Design: Replications: 6 Plot Length: 20 ft. Rows per Plot: 2 Row Spacing: 30 in. Seeding Rate: 27000 seeds/a Harvest population: 22312 plants/a																																																																															

Table 5B. New Mexico 2012 Forage Corn Performance Test - Agricultural Science Center at Artesia

Results

Brand/Company Name	Hybrid/Variety Name	Moisture			CP	NDF	Starch	Ash	TDN	NE _i	DMI	RFV
		Dry Forage	Green Forage	at Harvest								
		t/a	t/a	%	%	%	%	%	%	Mcal/lb	%	
Golden Acres Genetics	GAX 6156 RR	8.41	26.6	68.5	9.4	43.2	29.2	4.9	69.0	0.71	2.8	151
Triumph Seed Co., Inc.	TRX 11358 H	8.21	26.3	68.7	9.8	43.9	30.7	4.8	67.8	0.70	2.8	148
B-H Genetics	XP 8977 RR/HX	8.00	24.6	67.3	9.3	40.2	34.9	4.7	70.8	0.74	3.0	166
Triumph Seed Co., Inc.	1725 H	7.10	21.6	67.2	9.5	41.6	33.9	4.6	70.3	0.73	2.9	159
Mycogen Seeds	TMF2L871	7.04	24.4	71.1	9.9	46.3	24.1	5.3	66.8	0.68	2.6	137
Mycogen Seeds	F2F714	6.59	18.7	65.1	9.4	40.2	34.4	4.6	71.3	0.75	3.0	167
B-H Genetics	BH 9018 VTTP	6.47	20.7	68.9	10.0	42.3	32.3	5.1	69.2	0.72	2.8	155
Dyna-Gro	CX12117	6.05	20.9	71.7	10.2	45.9	23.6	6.2	65.7	0.67	2.6	139
Dyna-Gro	D58VP30	5.94	17.9	67.1	9.2	40.5	34.0	4.8	70.5	0.73	3.0	164
Dyna-Gro	D56VP24	5.85	20.6	71.8	10.1	43.9	28.5	5.8	67.5	0.70	2.8	147
Monsanto Company	DKC 67-88 GENVT3P	5.40	19.0	72.3	11.0	46.6	24.6	6.0	66.0	0.67	2.6	135
B-H Genetics	X11152 VTTP	5.35	17.3	69.7	10.5	41.4	31.2	5.3	68.8	0.72	2.9	159
Monsanto Company	DKC 66-86 GEMVT3P	5.24	15.5	66.5	9.9	38.7	36.1	5.1	70.5	0.74	3.1	172
Triumph Seed Co., Inc.	TRX 21801 H	5.14	16.6	69.0	9.8	45.3	24.6	5.6	67.0	0.68	2.7	140
B-H Genetics	BH 8933 VT3	4.73	15.7	70.0	10.3	47.1	21.2	6.4	65.2	0.66	2.6	132
Mycogen Seeds	F2F626	4.73	14.8	68.3	10.3	41.4	34.2	5.1	69.8	0.73	2.9	160
Golden Acres Genetics	GAG 8551	4.67	16.8	72.2	10.6	50.8	18.7	6.0	63.7	0.63	2.4	122
Mycogen Seeds	TMF2L825	4.61	15.5	71.2	10.2	47.2	24.9	5.2	65.5	0.66	2.6	135
	Trial Mean	6.1	19.6	69.3	10.0	43.7	28.9	5.3	68.1	0.70	2.8	149
	LSD	2.0	5.8	3.3	NS	4.7	6.4	1.0	3.6	0.05	0.3	21
	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	28.8	19.6	4.2	9.8	9.4	19.4	15.9	4.5	6.6	8.9	12.2
	F Test	0.0004	<0.0001	0.0001	0.1256	<0.0001	<0.0001	0.0008	0.0002	<0.0001	<0.0001	<0.0001

Table 6A. New Mexico 2012 Forage Corn Performance Test - Agricultural Science Center at Clovis

Investigators: M.A. Marsalis, R.E. Kirksey, B. Niece, and A. Scott

Test Description

<p>Location:</p> <p>County/Area: Curry Longitude: -103.22 Latitude: 34.60 Elevation: 4435 ft. Soil Name: Olton Soil Texture: clay loam Soil Depth: >60 in.</p>	<p>Management Practices:</p> <p>Previous Crop: fallow Planting Date: 25-May Harvest Date: 19-Sep</p> <hr/> <p>Production Inputs</p> <table border="1"> <thead> <tr> <th></th> <th>Rate</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td colspan="3">Fertilizer:</td> </tr> <tr> <td>Nitrogen</td> <td>54 lb/a</td> <td>carryover</td> </tr> <tr> <td>Nitrogen</td> <td>200 lb/a</td> <td>24-May</td> </tr> <tr> <td>P₂O₅</td> <td>50 lb/a</td> <td>24-May</td> </tr> <tr> <td>S</td> <td>34 lb/a</td> <td>24-May</td> </tr> <tr> <td>Zn</td> <td>1 lb/a</td> <td>24-May</td> </tr> </tbody> </table> <p>Herbicides:</p> <table border="1"> <tbody> <tr> <td>Parallel Plus</td> <td>3 pt/a</td> <td>26-May</td> </tr> <tr> <td>Me-Too-Lachlor II</td> <td>4 oz/a</td> <td>26-May</td> </tr> <tr> <td>Status</td> <td>5 oz/a</td> <td>29-Jun</td> </tr> <tr> <td>Me-Too-Lachlor II</td> <td>1 pt/a</td> <td>29-Jun</td> </tr> </tbody> </table> <p>Insecticides:</p> <table border="1"> <tbody> <tr> <td>Onager</td> <td>12 oz/a</td> <td>29-Jun</td> </tr> <tr> <td>Oberon 4SC</td> <td>7 oz/a</td> <td>8-Aug</td> </tr> <tr> <td>Prevathon</td> <td>20 oz/a</td> <td>8-Aug</td> </tr> </tbody> </table>		Rate	Date	Fertilizer:			Nitrogen	54 lb/a	carryover	Nitrogen	200 lb/a	24-May	P ₂ O ₅	50 lb/a	24-May	S	34 lb/a	24-May	Zn	1 lb/a	24-May	Parallel Plus	3 pt/a	26-May	Me-Too-Lachlor II	4 oz/a	26-May	Status	5 oz/a	29-Jun	Me-Too-Lachlor II	1 pt/a	29-Jun	Onager	12 oz/a	29-Jun	Oberon 4SC	7 oz/a	8-Aug	Prevathon	20 oz/a	8-Aug	<p>Growing Conditions:</p> <hr/> <table border="1"> <thead> <tr> <th></th> <th>Average Temp. °F</th> <th>Precip. in.</th> <th>Irrigation in.</th> </tr> </thead> <tbody> <tr><td>January</td><td></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>59.5</td><td>0.33</td><td>3.00</td></tr> <tr><td>May</td><td>65.5</td><td>2.52</td><td>2.55</td></tr> <tr><td>June</td><td>75.9</td><td>1.31</td><td>4.00</td></tr> <tr><td>July</td><td>77.5</td><td>0.50</td><td>9.75</td></tr> <tr><td>August</td><td>76.0</td><td>1.86</td><td>8.30</td></tr> <tr><td>September[†]</td><td>69.0</td><td>1.41</td><td>1.25</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>[†]Sept 1-19</p> <p>Seasonal Precipitation: 7.9 in. Total Irrigation: 28.9 in.</p> <p>Date of Last Spring Frost: 16-Apr Date of First Fall Frost: 7-Oct Frost Free Period: 174 days</p>		Average Temp. °F	Precip. in.	Irrigation in.	January				February				March				April	59.5	0.33	3.00	May	65.5	2.52	2.55	June	75.9	1.31	4.00	July	77.5	0.50	9.75	August	76.0	1.86	8.30	September [†]	69.0	1.41	1.25	October				November				December			
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Table 6B. New Mexico 2012 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		NDF	48hr	Starch					
		t/a	t/a	%	%	%	%	%	%	Mcal/lb	lb/t	lb/a	
Mycogen Seeds	TMF2L825	10.1	33.1	69.5	8.5	48.3	59.0	28.0	5.0	62.6	0.642	2919	29504
Triumph Seed Co.	TRX 11358 H	9.9	32.1	69.1	8.6	43.9	61.4	34.1	4.7	64.5	0.663	3075	30534
Triumph Seed Co.	TRX 21801 H	9.9	31.5	68.7	8.5	47.3	59.9	29.5	4.6	63.7	0.653	3001	29553
B-H Genetics	BH 9018 VTTP	9.5	28.6	66.7	9.6	46.6	61.1	28.5	5.2	64.2	0.659	3049	29057
Hoegemeyer Hybrid	8803 HX/LL/RR	9.4	27.6	65.8	8.9	44.5	60.8	32.8	4.2	65.1	0.669	3110	29354
B-H Genetics	X11139 RR	9.3	26.8	65.2	8.8	45.9	60.5	29.2	4.7	64.6	0.664	3075	28675
CPS Dyna-Gro	D58VP30	9.2	26.6	65.2	9.0	43.7	60.2	33.4	4.7	64.7	0.664	3075	28430
Triumph Seed Co.	1725 H	9.2	28.9	68.0	8.7	44.7	63.1	33.2	4.4	65.7	0.676	3173	29310
CPS Dyna-Gro	CX12117	9.2	28.7	68.0	8.9	45.1	61.5	31.0	4.4	65.2	0.670	3123	28765
B-H Genetics	BH 8933 VT3	9.2	30.7	70.0	9.3	45.5	57.9	30.1	5.3	62.5	0.640	2899	26694
Golden Acres Genetics	GAX 6156 RR	9.2	29.7	68.9	9.0	45.8	59.7	31.4	4.7	63.6	0.652	2992	27469
B-H Genetics	XP 8910 RR	9.2	29.0	68.4	9.5	44.9	61.3	29.7	5.1	64.7	0.664	3083	28264
B-H Genetics	XP 8977 RR/HX	9.1	28.7	68.1	8.7	46.0	63.8	32.0	4.2	65.9	0.678	3192	29211
Mycogen Seeds	TMF2L871	9.1	30.5	70.3	9.2	46.8	61.7	27.0	4.8	64.9	0.667	3104	28207
Hoegemeyer Hybrid	8389 HXT/LL/RR	8.8	26.2	66.4	9.5	45.6	60.2	29.6	4.7	64.5	0.662	3060	26802
Hoegemeyer Hybrid	EXP 1295 RW/RR/LL/LB	8.7	27.0	67.5	9.2	41.7	63.0	35.1	4.2	66.5	0.685	3232	28288
Hoegemeyer Hybrid	EXP 1296 HX/LL/RR	8.7	25.4	65.6	9.2	43.9	61.9	32.6	4.8	65.4	0.672	3143	27429
Golden Acres Genetics	GAG 8551	8.7	29.7	70.5	8.8	48.6	59.1	29.4	4.8	62.7	0.642	2923	25479
CPS Dyna-Gro	D56VP24	8.7	28.6	69.8	8.8	43.6	61.6	33.8	4.8	65.0	0.667	3108	26913
Hoegemeyer Hybrid	EXP 1294 RW/RR/LL/LB	8.6	25.9	66.7	8.9	41.2	62.0	37.0	4.2	66.1	0.681	3196	27536
Mycogen Seeds	F2F626	8.5	23.8	64.0	9.2	45.6	67.4	32.1	3.9	68.2	0.704	3390	28902
Hoegemeyer Hybrid	EXP 1186 HXT/LL/RR	8.3	25.1	66.8	9.0	43.5	61.6	32.5	4.7	65.4	0.672	3140	26224
Mycogen Seeds	F2F714	8.1	23.2	65.3	9.1	48.4	66.9	27.7	4.1	67.4	0.695	3327	26824
B-H Genetics	X11152 VTTP	7.9	26.4	70.0	9.2	44.3	62.2	32.6	4.7	65.3	0.672	3141	24890
	Trial Mean	9.0	28.1	67.7	9.0	45.2	61.6	31.3	4.6	64.9	0.667	3105	28013
	LSD	0.9	2.7	2.6	0.4	2.9	2.1	3.6	0.7	1.8	0.020	145	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	5.8	5.8	2.3	3.0	3.9	2.1	7.0	9.4	1.7	1.8	2.8	7.4
	F Test	0.0003	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	0.0143	<0.0001	<0.0001	<0.0001	0.1881

Table 7A. New Mexico 2012 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: 3 Plot Length: 19 ft. Rows per Plot: 4 Row Spacing: 30 in.</p> <p>Seeding Rate: 40,000 seeds/a Harvest area: 2 row 20 feet long</p>	<p>Management Practices: Previous Crop: 2011 fallow, 2010 potatoes Planting Date: 15-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>10 lb/a</td> <td>6-Mar</td> </tr> <tr> <td>Nitrogen</td> <td>21 lb/a</td> <td>1-Jun</td> </tr> <tr> <td>Nitrogen</td> <td>21 lb/a</td> <td>13-Jun</td> </tr> <tr> <td>Nitrogen</td> <td>21 lb/a</td> <td>20-Jun</td> </tr> <tr> <td>Nitrogen</td> <td>25 lb/a</td> <td>27-Jun</td> </tr> <tr> <td>Nitrogen</td> <td>17 lb/a</td> <td>3-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>10 lb/a</td> <td>13-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>21 lb/a</td> <td>17-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>21 lb/a</td> <td>25-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>29 lb/a</td> <td>30-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>29 lb/a</td> <td>8-Aug</td> </tr> <tr> <td>Nitrogen</td> <td>29 lb/a</td> <td>13-Aug</td> </tr> <tr> <td>Total Nitrogen</td> <td>254 lb/a</td> <td></td> </tr> <tr> <td>P₂O₅</td> <td>52 lb/a</td> <td>6-Mar</td> </tr> <tr> <td>K₂O</td> <td>60 lb/a</td> <td>6-Mar</td> </tr> <tr> <td>ZnSO₄</td> <td>10 lb/a</td> <td>6-Mar</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>Status</td> <td>5 oz/a</td> <td>12-Jun</td> </tr> <tr> <td>Prowl H₂O</td> <td>1 qt/a</td> <td>12-Jun</td> </tr> </tbody> </table>		Rate	Date	Fertilizer:			Nitrogen	10 lb/a	6-Mar	Nitrogen	21 lb/a	1-Jun	Nitrogen	21 lb/a	13-Jun	Nitrogen	21 lb/a	20-Jun	Nitrogen	25 lb/a	27-Jun	Nitrogen	17 lb/a	3-Jul	Nitrogen	10 lb/a	13-Jul	Nitrogen	21 lb/a	17-Jul	Nitrogen	21 lb/a	25-Jul	Nitrogen	29 lb/a	30-Jul	Nitrogen	29 lb/a	8-Aug	Nitrogen	29 lb/a	13-Aug	Total Nitrogen	254 lb/a		P ₂ O ₅	52 lb/a	6-Mar	K ₂ O	60 lb/a	6-Mar	ZnSO ₄	10 lb/a	6-Mar	Herbicides:			Bicep Lite II Mag	1.5 qt/a	21-May	Status	5 oz/a	12-Jun	Prowl H ₂ O	1 qt/a	12-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>63.0</td><td>0.08</td><td>5.0</td></tr> <tr><td>June</td><td>74.0</td><td>0.01</td><td>9.0</td></tr> <tr><td>July</td><td>75.5</td><td>1.07</td><td>7.2</td></tr> <tr><td>August</td><td>75.0</td><td>0.15</td><td>7.8</td></tr> <tr><td>September</td><td>67.0</td><td>0.64</td><td>3.6</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>2.0 in.</td> <td></td> </tr> <tr> <td>Total Irrigation</td> <td></td> <td>32.6 in.</td> <td></td> </tr> <tr> <td>Date of Last Spring Frost:</td> <td colspan="3">16-Apr</td> </tr> <tr> <td>Date of First Fall Frost:</td> <td colspan="3">25-Oct</td> </tr> <tr> <td>Frost Free Period:</td> <td colspan="3">192 days</td> </tr> </tbody> </table>		Average Temp. °F	Precip. in.	Irrigation in.	January				February				March				April				May	63.0	0.08	5.0	June	74.0	0.01	9.0	July	75.5	1.07	7.2	August	75.0	0.15	7.8	September	67.0	0.64	3.6	October				November				December				Seasonal Precipitation		2.0 in.		Total Irrigation		32.6 in.		Date of Last Spring Frost:	16-Apr			Date of First Fall Frost:	25-Oct			Frost Free Period:	192 days		
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Table 7B. New Mexico 2012 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	
CPS Dyna-Gro	CX12117	10.3	25.9	60.4	116	55	7.9	44.3	57.2	31.4	5.8	64.1	2734	24,763
CPS Dyna-Gro	D56VP24	9.2	20.0	51.4	106	49	7.1	46.0	58.1	32.8	5.7	61.6	2525	20,812
CPS Dyna-Gro	D58VP30	9.6	19.2	50.2	114	51	7.4	47.7	58.0	31.4	5.2	60.4	2428	20,356
	Trial Mean	9.7	21.7	54.0	112	52	7.5	46.0	57.8	31.9	5.6	62.0	2562	21,977
	LSD	NS	NS	NS	7.3	4.5	NS	NS	NS	NS	NS	1.5	125	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	20.1	25.3	8.4	2.9	3.9	6.9	6.8	2.3	6.2	7.9	1.0	2.1	20.4
	F Test	0.8012	0.3605	0.0921	0.0400	0.0494	0.3151	0.4796	0.7009	0.6546	0.3322	0.0055	0.0059	0.4829

Table 8A. New Mexico 2012 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: 33.53 ft. Soil Name: Pima Soil Texture: Silt loam Soil Depth: 60 in.	Previous Crop: fallow Planting Date: 14-Jun Harvest Date: 11-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 style="padding-left: 20px;">Nitrogen[†]</td> <td style="text-align: center;">76 lb/a</td> <td style="text-align: center;">carryover</td> </tr> <tr> <td style="padding-left: 40px;">P₂O₅</td> <td style="text-align: center;">73 lb/a</td> <td style="text-align: center;">carryover</td> </tr> <tr> <td style="padding-left: 40px;">K₂O</td> <td style="text-align: center;">142 lb/a</td> <td style="text-align: center;">carryover</td> </tr> <tr> <td style="padding-left: 40px;">Zn</td> <td style="text-align: center;">1 lb/a</td> <td style="text-align: center;">carryover</td> </tr> </tbody> </table> <p>†Fertilizer applicator problem</p> <p>Herbicides:</p> <p style="padding-left: 40px;">None</p> <p>Insecticides:</p> <p style="padding-left: 40px;">None</p>		Rate	Date	Fertilizer:			Nitrogen [†]	76 lb/a	carryover	P ₂ O ₅	73 lb/a	carryover	K ₂ O	142 lb/a	carryover	Zn	1 lb/a	carryover	<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;">43.9</td><td style="text-align: center;">0.00</td><td></td></tr> <tr><td>February</td><td style="text-align: center;">44.3</td><td style="text-align: center;">0.17</td><td></td></tr> <tr><td>March</td><td style="text-align: center;">55.4</td><td style="text-align: center;">0.06</td><td></td></tr> <tr><td>April</td><td style="text-align: center;">64.6</td><td style="text-align: center;">0.02</td><td style="text-align: center;">3.00</td></tr> <tr><td>May</td><td style="text-align: center;">70.9</td><td style="text-align: center;">3.19</td><td style="text-align: center;">2.55</td></tr> <tr><td>June</td><td style="text-align: center;">81.0</td><td style="text-align: center;">0.18</td><td style="text-align: center;">4.00</td></tr> <tr><td>July</td><td style="text-align: center;">80.2</td><td style="text-align: center;">2.33</td><td style="text-align: center;">9.75</td></tr> <tr><td>August</td><td style="text-align: center;">80.4</td><td style="text-align: center;">0.97</td><td style="text-align: center;">8.30</td></tr> <tr><td>September[†]</td><td style="text-align: center;">71.7</td><td style="text-align: center;">1.38</td><td style="text-align: center;">1.25</td></tr> <tr><td>October</td><td style="text-align: center;">61.0</td><td style="text-align: center;">0.26</td><td></td></tr> <tr><td>November</td><td style="text-align: center;">56.4</td><td style="text-align: center;">0.00</td><td></td></tr> <tr><td>December</td><td style="text-align: center;">41.0</td><td style="text-align: center;">0.01</td><td></td></tr> </tbody> </table> <table style="width: 100%;"> <tr> <td style="padding-left: 40px;">Seasonal Precipitation</td> <td style="text-align: right;">8.1 in.</td> </tr> <tr> <td style="padding-left: 40px;">Irrigation</td> <td style="text-align: right;">28.9 in.</td> </tr> </table> <table style="width: 100%;"> <tr> <td style="padding-left: 40px;">Date of Last Spring Frost:</td> <td style="text-align: right;">24-Mar</td> </tr> <tr> <td style="padding-left: 40px;">Date of First Fall Frost:</td> <td style="text-align: right;">27-Oct</td> </tr> <tr> <td style="padding-left: 40px;">Frost Free Period:</td> <td style="text-align: right;">217 days</td> </tr> </table>		Average Temp. °F	Precip. in.	Irrigation in.	January	43.9	0.00		February	44.3	0.17		March	55.4	0.06		April	64.6	0.02	3.00	May	70.9	3.19	2.55	June	81.0	0.18	4.00	July	80.2	2.33	9.75	August	80.4	0.97	8.30	September [†]	71.7	1.38	1.25	October	61.0	0.26		November	56.4	0.00		December	41.0	0.01		Seasonal Precipitation	8.1 in.	Irrigation	28.9 in.	Date of Last Spring Frost:	24-Mar	Date of First Fall Frost:	27-Oct	Frost Free Period:	217 days
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Table 8B. New Mexico 2012 Forage Sorghum Performance Test - Agricultural Science Center at Artesia

Results

Brand/Company Name	Hybrid/Variety Name	Moisture			CP	NDF	ADF	Starch	Ash	TDN	NE _i	DMI	RFV
		Dry Forage	Green Forage	at Harvest									
		t/a	t/a	%	%	%	%	%	%	Mcal/lb	% BW		
Chromatin Inc.	CHR-FS9	3.2	13.7	76.9	9.2	72.5	37.6	1.7	7.5	53.3	0.38	1.66	69
Eastern Colorado Seeds	HP 95 BMR	2.8	9.2	69.3	9.7	63.4	36.2	6.5	7.1	59.8	0.52	1.89	87
Eastern Colorado Seeds	HP 120 BMR	2.7	10.7	74.8	10.4	61.5	38.9	8.0	7.4	59.7	0.53	1.96	92
Eastern Colorado Seeds	HP ECS 12 EXP	2.6	11.5	76.8	10.4	66.4	41.8	3.6	8.7	56.3	0.46	1.81	81
Dyna-Gro	710F	2.5	8.2	69.2	9.4	60.2	45.3	9.9	6.1	59.5	0.54	2.00	93
Chromatin Inc.	CHR-SG1	2.4	12.3	80.2	9.0	73.1	46.7	1.3	7.9	50.2	0.35	1.64	67
Chromatin Inc.	CHR-FS4	2.3	8.7	73.2	8.8	68.0	36.1	6.5	6.3	55.7	0.44	1.77	77
Eastern Colorado Seeds	HP 85 BMR	2.3	7.6	69.2	9.2	63.3	36.2	6.9	7.7	58.5	0.51	1.90	87
B-H Genetics	BH 312 FBD	2.3	9.2	75.6	10.9	62.6	38.6	7.0	7.7	59.7	0.52	1.92	90
B-H Genetics	BH 380 F	2.2	8.0	72.7	9.3	63.0	38.1	7.0	6.4	57.8	0.50	1.91	87
Eastern Colorado Seeds	HP 99 BMR	1.9	6.7	72.1	10.4	57.0	34.0	12.7	7.0	61.2	0.57	2.12	103
Eastern Colorado Seeds	HP 1010 BMR	1.7	6.7	74.4	10.4	61.5	39.7	6.7	7.5	59.5	0.53	1.95	92
	Trial Mean	2.4	9.4	73.7	9.8	64.36	39.09	6.5	7.3	57.6	0.49	1.9	85
	LSD	0.7	2.6	2.2	0.7	2.7	2.1	2.4	1.0	2.5	0.04	0.1	6
	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	24.3	23.6	2.5	6.1	3.6	4.6	32.3	11.4	3.7	6.4	3.8	6.0
	F Test	0.0082	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Table 9A. New Mexico 2012 Irrigated Forage Sorghum Performance Test - Agricultural Science Center at Clovis

Investigators: M.A. Marsalis, R.E. Kirksey, B. Niece, and A. Scott

Test Description

Location:	Management Practices:	Growing Conditions:
County/Area: Curry	Previous Crop: fallow	
Longitude: -103.22	Planting Date: 31-May	
Latitude: 34.60	Harvest Date: 24-Sep	
Elevation: 4435 ft.		
Soil Name: Olton		
Soil Texture: clay loam		
Soil Depth: >60 in.		
	Production Inputs	
	Rate Date	
	Fertilizer:	
	Nitrogen 25 lb/a carryover	
	Nitrogen 200 lb/a 30-May	
	P ₂ O ₅ 50 lb/a 30-May	
	Zn 1 lb/a 30-May	
	Herbicides:	
	Atrazine 2 pt/a 2-Jun	
	Dicamba HD 5 oz/a 26-Jun	
	Me Too Lachlor 1 pt/a 26-Jun	
	Insecticides:	
	None	
Test Design:		
Replications: 3		
Plot Length: 20 ft.		
Rows per Plot: 2		
Row Spacing: 30 in.		
Seeding Rate: 90,000 seed/a		
		Average
		Temp. Precip. Irrigation
		°F in. in.
		January
		February
		March
		April 59.5 0.33 3.00
		May 65.5 2.52 0.00
		June 75.9 1.31 2.55
		July 77.5 0.50 6.00
		August 76.0 1.86 4.50
		September† 69.4 1.41 3.00
		October
		November
		December
		† Sept. 1-24
		Seasonal Precipitation 7.9 in.
		Total Irrigation 19.1 in.
		Date of Last Spring Frost: 16-Apr
		Date of First Fall Frost: 7-Oct
		Frost Free Period: 174 days

Table 9B. New Mexico 2012 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 %								
Chromatin	CHR-FS4	Conv	L	10.6	33.2	68.0	7.6	54.3	65.1	6.2	62.7	0.643	2975	31549
Chromatin	CHR-SS2	Conv	PS	10.3	33.9	69.8	7.0	58.0	64.9	6.4	61.0	0.623	2850	29211
Forage First	FS-5	Conv	M	9.6	28.3	66.0	7.9	49.6	63.8	7.1	62.8	0.643	2974	28455
Chromatin	CHR-FS9	Conv	PS	9.3	33.8	72.5	7.4	58.0	67.8	6.4	63.0	0.643	3018	28065
Chromatin	CHR-SG1	Conv	PS	8.7	34.2	74.5	7.7	58.6	65.8	7.2	61.6	0.630	2898	25317
Richardson Seeds	X36400	BMR	L	8.0	30.4	73.8	8.6	53.8	75.5	6.0	67.1	0.690	3367	26813
Eastern Colorado Seeds	HP 85 BMR	BMR	E	7.3	20.9	67.5	8.5	53.0	69.2	7.5	64.9	0.667	3162	23193
Eastern Colorado Seeds	HP ECS 12 EXP	BMR	M	7.1	25.1	71.6	9.3	49.5	69.6	7.9	66.0	0.680	3250	23117
Eastern Colorado Seeds	HP 1010 BMR	BMR	M	7.1	23.2	69.4	8.6	50.5	72.1	7.5	67.8	0.700	3393	24147
Pioneer Hibred Int.	849F	Conv	ML	7.1	20.5	65.8	8.6	52.4	61.0	7.4	61.8	0.630	2874	20191
Pioneer Hibred Int.	841F	Conv	M	6.9	20.4	62.6	9.0	53.8	63.6	8.2	62.2	0.637	2924	20249
CPS Dyna-Gro	710 F	Conv	M	6.9	22.1	69.2	8.0	52.4	64.0	6.7	62.2	0.637	2928	20099
Eastern Colorado Seeds	HP 95 BMR	BMR	E	6.7	19.9	65.6	8.1	52.7	69.0	7.4	64.8	0.667	3159	21266
B-H Genetics	BH 380 F	Conv	ML	6.6	20.0	67.3	7.9	49.9	66.0	6.7	62.4	0.637	2961	19369
Eastern Colorado Seeds	HP 120 BMR	BMR	L	6.3	20.6	69.3	9.2	51.4	70.2	8.4	66.0	0.680	3250	20597
Eastern Colorado Seeds	HP 99 BMR	BMR	M	6.1	20.4	69.9	8.3	48.5	70.7	7.4	65.7	0.673	3232	19768
Forage First	BMR 108 Leafy	BMR	M	6.1	21.2	71.0	9.5	51.1	68.5	8.4	65.1	0.670	3173	19399
	Red Top Cane	Conv	ME	6.0	20.4	70.8	8.0	45.5	71.3	6.7	65.3	0.670	3208	19105
B-H Genetics	BH 312 FBD	BMR	ML	5.9	21.0	71.6	9.7	49.8	68.4	8.5	65.1	0.670	3172	18870
	Hegari	Conv	M	4.6	11.6	60.1	7.9	50.0	63.4	8.0	62.5	0.640	2944	13559
	Trial Mean			7.4	24.1	68.8	8.3	52.1	67.5	7.3	64.0	0.657	3085	22616
	LSD			1.4	4.6	3.1	0.7	4.1	2.5	0.8	1.6	0.019	128	4388
	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			11.8	11.6	2.7	5.3	4.8	2.2	6.9	1.5	1.8	2.5	11.7
	F Test			<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 10A. New Mexico 2012 Dryland Forage Sorghum Performance Test - Agricultural Science Center at Clovis

Investigators: M.A. Marsalis, R.E. Kirksey, B. Niece, and A. Scott

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: 11-Jun Harvest Date: 5-Oct Production Inputs <hr/> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">Rate</th> <th style="text-align: center;">Date</th> </tr> </thead> <tbody> <tr> <td colspan="3">Fertilizer:</td> </tr> <tr> <td>Nitrogen</td> <td>34 lb/a</td> <td>carryover</td> </tr> <tr> <td>Nitrogen</td> <td>75 lb/a</td> <td>11-Jun</td> </tr> <tr> <td>P₂O₅</td> <td>25 lb/a</td> <td>11-Jun</td> </tr> <tr> <td>S</td> <td>12 lb/a</td> <td>11-Jun</td> </tr> <tr> <td>Zn</td> <td>1 lb/a</td> <td>11-Jun</td> </tr> </tbody> </table> Herbicides: <table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td>Atrazine</td> <td>2 pt/a</td> <td>13-Jun</td> </tr> <tr> <td>Me Too Lachlor</td> <td>1 pt/a</td> <td>26-Jun</td> </tr> </tbody> </table> Insecticides: None		Rate	Date	Fertilizer:			Nitrogen	34 lb/a	carryover	Nitrogen	75 lb/a	11-Jun	P ₂ O ₅	25 lb/a	11-Jun	S	12 lb/a	11-Jun	Zn	1 lb/a	11-Jun	Atrazine	2 pt/a	13-Jun	Me Too Lachlor	1 pt/a	26-Jun	<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></td></tr> <tr><td>May</td><td style="text-align: center;">65.5</td><td style="text-align: center;">2.52</td><td></td></tr> <tr><td>June</td><td style="text-align: center;">75.9</td><td style="text-align: center;">1.31</td><td style="text-align: center;">1.15*</td></tr> <tr><td>July</td><td style="text-align: center;">77.5</td><td style="text-align: center;">0.50</td><td></td></tr> <tr><td>August</td><td style="text-align: center;">76.0</td><td style="text-align: center;">1.86</td><td></td></tr> <tr><td>September</td><td style="text-align: center;">68.5</td><td style="text-align: center;">2.06</td><td></td></tr> <tr><td>October†</td><td style="text-align: center;">59.5</td><td style="text-align: center;">0.02</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> † Oct. 1-5 *Emergence Irrigations <table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="text-align: right;">Seasonal Precipitation</td> <td style="text-align: right;">8.3 in.</td> </tr> <tr> <td style="text-align: right;">Total Irrigation</td> <td style="text-align: right;">1.2 in.</td> </tr> </tbody> </table> Date of Last Spring Frost: 16-Apr Date of First Fall Frost: 7-Oct Frost Free Period: 174 days		Average Temp. °F	Precip. in.	Irrigation in.	January				February				March				April				May	65.5	2.52		June	75.9	1.31	1.15*	July	77.5	0.50		August	76.0	1.86		September	68.5	2.06		October†	59.5	0.02		November				December				Seasonal Precipitation	8.3 in.	Total Irrigation	1.2 in.
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Test Design: Replications: 3 Plot Length: 20 ft. Rows per Plot: 2 Row Spacing: 30 in. Seeding Rate: 60,000 seed/a																																																																																					

Table 10B. New Mexico 2012 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 _l Mcal/lb	Milk/Ton lb/t	Milk/Acre lb/a
				Dry Forage t/a	Green Forage t/a	at Harvest %								
Forage First	FS-5	Conv	M	4.3	12.0	64.9	8.0	46.5	67.5	6.1	66.0	0.677	3228	14083
Chromatin	CHR-SG1	Conv	PS	4.1	15.2	73.5	9.5	48.9	71.1	6.7	63.0	0.647	3041	12752
B-H Genetics	BH 380 F	Conv	ML	4.0	10.6	62.0	8.5	43.6	67.9	5.9	67.9	0.700	3371	13616
Eastern Colorado Seeds	HP 95 BMR	BMR	E	4.0	9.6	57.2	8.6	43.3	71.2	6.0	69.4	0.717	3504	15085
Pioneer Hibred Int.	849F	Conv	ML	3.9	9.2	57.9	8.8	45.7	62.0	6.2	64.4	0.660	3070	11928
Chromatin	CHR-FS4	Conv	L	3.8	11.9	68.2	8.0	45.1	72.2	5.5	65.3	0.670	3214	12169
Chromatin	CHR-FS9	Conv	PS	3.8	15.4	75.2	10.9	49.8	72.9	7.2	64.2	0.660	3141	13058
Pioneer Hibred Int.	841F	Conv	M	3.7	11.4	67.4	9.3	47.4	68.9	6.5	66.6	0.687	3286	12225
Eastern Colorado Seeds	HP 85 BMR	BMR	E	3.7	8.7	55.3	8.3	46.3	70.9	6.6	68.7	0.707	3453	13830
Chromatin	CHR-SS2	Conv	PS	3.7	12.3	69.7	8.8	49.8	70.2	6.5	63.5	0.650	3071	11598
CPS Dyna-Gro	710 F	Conv	M	3.5	8.9	60.5	8.2	43.8	69.2	5.9	68.1	0.703	3390	12009
Eastern Colorado Seeds	HP ECS 12 EXP	BMR	M	3.4	11.6	70.3	10.5	47.9	73.4	7.2	64.9	0.667	3197	11032
Eastern Colorado Seeds	HP 120 BMR	BMR	L	3.4	11.2	69.7	9.7	47.1	75.4	7.4	65.1	0.667	3222	11597
Eastern Colorado Seeds	HP 1010 BMR	BMR	M	3.1	9.7	67.6	9.3	46.2	75.9	7.2	67.4	0.693	3390	10670
Forage First	BMR 108 Leafy	BMR	M	3.1	10.2	69.6	9.6	45.6	76.2	7.0	65.1	0.670	3230	10055
B-H Genetics	BH 312 FBD	BMR	ML	3.1	10.3	69.7	9.6	45.5	76.4	6.9	66.1	0.680	3301	11291
Eastern Colorado Seeds	HP 99 BMR	BMR	M	3.0	8.2	63.6	8.9	43.8	72.2	7.0	66.6	0.687	3308	9850
Richardson Seeds	X36400	BMR	L	2.9	10.6	73.1	9.3	47.9	79.5	6.3	66.7	0.687	3365	10384
	Hegari	Conv	M	2.4	6.6	64.4	8.0	43.1	67.6	5.8	67.4	0.693	3333	7859
	Red Top Cane	Conv	ME	2.0	6.5	68.8	8.4	40.8	69.1	6.2	66.2	0.680	3256	6594
	Trial Mean			3.5	10.5	66.4	9.0	45.9	71.5	6.5	66.1	0.680	3269	11584
	LSD			0.5	1.2	4.9	0.6	3.0	2.1	0.8	1.4	0.017	108	2081
	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			9.1	6.6	4.5	3.7	3.9	1.8	7.3	1.3	1.5	2.0	10.9
	F Test			<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 11A. New Mexico 2012 Sorghum x 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: Silt loam Soil Depth: 60 in.	Previous Crop: fallow Planting Date: 14-Jun Harvest Date: 10-Sep No Second Cutting 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;">76 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;">9/11/2012</td> </tr> <tr> <td>P₂O₅</td> <td style="text-align: center;">73 lb/a</td> <td style="text-align: center;">carryover</td> </tr> <tr> <td>K₂O</td> <td style="text-align: center;">142 lb/a</td> <td style="text-align: center;">carryover</td> </tr> <tr> <td>Zn</td> <td style="text-align: center;">1 lb/a</td> <td style="text-align: center;">carryover</td> </tr> </tbody> </table> Herbicides: None Insecticides: None		Rate	Date	Fertilizer:			Nitrogen	76 lb/a	carryover	Nitrogen	100 lb/a	9/11/2012	P ₂ O ₅	73 lb/a	carryover	K ₂ O	142 lb/a	carryover	Zn	1 lb/a	carryover	<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;">43.9</td><td style="text-align: center;">0.00</td><td></td></tr> <tr><td>February</td><td style="text-align: center;">44.3</td><td style="text-align: center;">0.17</td><td></td></tr> <tr><td>March</td><td style="text-align: center;">55.4</td><td style="text-align: center;">0.06</td><td></td></tr> <tr><td>April</td><td style="text-align: center;">64.6</td><td style="text-align: center;">0.02</td><td></td></tr> <tr><td>May</td><td style="text-align: center;">70.9</td><td style="text-align: center;">3.19</td><td></td></tr> <tr><td>June</td><td style="text-align: center;">81.0</td><td style="text-align: center;">0.18</td><td style="text-align: center;">4.0</td></tr> <tr><td>July</td><td style="text-align: center;">80.2</td><td style="text-align: center;">2.33</td><td style="text-align: center;">10.1</td></tr> <tr><td>August</td><td style="text-align: center;">80.4</td><td style="text-align: center;">0.97</td><td style="text-align: center;">9.0</td></tr> <tr><td>September†</td><td style="text-align: center;">71.7</td><td style="text-align: center;">1.38</td><td style="text-align: center;">3.2</td></tr> <tr><td>October</td><td style="text-align: center;">61.0</td><td style="text-align: center;">0.26</td><td style="text-align: center;">2.1</td></tr> <tr><td>November</td><td style="text-align: center;">56.4</td><td style="text-align: center;">0.00</td><td></td></tr> <tr><td>December</td><td style="text-align: center;">41.0</td><td style="text-align: center;">0.01</td><td></td></tr> </tbody> </table> Seasonal Precipitation █ 8.1 in. Irrigation 28.4 in. Total Water 36 in. Date of Last Spring Frost: 24-Mar Date of First Fall Frost: 27-Oct Frost Free Period: 217 days		Average Temp. °F	Precip. in.	Irrigation in.	January	43.9	0.00		February	44.3	0.17		March	55.4	0.06		April	64.6	0.02		May	70.9	3.19		June	81.0	0.18	4.0	July	80.2	2.33	10.1	August	80.4	0.97	9.0	September†	71.7	1.38	3.2	October	61.0	0.26	2.1	November	56.4	0.00		December	41.0	0.01	
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Test Design: Replications: 6 Plot Length: 20 ft. Rows per Plot: 2 Row Spacing: 40 in. Seeding Rate: 95000 seeds/a																																																																											

Table 11B. New Mexico 2012 Sorghum x Sudangrass Performance Test - Agricultural Science Center at Artesia

Results

Brand/Company Name	Hybrid/Variety Name	Moisture			CP	NDF	ADF	Starch	Ash	TDN	NE _i	DMI	RFV
		Dry Forage	Green Forage	at Harvest									
		t/a	t/a	%	%	%	%	%	%	%	Mcal/lb	% BW	
B-H Genetics	BH 2115 BD	2.3	11.9	80.8	10.1	65.4	37.6	0.88	9.2	56.0	0.47	1.84	82
Dyna-Gro	71F10	2.0	10.5	80.3	10.5	65.0	36.2	0.97	8.8	57.2	0.48	1.85	83
B-H Genetics	BH 231 SB	1.9	10.8	81.9	11.1	66.0	38.9	0.37	9.4	55.7	0.46	1.82	81
B-H Genetics	BH 201 SB	1.9	9.8	80.2	10.3	65.1	41.8	1.40	8.6	57.8	0.49	1.84	83
Dyna-Gro	Danny Boy BMR	1.9	9.3	79.6	11.9	65.5	45.3	1.00	8.7	58.0	0.49	1.83	83
Chromatin Inc.	CHR-SS2	1.8	9.0	80.1	11.8	65.5	46.7	0.63	9.3	57.0	0.48	1.83	83
Richardson Seeds	X82400	1.8	9.3	81.0	11.2	64.1	36.1	1.28	8.2	59.3	0.51	1.88	86
Richardson Seeds	X38400	1.4	7.7	81.1	11.5	65.9	36.2	0.57	8.7	56.5	0.47	1.82	83
	Trial Mean	1.9	9.8	80.6	11.1	65.3	39.6	0.9	8.9	57.2	0.48	1.84	83
	LSD	NS	NS	NS	NS	NS	NS	NS	NS	2.1	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	27.7	29.8	2.4	10.4	3.6	5.3	93.7	9.4	3.1	6.2	3.6	5.8
	F Test	0.2651	0.3517	0.5546	0.0601	0.9010	0.2848	0.3918	0.2067	0.0272	0.2418	0.8927	0.6591

Appendix A

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

New Mexico 2012 Grain Corn Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Relative Maturity
Monsanto Company	Full Season:	
11151 W Rockwell Rd.	DKC 64-69 VT3P	114
Canyon, TX 79015	DKC 64-98 VT3P	114
(806) 445-4716	DKC 65-19 VT3P	115
Kyle Lawles		
Hoegemeyer Hybrid	8803 HX/LL/RR	118
1755 Hoegemeyer Rd.	1186 HXT/LL/RR	116
Hooper, NE 68031	8389 HXT/LL/RR	113
(620) 617 2083	7644 HX/LL/RR	106
Todd Gilkison	7876 HXT/LL/RR/CB	108
Pioneer Hi-Bred International, Inc.	Early Season:	
8100 S. 15th St.	36V75	102
Lincoln, NE 68512	P9690 HR	96
(402) 328-4055	P0193 HR	101
Bill McClure	P0636 HR	106
	P0210 HR	102
Triumph Seed Co., Inc.	Early Season:	
P.O. Box 1050	9811 X	98
Ralls, TX 79357	3212 X	102
(888) 521-7333	5502 S	102
Ben Benton	TRX 29946 S	100
	TRX 22114 R	100
	9669 S	96

New Mexico 2012 Forage Corn Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Relative Maturity
B-H Genetics 5933 FM 1157 Ganado, TX 77962 (823) 344-6389 Keith Arnold	XP8977 RR/HX	117
	BH9018 VTTP	118
	X11152 VTTP	118
	BH8933 VT3	119
	XP8910 RR	118
	X11139 RR	119
CPS Dyna-Gro 3492 Long Prairie Road, Suite 200 Flower Mound, TX 75022 (972) 691-9680 Shawn Carter	D56VP24	116
	D58VP30	118
	CX12117	117
Golden Acres Genetics P.O. Box 579 Buchanan Dam, TX 78609 (512) 793-5205 James Allison	GAG 8551	118
	GAX-6156 RR	117
Hoegemeyer Hybrid 1755 Hoegemeyer Rd. Hooper, NE 68031 (620) 617-2083 Todd Gilkison	8803 HX/LL/RR	118
	Exp 1186 HXT/LL/RR	116
	8389 HXT/LL/RR	113
	Exp 1294 RW/RR/LL/LB	118
	Exp 1295 RW/RR/LL/LB	118
	Exp 1296 HX/LL/RR	119
Monsanto Company 11151 Rockwell Rd. Canyon, TX 79015 (806) 445-4716 Kyle Lawles	DKC 67-88 GENVT3P	117
	DKC 66-86 GEMVT3P	116
Mycogen Seeds 1614 Safford Ave. Garden City, KS 67846 (620) 272-0024 Doug Heatwole	TMF2L871	
	TMF2L825	
	F2F714	
	F2F626	

New Mexico 2012 Forage Corn Hybrid Performance Test (cont.)

Company/Brand Name	Hybrid/Variety Name	Relative Maturity
		(days)
Triumph Seed Co., Inc.	TRX 11358 H	113
P.O. Box 1050	TRX 21801 H	118
Ralls, TX 79357	1725 H	117
(888) 521-7333		
Ben Benton		

New Mexico 2012 Grain Sorghum Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Maturity Group*
Pioneer Hi-Bred International, Inc. 8100 S. 15th St. Lincoln, NE 68512 (402) 328-4055 Bill McClure	Dryland:	
	85G01	M
	85G03	M
	85440	M
	86G32	ME
	Limited Irrigation	
	85G01	M
	85G03	M
	85440	M
	86G32	ME
Richardson Seeds, Ltd. P.O. Box 60 Vega, TX 79092 (806) 267-2379 Chuck Cielencki	Limited Irrigation	
	RS215	M
	X10341	ME
	X10315	M
	Full Irrigation	
	RS215	M
	X10341	ME
X10315	M	
Triumph Seed Co., Inc. P.O. Box 1050 Ralls, TX 79357 (806) 253-2584 Jim Irwin	Dryland	
	TR 457	M
	TR 438	ME
	TR 448	ME
	TR 424	E
	Limited Irrigation	
	TR 4941	ML
	TR 4951	ML
	TRX 85131	ML
	TR 457	M

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

New Mexico 2012 Forage Sorghum Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Maturity Group*	Brown Midrib
B-H Genetics 5933 FM 1157 Ganado, TX 77962 (823) 344-6389 Keith Arnold	Irrigated:		
	BH 312 FBD	ML	Y
	BH 380 F		N
Chromatin Inc. 8509 Venita Ave. Lubbock, TX 79424 (806) 790-4650 Jaiver Pineda	Irrigated:		
	CHR-FS4	120-125	N
	CHR-FS9	PS	N
	CHR-SG1	PS	N
	CHR-SS2	PS	N
CPS Dyna-Gro 3492 Long Prairie Road, Suite 200 Flower Mound, TX 75022 (972) 691-9680 Shawn Carter	Irrigated:		
	710 F	M	N
Eastern Colorado Seeds, LLC P.O. Box 546 Burlington, CO 80807 (719) 342 9316 Clay Smith	Irrigated:		
	HP 85 BMR	E	Y
	HP 95 BMR	E	Y
	HP 120 BMR	L	Y
	HP1010 BMR	M	Y
	HP 99 BMR	M	Y
	HP ECS 12 Exp	M	Y
Pioneer Hi-Bred International, Inc. 8100 S. 15th St. Lincoln, NE 68512 (402) 328-4055 Bill McClure	Irrigated:		
	849F	ML	N
	841F	M	N
Richardson Seeds, Ltd. P.O. Box 60 Vega, TX 79092 (806) 267-2379 Chuck Cielencki	Irrigated:		
	X36400	L	Y

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

New Mexico 2012 Sorghum X Sudangrass Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Maturity Group*	Brown Midrib
B-H Genetics	Irrigated:		
5933 FM 1157	BH211SBD	ML	Y
Ganado, TX 77962	BH201SB	M	Y
(823) 344-6389	BH231SB	ML	Y
Keith Arnold			
CPS Dyna-Gro	Irrigated:		
3492 Long Prairie Road, Suite 200	71F10	L	Y
Flower Mound, TX 75022	Danny Boy BMR	PS	Y
(972) 691-9680			
Shawn Carter			
Richardson Seeds, Ltd.	Irrigated:		
P.O. Box 60	X38400	M	Y
Vega, TX 79092	X82400	L	Y
(806) 267-2379			
Chuck Cieloncki			

* 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.