

** Please note, Blue River
Silage Results can be
found on pg.14 of this
report **

**New Mexico
2018
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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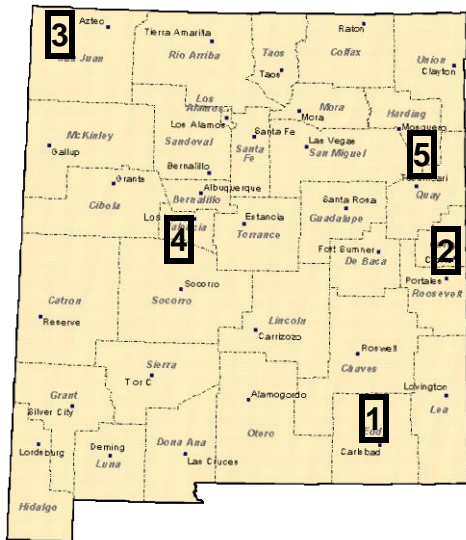
New Mexico 2018 Corn and Sorghum Performance Tests

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, and Tucumcari New Mexico in 2018 (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.

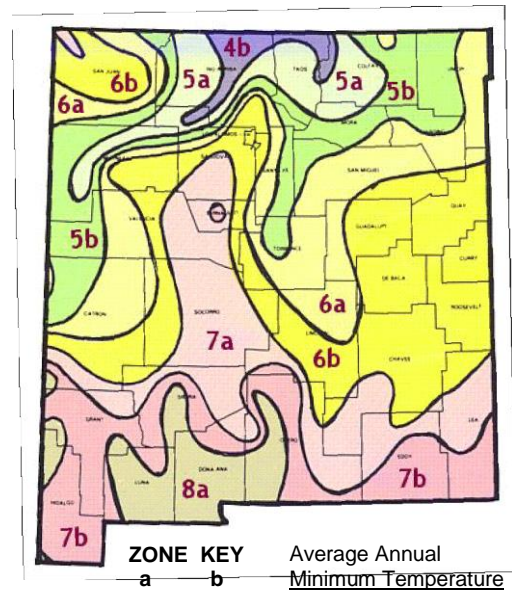


Table 1. Historical average monthly precipitation (inches) and temperatures (°F) for cooperating agricultural science centers.					
	Artesia	Clovis	Farmington	Los Lunas	Tucumcari
Precipitation (inches)					
January	0.39	0.36	0.56	0.38	0.37
February	0.41	0.40	0.54	0.41	0.46
March	0.41	0.69	0.65	0.47	0.74
April	0.62	0.78	0.63	0.47	1.09
May	1.07	1.99	0.58	0.46	1.97
June	1.38	2.38	0.24	0.56	1.87
July	1.78	2.84	0.87	1.37	2.60
August	1.69	3.07	1.09	1.67	2.69
September	1.82	1.94	1.07	1.17	1.55
October	1.18	1.71	0.87	1.06	1.29
November	0.54	0.51	0.69	0.46	0.64
December	0.50	0.46	0.52	0.52	0.59
Total	11.64	17.10	8.32	8.95	15.90
Average Temperature (°F)					
January	40.5	37.6	30.4	35.5	38.5
February	45.2	41.2	36.3	40.2	42.3
March	52.0	48.0	44.0	47.2	49.4
April	60.5	56.1	51.1	54.8	57.7
May	69.2	64.6	60.1	63.4	66.3
June	77.7	74.0	70.6	72.7	75.8
July	79.8	76.5	75.8	77.0	79.2
August	78.4	74.8	73.4	74.8	77.4
September	71.7	68.5	66.1	67.4	70.8
October	61.0	58.2	54.0	55.9	59.7
November	48.8	46.4	41.1	43.6	47.6
December	40.8	38.8	31.3	35.1	39.3
Average	60.4	57.0	52.8	55.7	58.7
Source: Western Region Climate Center: http://www.wrcc.dri.edu/summary/climsnm.html					

TEST LOCATIONS

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

A list of seed companies that participated in the 2018 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 2019 Corn and Sorghum Performance Tests will be mailed to seed companies in February 2019. Additional 2019 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 (125-150°F) for determination of moisture content. Sub-samples of the dried material from all locations were submitted to an NFTA-certified forage testing laboratory for nutrient composition analysis using near infrared reflectance spectroscopy (NIRS). For these trials, milk production estimates were

calculated using the University of Wisconsin Milk2000 and Milk2006 spreadsheet programs.

RESULTS

Results for the 2018 corn and sorghum variety tests are shown in Tables 2-12 below. Test procedures for each test are presented in tables designated with an 'A' at each location. Results are presented in tables designated with 'B' or 'C' suffixes. Within tables, hybrids and varieties are ranked according to grain yield or total dry forage yield. A glossary of terms used in the tables is presented in Appendix B.

All corn and grain and forage sorghum tests at Tucumcari were planted and emerged; however, due to irrigation supply problems and subsequent drought stress, crops were not harvestable in 2018.

The irrigated and dryland forage sorghum tests at Clovis were harvested and fresh weights were obtained. However, a drying oven fire consumed all the subsamples used for estimating dry matter and nutritive value parameters. Hence, no DM yield or quality results are reported for these tests.

Table 2A. New Mexico 2018 Grain Corn Performance Test - Agricultural Science Center at Clovis

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

Test Description

Location:	Management Practices:	Growing Conditions:
County/Area: Curry	Previous Crop: fallow	
Longitude: -103.22	Planting Date: 17-May	
Latitude: 34.60	Harvest Date: 5-Nov	
Elevation: 4435 ft.		
Soil Name: Olton		
Soil Texture: clay loam		
Soil Depth: >60 in.		
	Production Inputs	
	Rate Date	
	Fertilizer:	
	Nitrogen 12 lb/a carryover	
	Nitrogen 18 lb/a 16-Feb	
	P ₂ O ₅ 60 lb/a 16-Feb	
	Zn 3 qt/ac 16-Feb	
	Nitrogen 122 lb/ac pre plant	
	S 22 lb/ac pre plant	
	Nitrogen 30 lb/ac at plant	
	S 5.5 lb/ac at plant	
	Herbicides:	
	Atrazine 1 pt/a pre plant	
	Balance Flexx 3 oz/ac pre plant	
	Diflexx 5 oz/ac pre plant	
	Glyphosate 40 oz/ac pre plant	
	Brawl 1.3 pt/ac at plant	
	Diflexx 8 oz/ac 20-Jun	
	Brawl 16 oz/ac 20-Jun	
	Insecticides:	
	Onager 16 oz/ac 20-Jun	
	Prevathon 20 oz/ac 1-Aug	
	Oberon 8 oz/ac 1-Aug	
Test Design:		
Replications: 3		
Plot Length: 20 ft.		
Rows per Plot: 2		
Row Spacing: 30 in.		
Seeding Rate: 27,000 seed/a		
		Average
		Temp. Precip. Irrigation
		°F in. in.
		January 35.2
		February 40.3
		March 49.3
		April 52.8
		May 17-31 68.2 1.60 1.40
		June 76.1 1.71 3.20
		July 76.5 3.05 5.30
		August 74.5 3.94 4.40
		September 68.5 1.64 1.70
		October 56.0 3.99 0.00
		November 45.0 0.09 0.00
		December
		Seasonal Precipitation: 15.9 in.
		Total Irrigation: 16.0 in.
		Date of Last Spring Frost: 16-Apr
		Date of First Fall Frost: 15-Oct
		Frost Free Period: 182 days

Table 2B. New Mexico 2018 Grain Corn Performance Test - Agricultural Science Center at Clovis

Results

Brand/Company Name	Hybrid/Variety Name	Grain Yield	Moisture at Harvest	Test Weight	Plant Height	Ear Height	Silk Date
		bu/a	%	lb/bu	in	in	
Golden Acres Genetics/LG Seeds	LG 66C32 STX	289.6	18.33	60.60	101.0	42.1	23-Jul
Golden Harvest Seeds	G18D87-3111	283.9	18.56	59.70	109.7	48.4	20-Jul
Dyna-Gro Seed	D57VC51	281.8	18.06	56.43	108.3	46.6	21-Jul
Golden Acres Genetics/LG Seeds	ES 7667 VT2 PRO	277.8	18.66	59.30	102.7	44.6	21-Jul
Golden Harvest Seeds	G11B63-3010A	271.5	16.83	58.40	103.0	43.0	23-Jul
Dyna-Gro Seed	D58VC65	270.4	16.93	60.03	100.0	43.0	21-Jul
Golden Harvest Seeds	G13Z50-3110	269.0	16.20	58.73	95.0	44.1	25-Jul
Dyna-Gro Seed	D54VC14	265.3	16.56	60.00	94.7	42.8	24-Jul
Dyna-Gro Seed	D55VC45	261.8	16.30	60.46	94.3	42.4	25-Jul
Dyna-Gro Seed	D54DC94	261.7	17.13	57.80	100.3	45.5	24-Jul
Dyna-Gro Seed	D52VC63	261.6	15.36	59.80	100.3	47.5	21-Jul
Golden Harvest Seeds	G13T43-3010	249.0	17.46	55.13	97.7	41.3	21-Jul
Dyna-Gro Seed	D52VC91	240.5	16.96	59.56	97.0	43.8	24-Jul
	Trial Mean	268.0	17.2	58.9	100.3	44.3	22-Jul
	LSD (P < 0.05)	27.9	1.2	NS	6.0	3.7	3.1
	CV	6.2	4.0	4.5	3.5	5.0	0.9
	F Test	0.0263	<0.0001	0.3956	<0.0001	<0.0001	0.0168

Table 3A. New Mexico 2018 Early Season Grain Corn Performance Test - Agricultural Science Center at Farmington

Investigators: Koffi Djaman (PI), Samuel Allen, Margaret West, Dallen Begay, Jonah Joe

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: 2017 w. wheat, 2016 fallow, 2015 w. wheat, 2014 fallow, 2013 fallow, 2012 potatoes Planting Date: 22-May Harvest Date: 19-Dec Production Inputs <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">Rate</th> <th style="text-align: center;">Date</th> </tr> </thead> <tbody> <tr> <td colspan="3">Fertilizer:</td> </tr> <tr> <td>Dry Nitrogen</td> <td>20.0 lb/a</td> <td>16-May</td> </tr> <tr> <td>Nitrogen</td> <td>17.0 lb/a</td> <td>31-May</td> </tr> <tr> <td>Nitrogen</td> <td>17.0 lb/a</td> <td>5-Jun</td> </tr> <tr> <td>Nitrogen</td> <td>17.0 lb/a</td> <td>12-Jun</td> </tr> <tr> <td>Nitrogen</td> <td>17.0 lb/a</td> <td>19-Jun</td> </tr> <tr> <td>Nitrogen</td> <td>17.0 lb/a</td> <td>26-Jun</td> </tr> <tr> <td>Nitrogen</td> <td>17.0 lb/a</td> <td>3-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>17.0 lb/a</td> <td>10-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>17.0 lb/a</td> <td>17-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>17.0 lb/a</td> <td>24-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>17.0 lb/a</td> <td>31-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>17.0 lb/a</td> <td>7-Aug</td> </tr> <tr> <td>Total Nitrogen</td> <td>207.0 lb/a</td> <td></td> </tr> <tr> <td>NH₄H₂PO₄</td> <td>192 lb/a</td> <td>16-May</td> </tr> <tr> <td>KCl</td> <td>150 lb/a</td> <td>16-May</td> </tr> <tr> <td>ZnSO₄</td> <td>14 lb/a</td> <td>16-May</td> </tr> <tr> <td colspan="3">Herbicides:</td> </tr> <tr> <td>Atrazine 4L</td> <td>1 qt/a</td> <td>12-Jun</td> </tr> <tr> <td>Super Spread MSO</td> <td>1 qt/a</td> <td>12-Jun</td> </tr> <tr> <td>Status</td> <td>10 oz/a</td> <td>12-Jun</td> </tr> </tbody> </table>		Rate	Date	Fertilizer:			Dry Nitrogen	20.0 lb/a	16-May	Nitrogen	17.0 lb/a	31-May	Nitrogen	17.0 lb/a	5-Jun	Nitrogen	17.0 lb/a	12-Jun	Nitrogen	17.0 lb/a	19-Jun	Nitrogen	17.0 lb/a	26-Jun	Nitrogen	17.0 lb/a	3-Jul	Nitrogen	17.0 lb/a	10-Jul	Nitrogen	17.0 lb/a	17-Jul	Nitrogen	17.0 lb/a	24-Jul	Nitrogen	17.0 lb/a	31-Jul	Nitrogen	17.0 lb/a	7-Aug	Total Nitrogen	207.0 lb/a		NH ₄ H ₂ PO ₄	192 lb/a	16-May	KCl	150 lb/a	16-May	ZnSO ₄	14 lb/a	16-May	Herbicides:			Atrazine 4L	1 qt/a	12-Jun	Super Spread MSO	1 qt/a	12-Jun	Status	10 oz/a	12-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></td><td></td><td></td></tr> <tr><td>May</td><td style="text-align: center;">63.6</td><td style="text-align: center;">0.32</td><td style="text-align: center;">2.2</td></tr> <tr><td>June</td><td style="text-align: center;">73.6</td><td style="text-align: center;">0.80</td><td style="text-align: center;">6.7</td></tr> <tr><td>July</td><td style="text-align: center;">79.6</td><td style="text-align: center;">0.60</td><td style="text-align: center;">12.2</td></tr> <tr><td>August</td><td style="text-align: center;">76.1</td><td style="text-align: center;">0.21</td><td style="text-align: center;">10.4</td></tr> <tr><td>September</td><td style="text-align: center;">69.2</td><td style="text-align: center;">0.14</td><td style="text-align: center;">7.7</td></tr> <tr><td>October</td><td style="text-align: center;">53.1</td><td style="text-align: center;">0.81</td><td style="text-align: center;">3.8</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;">2.9 in.</td> <td></td> </tr> <tr> <td>Total Irrigation</td> <td></td> <td style="text-align: center;">43.0 in.</td> <td></td> </tr> <tr> <td>Date of Last Spring Frost:</td> <td colspan="3" style="text-align: right;">19-Apr</td> </tr> <tr> <td>Date of First Fall Frost:</td> <td colspan="3" style="text-align: right;">15-Oct</td> </tr> <tr> <td>Frost Free Period:</td> <td colspan="3" style="text-align: right;">179 days</td> </tr> </tbody> </table>		Average Temp. °F	Precip. in.	Irrigation in.	January				February				March				April				May	63.6	0.32	2.2	June	73.6	0.80	6.7	July	79.6	0.60	12.2	August	76.1	0.21	10.4	September	69.2	0.14	7.7	October	53.1	0.81	3.8	November				December				Seasonal Precipitation		2.9 in.		Total Irrigation		43.0 in.		Date of Last Spring Frost:	19-Apr			Date of First Fall Frost:	15-Oct			Frost Free Period:	179 days		
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Test Design: Replications: 4 Plot Length: 20 ft. Rows per Plot: 4 Row Spacing: 30 in. Seeding Rate: 36,590 seeds/a Harvest area: 2 row 20 feet long																																																																																																																																												

Table 3B. New Mexico 2018 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		
Dyna-Gro Seed	D43VC81	236.1	14.0	59.5	104	46	2-Aug	31,363
Dyna-Gro Seed	D47SS29	227.6	13.9	59.9	99	43	3-Aug	32,126
Dyna-Gro Seed	D41SS71	219.4	14.1	59.1	96	38	2-Aug	33,106
Golden Harvest Seeds	G05K08-3010A	214.9	14.6	59.0	94	40	2-Aug	31,363
Golden Harvest Seeds	G06Q68-3220	212.8	15.0	57.9	97	39	2-Aug	30,383
Dyna-Gro Seed	D49VC70	207.6	15.3	59.6	94	37	2-Aug	28,314
Dyna-Gro Seed	D44VC36	207.0	14.5	60.1	97	40	2-Aug	32,234
Dyna-Gro Seed	D50VC30	197.6	14.3	59.7	101	44	5-Aug	29,948
Golden Harvest Seeds	G97N86-3110	187.2	13.7	59.6	98	38	2-Aug	31,472
Dyna-Gro Seed	D45SS65	183.8	14.2	59.8	99	41	2-Aug	29,730
Golden Harvest Seeds	G00H12-3010	178.1	14.5	59.9	94	37	2-Aug	29,730
Golden Harvest Seeds	G95D32-3220	167.8	14.5	60.7	96	40	2-Aug	28,532
Golden Harvest Seeds	G03C84-3120	146.7	14.5	59.8	96	39	2-Aug	30,710
	Trial Mean	199.0	14.4	59.6	97	40	2-Aug	30,693
	LSD P < 0.05	NS	0.35	0.58	NS	NS		NS
	CV	23.9	1.7	0.7	5.4	14.2		10.7
	F Test	0.3643	<0.0001	<0.0001	0.2923	0.5237		0.6811

Table 4B. New Mexico 2018 Full Season 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 %					
Dyna-Gro Seed	D52VC15	224.1	15.1	58.3	97	40	2-Aug	29,948
Dyna-Gro Seed	D58VC65	199.4	17.8	57.5	95	37	5-Aug	27,443
Dyna-Gro Seed	D54DC94	186.7	17.0	56.1	109	44	6-Aug	25,918
Dyna-Gro Seed	D57VC51	178.9	20.7	54.3	100	43	6-Aug	27,878
Dyna-Gro Seed	D55VC45	177.8	15.9	58.6	100	43	6-Aug	30,056
Dyna-Gro Seed	D52VC63	165.5	15.8	57.3	99	39	5-Aug	31,581
Dyna-Gro Seed	D52VC91	163.4	17.6	57.8	98	40	6-Aug	31,472
Dyna-Gro Seed	D54VC14	157.4	16.9	58.2	95	40	5-Aug	27,116
	Trial Mean	181.7	17.1	57.2	99	41	5-Aug	28,927
	LSD P < 0.05	NS	1.73	1.92	7.31	NS		NS
	CV	30.1	7.0	2.3	5.1	9.4		12.1
	F Test	0.7970	<0.0001	0.0023	0.0202	0.2733		0.2737

Table 5A. New Mexico 2018 Irrigated Forage Corn Performance Test - Agricultural Science Center at Artesia

Investigators: R. Flynn, R. Pacheco, S. Bustillos, M. Lopez, and C. Hill

Test Description


<p>Location: County/Area: Eddy Longitude: -104.22 Latitude: 32.45 Elevation: 3356 ft. Soil Name: Pima Soil Texture: silt loam Soil Depth: 32 in.</p>	<p>Management Practices: Previous Crop: cotton Planting Date: 16-May Harvest Date: 24-Aug</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>20 lb/a</td> <td>25-Apr</td> </tr> <tr> <td>Nitrogen</td> <td>225 lb/a</td> <td>23-Jul</td> </tr> <tr> <td>P₂O₅</td> <td>96 lb/a</td> <td>25-Apr</td> </tr> </tbody> </table> <p>Herbicides:</p> <table border="1"> <tbody> <tr> <td>Rifle</td> <td>16 oz/a</td> <td>13-Jun</td> </tr> </tbody> </table> <p>Insecticides:</p> <p>None</p>		Rate	Date	Fertilizer:			Nitrogen	20 lb/a	25-Apr	Nitrogen	225 lb/a	23-Jul	P ₂ O ₅	96 lb/a	25-Apr	Rifle	16 oz/a	13-Jun	<p>Growing Conditions:</p> <table border="1"> <thead> <tr> <th></th> <th>Average Temp. °F</th> <th>Precip. in.</th> <th>Irrigation in.</th> </tr> </thead> <tbody> <tr><td>January</td><td>37.5</td><td>0.10</td><td></td></tr> <tr><td>February</td><td>46.1</td><td>0.31</td><td></td></tr> <tr><td>March</td><td>54.0</td><td>0.03</td><td></td></tr> <tr><td>April</td><td>60.5</td><td>0.00</td><td>1.55</td></tr> <tr><td>May</td><td>73.0</td><td>1.89</td><td>4.12</td></tr> <tr><td>June</td><td>80.1</td><td>1.67</td><td>8.74</td></tr> <tr><td>July</td><td>80.7</td><td>1.72</td><td>9.93</td></tr> <tr><td>August</td><td>79.5</td><td>1.38</td><td>3.61</td></tr> <tr><td>September</td><td>71.7</td><td>1.92</td><td></td></tr> <tr><td>October</td><td>58.9</td><td>3.01</td><td></td></tr> <tr><td>November</td><td>46.0</td><td>0.23</td><td></td></tr> <tr><td>December</td><td></td><td></td><td></td></tr> </tbody> </table> <p>Seasonal Precipitation  7.00 in. Total Irrigation 27.94 in.</p> <p>Date of Last Spring Frost: 21-Mar Date of First Fall Frost: 12-Nov Frost Free Period: 236 days</p>		Average Temp. °F	Precip. in.	Irrigation in.	January	37.5	0.10		February	46.1	0.31		March	54.0	0.03		April	60.5	0.00	1.55	May	73.0	1.89	4.12	June	80.1	1.67	8.74	July	80.7	1.72	9.93	August	79.5	1.38	3.61	September	71.7	1.92		October	58.9	3.01		November	46.0	0.23		December			
	Rate	Date																																																																						
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November	46.0	0.23																																																																						
December																																																																								
<p>Test Design: Replications: 4 Plot Length: 20 ft. Rows per Plot: 2 Row Spacing: 40 in.</p> <p>Seeding Rate: 32,000 seed/a</p>																																																																								

Table 5B. New Mexico 2018 Irrigated Forage Corn Performance Test - Agricultural Science Center at Artesia

Results

Brand/Company Name	Hybrid/Variety Name	Moisture			CP	NDF	NDFD 30hr	Ash	Starch	NE _i	Milk/Ton	Milk/Acre
		Dry Forage t/a	Green Forage t/a	at Harvest %								
Golden Acres Genetics/LG Seeds	LG68C88 VT2PRO	7.8	22.5	65.2	9.4	41.6	48.5	4.2	19.2	0.437	2419	18780
Golden Acres Genetics/LG Seeds	ES7667 VT2PRO	7.3	21.4	65.8	10.2	41.7	58.5	4.6	14.7	0.433	2392	17590
Dyna-Gro Seed	D57VC17	7.3	21.2	65.6	9.5	41.0	49.3	4.1	19.2	0.452	2439	17794
Dyna-Gro Seed	D55VP77 VT2P	7.2	21.1	65.7	9.8	40.6	51.5	3.9	19.4	0.447	2499	18115
Dyna-Gro Seed	D58SS65	7.0	19.3	63.6	10.0	40.5	52.5	4.2	18.3	0.441	2481	17346
Dyna-Gro Seed	D55SS45	7.0	21.3	67.3	9.8	42.4	54.5	4.4	14.9	0.425	2311	16221
Golden Acres Genetics/LG Seeds	LG68C22 VT2PRO	6.8	18.7	63.9	10.2	40.4	52.8	4.3	18.9	0.448	2517	17019
Dyna-Gro Seed	D58RR70 RR	6.4	17.8	63.7	9.7	39.5	50.3	4.3	19.7	0.438	2441	15610
Trial Mean		7.1	20.4	65.1	9.8	41.0	52.2	4.2	18.0	0.440	2437	17309
LSD (P < 0.05)		NS	NS	NS	NS	NS	4.3	NS	3.8	NS	122	NS
CV		17.9	15.3	3.9	5.3	4.8	5.6	11.8	14.3	2.9	3.4	18.8
F Test		0.8640	0.4146	0.4160	0.3016	0.5590	0.0022	0.6299	0.0493	0.1274	0.0479	0.9182

Table 6A. New Mexico 2018 Forage Corn Performance Test - Agricultural Science Center at Clovis

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

Test Description

Location:	Management Practices:	Growing Conditions:		
County/Area: Curry	Previous Crop: fallow			
Longitude: -103.22	Planting Date: 17-May			
Latitude: 34.60	Harvest Date: 6-Sep			
Elevation: 4435 ft.				
Soil Name: Olton				
Soil Texture: clay loam				
Soil Depth: >60 in.				
	Production Inputs			
	<u>Rate</u> <u>Date</u>			
	Fertilizer:			
	Nitrogen 12 lb/a carryover			
	Nitrogen 18 lb/a 16-Feb			
	P ₂ O ₅ 60 lb/a 16-Feb			
	Zn 3 qt/ac 16-Feb			
	Nitrogen 122 lb/ac pre plant			
	S 22 lb/ac pre plant			
	Nitrogen 30 lb/ac at plant			
	S 5.5 lb/ac at plant			
	Herbicides:			
	Atrazine 1 pt/a pre plant			
	Balance Flexx 3 oz/ac pre plant			
	Diflexx 5 oz/ac pre plant			
	Glyphosate 40 oz/ac pre plant			
	Brawl 1.3 pt/ac at plant			
	Diflexx 8 oz/ac 20-Jun			
	Brawl 16 oz/ac 20-Jun			
	Insecticides:			
	Onager 16 oz/ac 20-Jun			
	Prevathon 20 oz/ac 1-Aug			
	Oberon 8 oz/ac 1-Aug			
Test Design:				
Replications: 3				
Plot Length: 20 ft.				
Rows per Plot: 2				
Row Spacing: 30 in.				
Seeding Rate: 27000 seed/a				
		<u>Average</u>		
		<u>Temp.</u>	<u>Precip.</u>	<u>Irrigation</u>
		°F	in.	in.
		January	35.2	
		February	40.3	
		March	49.3	
		April	52.8	
		May 17-31	68.2	1.60 1.40
		June	76.1	1.71 3.20
		July	76.5	3.05 5.30
		August	74.5	3.94 4.40
		September 1-6	72.4	0.72 0.00
		October	56.0	
		November		
		December		
		Seasonal Precipitation:	11.0 in.	
		Total Irrigation:	14.3 in.	
		Date of Last Spring Frost:	16-Apr	
		Date of First Fall Frost:	15-Oct	
		Frost Free Period:	182 days	

Table 6B. New Mexico 2018 Forage Corn Performance Test - Agricultural Science Center at Clovis

Results

Brand/Company Name	Hybrid/Variety Name	Moisture			CP	NDF	NDFD		Ash	TDN	NE _i	Milk/Ton	Milk/Acre
		Dry Forage	Green Forage	at Harvest			48hr	Starch					
		t/a	t/a	%	%	%	%	%	%	Mcal/lb	lb/t	lb/a	
Wilbur-Ellis Company	INT6709 VT3PRO	10.4	29.8	64.9	9.1	42.5	59.7	31.4	4.1	66.2	0.681	3181	33204
Wilbur-Ellis Company	INT9678 VT2PRO	9.5	26.9	64.5	9.4	42.4	56.4	31.3	3.8	65.5	0.673	3102	29575
Golden Harvest Seeds	G18D87-3111	9.5	27.8	65.7	8.9	42.1	62.4	31.4	4.1	67.2	0.693	3277	31213
Wilbur-Ellis Company	INT STP6498R	9.4	29.0	67.8	9.1	44.5	62.2	28.5	4.1	66.8	0.688	3246	30351
Dyna-Gro Seed	D58RR70	9.3	27.0	65.4	9.2	42.9	61.3	31.2	4.1	66.6	0.685	3224	30045
Wilbur-Ellis Company	INT 6474 DGVT2PRIB	9.2	26.1	64.6	9.0	40.8	61.7	33.2	4.2	67.2	0.692	3267	30153
Golden Harvest Seeds	G14H66-3010A	9.2	26.0	64.5	8.9	40.8	61.7	32.7	4.0	67.4	0.695	3286	30337
Wilbur-Ellis Company	INT9684 VT2PRO	9.1	27.6	67.2	9.3	44.3	58.8	28.4	4.3	65.0	0.667	3085	28017
Dyna-Gro Seed	D58SS65	9.0	26.7	66.3	9.2	40.9	58.8	33.8	4.0	66.2	0.681	3172	28531
Golden Harvest Seeds	G18H82-3111	8.9	23.8	62.4	8.4	37.9	61.4	38.1	3.5	67.8	0.698	3306	29566
Wilbur-Ellis Company	CX618118-VT2PRIB	8.9	24.7	63.9	8.8	40.6	61.0	32.7	3.8	67.6	0.696	3291	29335
Blue River Organic Seed	70A47	8.8	25.7	65.6	9.5	39.9	59.6	34.8	4.6	66.1	0.679	3168	27972
Golden Harvest Seeds	NK1860-3111	8.8	23.7	62.8	9.0	37.3	64.4	35.2	4.2	69.0	0.712	3423	30172
Masters Choice	MCT6653	8.8	24.5	64.0	9.1	41.7	60.8	33.1	3.9	66.8	0.688	3235	28469
Dyna-Gro Seed	D55VC77	8.8	25.8	66.0	9.2	44.0	56.8	31.0	4.3	64.2	0.659	3011	26340
Wilbur-Ellis Company	CX801115 DGVT2PRO	8.8	25.2	65.3	8.9	39.6	60.1	35.0	4.3	66.5	0.684	3205	28040
Masters Choice	EXP 671T	8.7	23.9	63.5	8.6	41.7	61.6	32.4	4.0	66.8	0.688	3240	28286
Masters Choice	EXP 672T	8.7	24.7	65.0	8.7	41.4	61.3	33.1	4.3	66.7	0.687	3232	28052
Golden Acres Genetics/ LG Seeds	LG 68C88 VT2PRO	8.7	24.1	64.1	9.0	44.2	60.6	27.8	3.8	66.6	0.685	3214	27776
Blue River Organic Seed	66G25	8.6	24.5	64.8	9.0	42.5	61.9	31.3	4.2	67.0	0.689	3252	28107
Golden Harvest Seeds	G16K01-3111	8.6	25.7	66.4	8.4	41.9	60.4	32.9	3.9	66.6	0.685	3212	27779
Golden Acres Genetics/ LG Seeds	ES 7667 VT2PRO	8.5	24.4	65.2	9.1	42.1	61.1	31.6	4.1	67.0	0.689	3247	27572
Masters Choice	EXP 621T	8.4	24.2	65.1	8.6	41.9	60.8	32.7	4.4	66.4	0.683	3202	26928
Wilbur-Ellis Company	CX711118-3110	8.4	25.6	67.1	9.5	43.0	59.2	28.5	4.1	65.9	0.677	3150	26559
Wilbur-Ellis Company	CX801117 SS	8.4	23.1	63.6	8.8	40.2	59.5	33.9	3.8	67.2	0.692	3251	27360
Wilbur-Ellis Company	CX842118-3110	8.4	24.0	65.2	8.9	41.3	61.8	32.3	4.2	67.0	0.690	3255	27275
Wilbur-Ellis Company	CX841118-3110	8.3	24.6	66.0	8.6	43.7	61.2	31.2	4.3	66.4	0.683	3208	26744
Dyna-Gro Seed	D55SS45	8.3	23.5	64.6	9.3	39.8	63.6	32.6	4.1	68.4	0.706	3374	28055
Blue River Organic Seed	62G22	8.2	24.1	66.0	9.3	43.0	60.8	31.5	4.4	66.2	0.681	3187	26234
Masters Choice	MCT6733	8.2	22.8	64.1	8.7	42.2	61.5	32.5	3.8	67.2	0.691	3265	26708
Dyna-Gro Seed	D52VC15	8.2	21.0	61.0	8.4	39.7	61.4	36.6	4.0	67.1	0.691	3259	26623
Masters Choice	MCT6552	8.1	24.0	66.2	8.9	40.5	62.3	33.2	4.2	67.7	0.697	3307	26717
Golden Acres Genetics/ LG Seeds	LG 68C22 VTPRO	8.1	22.1	63.6	9.1	42.1	59.4	31.3	3.8	66.7	0.687	3215	25884
Wilbur-Ellis Company	CX851110SS	7.4	21.6	65.6	9.3	40.4	63.0	31.7	4.6	67.8	0.698	3321	24661
	Trial Mean	8.7	24.9	64.9	9.0	41.6	60.8	32.3	4.09	66.8	0.681	3231	28195
	LSD (P < 0.05)	1.0	2.7	2.0	0.6	3.3	3.7	4.71	NS	NS	NS	NS	3573
	CV	7.2	6.7	2.3	4.0	4.9	3.8	9.0	9.2	1.9	2.1	3.4	7.8
	F Test	0.0023	0.0001	0.0003	0.0028	0.0050	0.0554	0.0274	0.2370	0.0872	0.0896	0.0725	0.0132

Table 7A. New Mexico 2018 Forage Corn Performance Test - Agricultural Science Center at Farmington

Investigators: Koffi Djaman (PI), Samuel Allen, Margaret West, Dallen Begay, Jonah Joe

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: 2017 w. wheat, 2016 fallow, 2015 w. wheat, 2014 fallow, 2013 fallow, 2012 potatoes Planting Date: 22-May Harvest Date: 25-28-Sep Production Inputs <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">Rate</th> <th style="text-align: center;">Date</th> </tr> </thead> <tbody> <tr> <td colspan="3">Fertilizer:</td> </tr> <tr> <td>Dry Nitrogen</td> <td>20.0 lb/a</td> <td>16-May</td> </tr> <tr> <td>Nitrogen</td> <td>17.0 lb/a</td> <td>31-May</td> </tr> <tr> <td>Nitrogen</td> <td>17.0 lb/a</td> <td>5-Jun</td> </tr> <tr> <td>Nitrogen</td> <td>17.0 lb/a</td> <td>12-Jun</td> </tr> <tr> <td>Nitrogen</td> <td>17.0 lb/a</td> <td>19-Jun</td> </tr> <tr> <td>Nitrogen</td> <td>17.0 lb/a</td> <td>26-Jun</td> </tr> <tr> <td>Nitrogen</td> <td>17.0 lb/a</td> <td>3-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>17.0 lb/a</td> <td>10-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>17.0 lb/a</td> <td>17-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>17.0 lb/a</td> <td>24-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>17.0 lb/a</td> <td>31-Jul</td> </tr> <tr> <td>Nitrogen</td> <td>17.0 lb/a</td> <td>7-Aug</td> </tr> <tr> <td>Total Nitrogen</td> <td>207.0 lb/a</td> <td></td> </tr> <tr> <td>NH₄H₂PO₄</td> <td>192 lb/a</td> <td>16-May</td> </tr> <tr> <td>KCl</td> <td>150 lb/a</td> <td>16-May</td> </tr> <tr> <td>ZnSO₄</td> <td>14 lb/a</td> <td>16-May</td> </tr> <tr> <td colspan="3">Herbicides:</td> </tr> <tr> <td>Atrazine 4L</td> <td>1 qt/a</td> <td>12-Jun</td> </tr> <tr> <td>Super Spread MSO</td> <td>1 qt/a</td> <td>12-Jun</td> </tr> <tr> <td>Status</td> <td>10 oz/a</td> <td>12-Jun</td> </tr> </tbody> </table>		Rate	Date	Fertilizer:			Dry Nitrogen	20.0 lb/a	16-May	Nitrogen	17.0 lb/a	31-May	Nitrogen	17.0 lb/a	5-Jun	Nitrogen	17.0 lb/a	12-Jun	Nitrogen	17.0 lb/a	19-Jun	Nitrogen	17.0 lb/a	26-Jun	Nitrogen	17.0 lb/a	3-Jul	Nitrogen	17.0 lb/a	10-Jul	Nitrogen	17.0 lb/a	17-Jul	Nitrogen	17.0 lb/a	24-Jul	Nitrogen	17.0 lb/a	31-Jul	Nitrogen	17.0 lb/a	7-Aug	Total Nitrogen	207.0 lb/a		NH ₄ H ₂ PO ₄	192 lb/a	16-May	KCl	150 lb/a	16-May	ZnSO ₄	14 lb/a	16-May	Herbicides:			Atrazine 4L	1 qt/a	12-Jun	Super Spread MSO	1 qt/a	12-Jun	Status	10 oz/a	12-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></td><td></td><td></td></tr> <tr><td>May</td><td style="text-align: center;">63.6</td><td style="text-align: center;">0.32</td><td style="text-align: center;">2.2</td></tr> <tr><td>June</td><td style="text-align: center;">73.6</td><td style="text-align: center;">0.80</td><td style="text-align: center;">6.7</td></tr> <tr><td>July</td><td style="text-align: center;">79.6</td><td style="text-align: center;">0.60</td><td style="text-align: center;">12.2</td></tr> <tr><td>August</td><td style="text-align: center;">76.1</td><td style="text-align: center;">0.21</td><td style="text-align: center;">10.4</td></tr> <tr><td>September</td><td style="text-align: center;">69.2</td><td style="text-align: center;">0.14</td><td style="text-align: center;">7.7</td></tr> <tr><td>October</td><td style="text-align: center;">53.1</td><td style="text-align: center;">0.81</td><td style="text-align: center;">3.8</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;">2.9 in.</td> <td></td> </tr> <tr> <td>Total Irrigation</td> <td></td> <td style="text-align: center;">43.0 in.</td> <td></td> </tr> <tr> <td>Date of Last Spring Frost:</td> <td colspan="3" style="text-align: right;">19-Apr</td> </tr> <tr> <td>Date of First Fall Frost:</td> <td colspan="3" style="text-align: right;">15-Oct</td> </tr> <tr> <td>Frost Free Period:</td> <td colspan="3" style="text-align: right;">179 days</td> </tr> </tbody> </table>		Average Temp. °F	Precip. in.	Irrigation in.	January				February				March				April				May	63.6	0.32	2.2	June	73.6	0.80	6.7	July	79.6	0.60	12.2	August	76.1	0.21	10.4	September	69.2	0.14	7.7	October	53.1	0.81	3.8	November				December				Seasonal Precipitation		2.9 in.		Total Irrigation		43.0 in.		Date of Last Spring Frost:	19-Apr			Date of First Fall Frost:	15-Oct			Frost Free Period:	179 days		
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Table 7B. New Mexico 2018 Forage Corn Performance Test - Agricultural Science Center at Farmington

Results

Brand/Company Name	Hybrid/Variety Name	Moisture					Plant Height	Ear Height	CP	NDFD			Ash	TDN	Milk/Ton	Milk/Acre
		Dry Forage	Green Forage	at Harvest	NDF	48hr				Starch						
		t/a	t/a	%	in	in	%	%	%	%	%	%	lb/t	lb/a		
Dyna-Gro Seed	D58RR70	15.8	36.8	56.9	115	53	7.2	40.8	62.6	29.5	4.0	67.8	2979	46,995		
Wilbur-Ellis Company	INT6474 DGVT2PRIB	15.1	30.9	50.9	107	47	6.9	40.4	64.4	28.1	4.1	66.8	2885	43,719		
Dyna-Gro Seed	D52VC15	14.6	29.7	51.3	100	43	6.7	43.2	60.8	28.2	5.2	66.7	2911	42,095		
Wilbur-Ellis Company	INT6709 VT3PRO	14.0	32.1	56.6	119	52	6.3	43.4	62.2	26.8	3.7	66.1	2845	39,899		
Golden Harvest Seeds	G11B63-3010A	14.0	26.7	46.7	110	43	6.7	41.0	64.7	28.5	4.0	67.4	2929	41,745		
Wilbur-Ellis Company	CX842118-3110	13.0	26.9	51.9	104	43	6.1	41.3	62.0	29.4	4.7	66.5	2885	37,857		
Wilbur-Ellis Company	CX618118-VT2PRIB	12.8	30.5	57.9	103	42	6.7	42.7	62.1	28.2	4.0	67.4	2954	37,895		
Golden Harvest Seeds	G14H66-3010A	11.9	25.3	52.8	108	43	6.3	43.2	61.8	28.2	3.8	66.5	2881	34,329		
Wilbur-Ellis Company	INT9678 VT2PRO	11.9	26.4	56.4	104	42	6.6	42.3	59.8	27.4	4.0	65.2	2798	32,842		
Wilbur-Ellis Company	INT9684 VT2PRO	11.7	26.4	56.0	102	43	7.0	40.6	65.5	28.8	4.1	67.7	2947	34,616		
Wilbur-Ellis Company	CX851110SS	11.5	24.8	54.5	112	46	6.6	44.1	60.1	29.0	4.2	66.9	2935	34,018		
Wilbur-Ellis Company	CX711118-3110	11.4	25.3	55.4	110	42	7.1	41.2	63.3	26.8	4.0	65.5	2790	31,953		
Wilbur-Ellis Company	INTSTP6498R	10.8	27.2	60.0	108	45	7.1	46.0	65.8	22.9	4.2	66.2	2805	30,225		
Wilbur-Ellis Company	CX801115 DGVT2PRO	10.7	26.8	60.2	105	47	6.9	40.7	61.8	27.0	5.5	65.4	2800	31,185		
Dyna-Gro Seed	D55VP77	10.7	21.2	51.7	97	43	7.0	40.3	62.8	28.9	4.3	66.8	2904	31,497		
Wilbur-Ellis Company	CX801117 SS	10.6	22.9	56.2	101	42	6.5	42.1	62.3	27.0	4.4	65.9	2831	31,073		
Dyna-Gro Seed	D58SS65	10.6	23.3	54.9	100	42	6.8	41.3	61.8	30.0	3.6	68.3	3026	32,182		
Dyna-Gro Seed	D55SS45	10.5	23.0	53.8	104	47	7.0	39.6	62.9	28.0	4.7	65.8	2821	29,605		
Golden Harvest Seeds	G07B39-3111A	10.4	23.3	57.3	112	44	6.5	40.2	62.5	27.6	4.1	65.2	2773	29,557		
Golden Harvest Seeds	G13Z50-3110	10.3	27.1	61.2	102	41	6.4	41.9	64.3	29.3	4.1	68.0	2980	30,896		
Dyna-Gro Seed	D54DC94	10.1	21.9	54.6	107	43	7.2	41.8	64.5	26.2	4.3	66.7	2873	28,996		
Wilbur-Ellis Company	CX841118-3110	9.4	21.6	59.3	113	52	6.7	42.6	63.6	24.9	4.4	64.8	2724	26,663		
	Trial Mean	11.9	26.4	55.3	106	45	6.7	41.9	62.8	27.8	4.2	66.5	2876	34,538		
	LSD P < 0.05	NS	NS	NS	9.3	5.4	NS	NS	3.1	NS	NS	NS	NS	NS		
	CV	32.7	27.3	11.3	6.2	8.6	8.7	7.5	3.5	14.6	21.1	4.1	7.5	35.9		
	F Test	0.6389	0.3377	0.2405	0.0009	0.0001	0.3060	0.5355	0.0107	0.8711	0.4575	0.9541	0.9524	0.7424		

Table 8A. New Mexico 2018 Dryland Grain Sorghum Performance Test - Agricultural Science Center at Clovis

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

Test Description

<p>Location:</p> <p>County/Area: Curry Longitude: -103.22 Latitude: 34.60 Elevation: 4435 ft. Soil Name: Olton Soil Texture: clay loam Soil Depth: >60 in.</p>	<p>Management Practices:</p> <p>Previous Crop: fallow Planting Date: 11-Jun Harvest Date: 19-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>9 lb/a</td> <td>carryover</td> </tr> <tr> <td>Nitrogen</td> <td>30 lb/ac</td> <td>19-Feb</td> </tr> <tr> <td>P₂O₅</td> <td>20 lb/ac</td> <td>19-Feb</td> </tr> <tr> <td>S</td> <td>4 lb/ac</td> <td>19-Feb</td> </tr> <tr> <td>Zn</td> <td>1 qt/ac</td> <td>19-Feb</td> </tr> <tr> <td>Nitrogen</td> <td>75 lb/ac</td> <td>8-Jun</td> </tr> <tr> <td colspan="3">Herbicides:</td> </tr> <tr> <td>Glyphosate</td> <td>40 oz/ac</td> <td>8-Jun</td> </tr> <tr> <td>Sharpen</td> <td>1.5 oz/ac</td> <td>8-Jun</td> </tr> <tr> <td>Starane</td> <td>6.4 oz/ac</td> <td>8-Jun</td> </tr> <tr> <td>Atrazine</td> <td>1 pt/ac</td> <td>8-Jun</td> </tr> <tr> <td>Brawl</td> <td>1.3 pt/ac</td> <td>12-Jun</td> </tr> <tr> <td colspan="3">Insecticides:</td> </tr> <tr> <td>Sivanto</td> <td>10.5 oz/ac</td> <td>15-Aug</td> </tr> <tr> <td>Prevathon</td> <td>20 oz/ac</td> <td>15-Aug</td> </tr> <tr> <td>Sivanto</td> <td>10.5 oz/ac</td> <td>24-Sep</td> </tr> </tbody> </table>		Rate	Date	Fertilizer:			Nitrogen	9 lb/a	carryover	Nitrogen	30 lb/ac	19-Feb	P ₂ O ₅	20 lb/ac	19-Feb	S	4 lb/ac	19-Feb	Zn	1 qt/ac	19-Feb	Nitrogen	75 lb/ac	8-Jun	Herbicides:			Glyphosate	40 oz/ac	8-Jun	Sharpen	1.5 oz/ac	8-Jun	Starane	6.4 oz/ac	8-Jun	Atrazine	1 pt/ac	8-Jun	Brawl	1.3 pt/ac	12-Jun	Insecticides:			Sivanto	10.5 oz/ac	15-Aug	Prevathon	20 oz/ac	15-Aug	Sivanto	10.5 oz/ac	24-Sep	<p>Growing Conditions:</p> <table border="1"> <thead> <tr> <th></th> <th colspan="3">Average</th> </tr> <tr> <th></th> <th>Temp.</th> <th>Precip.</th> <th>Irrigation</th> </tr> <tr> <th></th> <th>°F</th> <th>in.</th> <th>in.</th> </tr> </thead> <tbody> <tr> <td>January</td> <td>35.2</td> <td></td> <td></td> </tr> <tr> <td>February</td> <td>40.3</td> <td></td> <td></td> </tr> <tr> <td>March</td> <td>49.3</td> <td></td> <td></td> </tr> <tr> <td>April</td> <td>52.8</td> <td></td> <td></td> </tr> <tr> <td>May</td> <td>69.4</td> <td></td> <td></td> </tr> <tr> <td>June 11-30</td> <td>76.1</td> <td>0.51</td> <td></td> </tr> <tr> <td>July</td> <td>76.5</td> <td>3.05</td> <td></td> </tr> <tr> <td>August</td> <td>74.5</td> <td>3.94</td> <td></td> </tr> <tr> <td>September</td> <td>68.5</td> <td>1.64</td> <td></td> </tr> <tr> <td>October</td> <td>56.0</td> <td>3.99</td> <td></td> </tr> <tr> <td>November 1-19</td> <td>43.0</td> <td>0.17</td> <td></td> </tr> <tr> <td>December</td> <td>37.5</td> <td></td> <td></td> </tr> <tr> <td colspan="2">Seasonal Precipitation:</td> <td colspan="2">13.3 in.</td> </tr> <tr> <td colspan="2">Total Irrigation:</td> <td colspan="2">0.0 in.</td> </tr> <tr> <td colspan="2">Date of Last Spring Frost:</td> <td colspan="2">16-Apr</td> </tr> <tr> <td colspan="2">Date of First Fall Frost:</td> <td colspan="2">15-Oct</td> </tr> <tr> <td colspan="2">Frost Free Period:</td> <td colspan="2">182 days</td> </tr> </tbody> </table>		Average				Temp.	Precip.	Irrigation		°F	in.	in.	January	35.2			February	40.3			March	49.3			April	52.8			May	69.4			June 11-30	76.1	0.51		July	76.5	3.05		August	74.5	3.94		September	68.5	1.64		October	56.0	3.99		November 1-19	43.0	0.17		December	37.5			Seasonal Precipitation:		13.3 in.		Total Irrigation:		0.0 in.		Date of Last Spring Frost:		16-Apr		Date of First Fall Frost:		15-Oct		Frost Free Period:		182 days	
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Table 8B. New Mexico 2018 Dryland Grain Sorghum Performance Test - Agricultural Science Center at Clovis

Results

Brand/Company Name	Hybrid/Variety Name	Grain Yield bu/a	Grain Yield lb/a	Moisture	Test Weight lb/bu	Plant Height in	Head Exertion in	Lodging %	Heading Date
				at Harvest %					
Dyna-Gro Seed	GX17948	113.0 ***	6330 ***	14.6	58.5 *	21.7 *	5.0	0	8-Aug
Advanta Seeds	ADV XG602	112.9 *	6323 *	14.2	56.9 *	20.7 *	7.3 *	0	16-Aug
Golden Acres Genetics	2620C	112.7 *	6310 *	12.9	56.6 *	16.0	7.7 *	0	11-Aug
Golden Acres Genetics	2730B	109.1 *	6109 *	13.5	58.2 *	16.7	7.0 *	0	15-Aug
Dyna-Gro Seed	M69GR88	107.5 *	6020 *	15.1	56.5 *	21.0 *	4.3	0	12-Aug
Browning Seed, Inc.	Phoenix	105.3 *	5897 *	13.8	58.3 *	18.7	8.7 ***	0	16-Aug
Dyna-Gro Seed	M74GB17	103.7 *	5809 *	14.8	57.4 *	19.0	6.3	0	16-Aug
Advanta Seeds	ADV XG001	102.9 *	5761 *	14.5	58.5 *	15.0	7.3 *	0	17-Aug
Dyna-Gro Seed	M60GB31	99.2 *	5555 *	13.9	57.6 *	17.3	6.3	0	17-Aug
Dyna-Gro Seed	GX17968	97.6 *	5465 *	14.1	57.2 *	20.0	7.7 *	0	7-Aug
Dyna-Gro Seed	GX17962	97.2 *	5442 *	14.0	58.6 ***	16.3	5.0	0	10-Aug
Dyna-Gro Seed	M60GB88	93.2 *	5217 *	12.9	58.0 *	17.0	5.7	0	17-Aug
Advanta Seeds	AG 1203	91.4 *	5119 *	13.8	57.9 *	18.7	6.0	0	12-Aug
Dyna-Gro Seed	M68GR41	89.8 *	5033 *	15.5	54.8 *	17.3	2.3	0	9-Aug
Browning Seed, Inc.	775 W	89.1 *	4989 *	13.3	57.6 *	15.7	6.0	0	14-Aug
Dyna-Gro Seed	GX17379	84.7 *	4747 *	15.3	51.5 *	16.7	1.3	0	18-Aug
Dyna-Gro Seed	GX16833	84.6 *	4738 *	15.3	54.7 *	24.3 ***	2.3	0	23-Aug ***
Advanta Seeds	AG 1201	82.8 *	4640 *	13.0	56.4 *	16.3	5.0	0	15-Aug
Advanta Seeds	ADV XG629	78.9 *	4416 *	13.1	57.6 *	17.7	5.0	0	13-Aug
Browning Seed, Inc.	Blaze	78.1 *	4375 *	14.2	58.0 *	16.0	5.7	0	12-Aug
Browning Seed, Inc.	Challenger BMX	77.3 *	4327 *	14.5	51.0	21.0 *	5.7	0	8-Aug
Dyna-Gro Seed	M73GR55	59.5	3330	17.0 ***	35.8	22.7 *	2.3	0	11-Aug
Trial Mean		94.1	5270	14.2	55.8	13.3	5.5	0.0	13-Aug
LSD (P > 0.05)		NS	NS	0.8	7.5	4.0	2.2	0.0	3.2
CV		32.3	32.3	3.4	8.1	13.3	24.3	0.0	0.9
F Test		0.8661	0.8661	<0.0001	0.0002	0.0006	<0.0001	<0.0001	<0.0001

*** Highest numerical value in the column.

* Not significantly different from the highest numerical value in the column based on the 5% LSD.

Table 9A. New Mexico 2018 Irrigated Forage Sorghum Performance Test - Agricultural Science Center at Artesia

Investigators: R. Flynn, R. Pacheco, S. Bustillos, M. Lopez, and C. Hill

Test Description

Location:	Management Practices:	Growing Conditions:
County/Area: Eddy	Previous Crop: cotton	
Longitude: -104.22	Planting Date: 1-Jun	
Latitude: 32.45	Harvest Date: 19-Sep	
Elevation: 3356 ft.		
Soil Name: Pima		
Soil Texture: silt loam		
Soil Depth: 32 in.		
	Production Inputs	
	<u>Rate</u> <u>Date</u>	
	Fertilizer:	
	Nitrogen 20 lb/a 25-Apr	
	Nitrogen 225 lb/a 23-Jul	
	P2O5 96 lb/a 25-Apr	
	Herbicides:	
	None	
	Insecticides:	
	None	
Test Design:		
Replications: 3		
Plot Length: 30 ft.		
Rows per Plot: 2		
Row Spacing: 40 in.		
Seeding Rate: 85,000 seed/a		
		Average
		Temp. Precip. Irrigation
		°F in. in.
		January 37.5 0.10
		February 46.1 0.31
		March 54.0 0.03
		April 60.5 0.00 1.55
		May 73.0 1.89 2.79
		June 80.1 1.67 8.74
		July 80.7 1.72 5.14
		August 79.5 1.38 7.23
		September 71.7 1.92 2.30
		October 58.9 3.01
		November 46.0 0.23
		December
		Seasonal Precipitation ▲ 8.92 in.
		Total Irrigation 27.74 in.
		Date of Last Spring Frost: 21-Mar
		Date of First Fall Frost: 12-Nov
		Frost Free Period: 236 days

Table 9B. New Mexico 2018 Irrigated Forage Sorghum Performance Test - Agricultural Science Center at Artesia

Results

Brand/Company Name	Hybrid/Variety Name	Sorghum [†] Type	Maturity [§] Group	Brown Midrib	65% Adj Moisture			CP	NDF	NDFD 30hr	Ash	TDN	NE _i	Milk/ Ton	Milk/ Acre
					Dry Forage	Green Forage	at Harvest								
					t/a	t/a	%	%	%	%	%	Mcal/lb	lb/t	lb/a	
Advanta Seeds	AF 8301	FS	M	N	4.9	19.4	74.9	7.6	60.4	55.0	8.5	63.2	0.643	2411	11711
Dyna-Gro Seed	Super Sile 20	FS	ML	Y	4.6	18.1	74.7	7.5	59.9	52.7	7.6	62.9	0.637	2305	10557
Advanta Seeds	ADV XF033	FS	ML	N	4.5	16.6	72.7	7.9	58.4	57.3	6.9	65.4	0.677	2527	11358
Dyna-Gro Seed	F74FS23 BMR	FS	ML	Y	4.5	18.9	76.0	8.1	58.1	63.0	6.6	66.7	0.697	2656	12044
Dyna-Gro Seed	705F	FS	ME	N	4.2	16.0	73.5	7.9	59.4	55.0	8.2	62.9	0.643	2487	10599
Dyna-Gro Seed	Super Sile 30	FS	ME	N	4.1	17.4	76.5	8.5	61.6	55.7	8.5	62.4	0.630	2505	10158
Dyna-Gro Seed	F76FS77 BMR	FS	ML	Y	4.0	17.3	77.1	8.7	62.9	57.3	10.0	61.7	0.620	2627	10464
Advanta Seeds	ADVXF372	FS	M	Y	3.6	15.2	76.0	8.9	56.7	62.7	9.4	64.9	0.667	2651	9726
Dyna-Gro Seed	Dual Forage SCA	FS/GS	ML	N	3.5	11.6	69.2	8.0	62.1	53.7	10.1	59.5	0.590	2418	8358
Dyna-Gro Seed	FX18811	FS	M	N	3.5	13.9	75.3	8.1	58.8	58.3	7.4	65.4	0.677	2597	9054
Advanta Seeds	AF 7401	FS	ML	Y	3.4	14.1	76.3	8.1	58.0	63.3	10.1	63.5	0.643	2678	8989
Mojo Seed Enterprises	Opal	FS	ML	N	3.4	13.1	74.0	8.3	59.2	56.0	8.2	63.9	0.653	2478	8579
Dyna-Gro Seed	FX18851 BMR	FS	ML	Y	3.2	14.6	77.7	9.3	59.3	60.7	9.5	64.5	0.663	2816	9141
Dyna-Gro Seed	FX18878 BMR	FS	M	Y	2.7	11.1	75.3	8.8	57.5	61.7	8.2	65.9	0.680	2667	7275
Dyna-Gro Seed	GX16921	FS/GS	ML	N	2.4	8.7	72.6	8.6	61.1	55.7	9.8	61.2	0.613	2567	6112
Trial Mean					3.8	15.1	74.7	8.3	59.6	57.8	8.6	63.6	0.649	2559	9608
LSD (P < 0.05)					1.5	5.5	2.9	NS	NS	4.7	1.6	NS	NS	239	NS
CV					23.8	22.0	22.2	11.2	4.6	4.9	11.3	3.8	5.5	5.9	23.9
F Test					0.0721	0.0168	0.0003	0.5675	0.2745	0.0002	0.0006	0.0699	0.0715	0.0191	0.1651

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

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

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

Table 10B. New Mexico 2018 Irrigated Forage Sorghum & Sorghum Sudangrass (Multi-Cut) Performance Test - Agricultural Science Center at Artesia

Results

Brand/Company Name	Hybrid/Variety Name	Type ¹	Harvest 1					Harvest 2					Total	
			Dry Forage	Green Forage	Harvest Moisture	Milk/ Ton	Milk/ Acre	Dry Forage	Green Forage	Harvest Moisture	Milk/ Ton	Milk/ Acre	Dry Forage	Milk/ Acre
			t/a	t/a	%	lb/t	lb/a	t/a	t/a	%	lb/t	lb/a	t/a	lb/a
Dyna-Gro Seed	FX18843SS BMR	SxS	4.5	21.0	78.2	2520	11472	1.8	13.3	86.3	2638	4867	6.4	16340
American Hybrids	Lincoln	SxS	4.2	22.7	81.3	2433	10206	2.2	17.0	87.1	2626	5842	6.4	16048
Dyna-Gro Seed	FX18835SS	SxS	3.9	19.4	79.3	2295	9145	2.4	16.1	84.8	2535	6016	6.3	15161
Brownig Seed, Inc.	Sweet Sioux BMR	SxS	3.9	17.7	76.2	2557	9921	2.3	16.0	85.7	2701	6184	6.2	16105
American Hybrids	Brighton	SxS	3.3	18.0	81.6	2341	7834	2.5	15.0	83.3	2568	6488	5.9	14322
Dyna-Gro Seed	Danny Boy BMR	SxS	3.7	18.3	79.0	2639	9848	2.1	16.6	87.2	2534	5407	5.8	15255
Dyna-Gro Seed	Full Graze BMR	SxS	3.9	20.3	80.1	2573	9978	2.0	13.7	85.8	2638	5158	5.8	15136
Brownig Seed, Inc.	Cadan 99B	SxS	3.9	17.6	77.4	2206	8137	1.9	11.5	83.9	2637	4952	5.7	13089
American Hybrids	Navion	SxS	3.1	16.0	81.1	2359	7286	2.5	16.7	84.9	2584	6509	5.6	13795
Dyna-Gro Seed	Danny Boy II BMR	SxS	3.2	16.7	80.2	2405	7659	2.1	17.0	87.9	2562	5307	5.3	12966
Advanta Seeds	S6504	SxS	3.2	18.9	80.8	2505	8146	2.0	16.4	87.8	2542	5120	5.2	13266
	Trial Mean		3.7	18.9	79.6	2439	9057	2.2	15.4	85.9	2597	5623	5.9	14680
	LSD		NS	NS	NS	NS	NS	NS	NS	1.5	NS	NS	NS	NS
	CV		41.0	42.3	7.0	8.1	41.3	19.4	17.4	1.2	3.5	20.7	25.6	26.1
	F Test		0.9615	0.9881	0.9419	0.1063	0.8735	0.2553	0.1012	0.0001	0.2262	0.4047	0.9804	0.9204

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

Table 10C. New Mexico 2018 Irrigated Forage Sorghum & Sorghum Sudangrass (Multi-Cut) Performance Test - Agricultural Science Center at Artesia

Results

Brand/Company Name	Hybrid/Variety Name	Type ¹	Harvest 1						Harvest 2					
			CP		NDF		NDFD		CP		NDF		NDFD	
			%	%	%	%	%	Mcal/lb	%	%	%	%	%	Mcal/lb
Dyna-Gro Seed	FX18843SS BMR	SxS	7.6	69.8	58.3	97	57.8	0.589	12.5	65.0	63.8	110	60.2	0.616
American Hybrids	Lincoln	SxS	9.5	60.5	57.8	112	61.3	0.627	13.1	62.0	64.0	111	61.3	0.628
Dyna-Gro Seed	FX18835SS	SxS	6.6	73.0	52.5	83	55.3	0.561	11.9	66.2	59.3	102	59.2	0.605
Brownig Seed, Inc.	Sweet Sioux BMR	SxS	8.8	58.9	59.0	120	64.1	0.660	13.2	61.2	64.5	117	62.6	0.643
American Hybrids	Brighton	SxS	7.1	68.1	51.8	92	57.5	0.586	12.4	65.2	58.8	104	60.2	0.616
Dyna-Gro Seed	Danny Boy BMR	SxS	8.7	64.7	62.8	115	60.2	0.616	13.1	64.5	65.0	104	59.0	0.602
Dyna-Gro Seed	Full Graze BMR	SxS	8.4	67.8	59.8	100	57.7	0.588	13.0	61.6	65.5	115	61.7	0.632
Brownig Seed, Inc.	Cadan 99B	SxS	7.4	64.1	52.8	92	58.6	0.598	12.0	65.1	60.0	106	60.1	0.614
American Hybrids	Navion	SxS	9.3	66.7	57.3	91	56.4	0.573	13.7	61.7	62.0	104	60.2	0.616
Dyna-Gro Seed	Danny Boy II BMR	SxS	7.1	71.0	59.3	86	54.7	0.555	11.8	64.1	64.3	107	59.8	0.611
Advanta Seeds	S6504	SxS	8.7	68.8	59.5	96	57.3	0.584	12.9	63.5	63.8	105	60.1	0.615
	Trial Mean		8.1	66.7	57.3	98	58.2	0.594	12.7	63.6	62.8	108	60.4	0.618
	LSD		1.6	4.2	3.4	18.0	NS	0.044	NS	2.9	2.2	NS	NS	NS
	CV		14.0	4.3	4.2	12.8	4.7	5.1	7.4	3.1	2.4	6.7	3.0	3.3
	F Test		0.0098	0.0001	0.0001	0.0028	0.2556	0.0015	0.1327	0.0071	0.0001	0.1080	0.2366	0.2417

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

Table 11A. New Mexico 2018 Irrigated Forage Sorghum Performance Test - Agricultural Science Center at Clovis

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

Test Description

Location:	Management Practices:	Growing Conditions:																																																																																																																					
County/Area: Curry Longitude: -103.22 Latitude: 34.60 Elevation: 4435 ft. Soil Name: Olton Soil Texture: clay loam Soil Depth: >60 in.	Previous Crop: fallow Planting Date: 30-May Harvest Date: 4-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>9 lb/ac</td> <td>carryover</td> </tr> <tr> <td>Nitrogen</td> <td>101 lb/ac</td> <td>pre-plant</td> </tr> <tr> <td>P₂O₅</td> <td>35 lb/ac</td> <td>pre-plant</td> </tr> <tr> <td>Zn</td> <td>2 qt/ac</td> <td>pre-plant</td> </tr> <tr> <td colspan="3">Herbicides:</td> </tr> <tr> <td>Atrazine</td> <td>1 pt/ac</td> <td>at plant</td> </tr> <tr> <td>Glyphosate</td> <td>40 oz/ac</td> <td>at plant</td> </tr> <tr> <td>Yukon</td> <td>6 oz/ac</td> <td>23-Jun</td> </tr> <tr> <td>Brawl</td> <td>1 pt/ac</td> <td>23-Jun</td> </tr> <tr> <td colspan="3">Insecticides:</td> </tr> <tr> <td>Sivanto</td> <td>10.5 oz/ac</td> <td>15-Aug</td> </tr> <tr> <td>Prevathon</td> <td>20 oz/ac</td> <td>15-Aug</td> </tr> <tr> <td>Sivanto</td> <td>10.5 oz/ac</td> <td>24-Sep</td> </tr> </tbody> </table>		Rate	Date	Fertilizer:			Nitrogen	9 lb/ac	carryover	Nitrogen	101 lb/ac	pre-plant	P ₂ O ₅	35 lb/ac	pre-plant	Zn	2 qt/ac	pre-plant	Herbicides:			Atrazine	1 pt/ac	at plant	Glyphosate	40 oz/ac	at plant	Yukon	6 oz/ac	23-Jun	Brawl	1 pt/ac	23-Jun	Insecticides:			Sivanto	10.5 oz/ac	15-Aug	Prevathon	20 oz/ac	15-Aug	Sivanto	10.5 oz/ac	24-Sep	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">Average Temp. °F</th> <th style="text-align: center;">Precip. in.</th> <th style="text-align: center;">Irrigation in.</th> </tr> </thead> <tbody> <tr><td>January</td><td style="text-align: center;">35.2</td><td></td><td></td></tr> <tr><td>February</td><td style="text-align: center;">40.3</td><td></td><td></td></tr> <tr><td>March</td><td style="text-align: center;">49.3</td><td></td><td></td></tr> <tr><td>April</td><td style="text-align: center;">52.8</td><td></td><td></td></tr> <tr><td>May</td><td style="text-align: center;">69.4</td><td style="text-align: center;">1.60</td><td style="text-align: center;">1.80</td></tr> <tr><td>June</td><td style="text-align: center;">76.1</td><td style="text-align: center;">1.71</td><td style="text-align: center;">2.50</td></tr> <tr><td>July</td><td style="text-align: center;">76.5</td><td style="text-align: center;">3.05</td><td style="text-align: center;">5.75</td></tr> <tr><td>August</td><td style="text-align: center;">74.5</td><td style="text-align: center;">3.94</td><td style="text-align: center;">0.00</td></tr> <tr><td>September</td><td style="text-align: center;">68.5</td><td style="text-align: center;">1.64</td><td style="text-align: center;">1.60</td></tr> <tr><td>October 1-4</td><td style="text-align: center;">56.0</td><td style="text-align: center;">0.00</td><td style="text-align: center;">0.00</td></tr> <tr><td>November</td><td></td><td></td><td></td></tr> <tr><td>December</td><td></td><td></td><td></td></tr> <tr> <td>Seasonal Precipitation:</td> <td></td> <td style="text-align: center;">11.9 in.</td> <td></td> </tr> <tr> <td>Total Irrigation:</td> <td></td> <td style="text-align: center;">11.7 in.</td> <td></td> </tr> <tr> <td>Date of Last Spring Frost:</td> <td></td> <td style="text-align: center;">16-Apr</td> <td></td> </tr> <tr> <td>Date of First Fall Frost:</td> <td></td> <td style="text-align: center;">15-Oct</td> <td></td> </tr> <tr> <td>Frost Free Period:</td> <td></td> <td style="text-align: center;">182 days</td> <td></td> </tr> </tbody> </table>		Average Temp. °F	Precip. in.	Irrigation in.	January	35.2			February	40.3			March	49.3			April	52.8			May	69.4	1.60	1.80	June	76.1	1.71	2.50	July	76.5	3.05	5.75	August	74.5	3.94	0.00	September	68.5	1.64	1.60	October 1-4	56.0	0.00	0.00	November				December				Seasonal Precipitation:		11.9 in.		Total Irrigation:		11.7 in.		Date of Last Spring Frost:		16-Apr		Date of First Fall Frost:		15-Oct		Frost Free Period:		182 days	
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Frost Free Period:		182 days																																																																																																																					
Test Design: Replications: 3 Plot Length: 20 ft. Rows per Plot: 2 Row Spacing: 30 in. Seeding Rate: 75,000 ac.																																																																																																																							
Notes: <u>Major oven fire destroyed subsamples for dry matter determination and quality analysis. Only wet yields are presented.</u>																																																																																																																							

Table 11B. New Mexico 2018 Irrigated Forage Sorghum Performance Test - Agricultural Science Center at Clovis

Results

Brand/Company Name	Hybrid/Variety Name	Sorghum [†] Type	Maturity [§] Group	Brown Midrib	Moisture			CP %	NDFD		Ash %	TDN %	NE _i Mcal/lb	Milk/Ton lb/t	Milk/Acre lb/a
					Dry Forage t/a	Green Forage t/a	at Harvest %		NDF %	48hr %					
Advanta Seeds	ADV S6504	SxS	PS	Y	.	36.5	.	.	.	.	.	.	.	.	.
Dyna-Gro Seed	FX18843SS BMR	SxS	ML	Y	.	28.3	.	.	.	.	.	.	.	.	.
Dyna-Gro Seed	FX18835SS	SxS	ML	N	.	24.6	.	.	.	.	.	.	.	.	.
Sorghum Partners	SS405	FS	L	N	.	24.5	.	.	.	.	.	.	.	.	.
Dyna-Gro Seed	Danny Boy BMR	SxS	PS	Y	.	23.6	.	.	.	.	.	.	.	.	.
Dyna-Gro Seed	705F	FS	ME	N	.	22.0	.	.	.	.	.	.	.	.	.
Dyna-Gro Seed	Super Sile 20	FS	ML	Y	.	21.8	.	.	.	.	.	.	.	.	.
Advanta Seeds	AF 8301	FS	M	N	.	21.7	.	.	.	.	.	.	.	.	.
Dyna-Gro Seed	FX18811	FS	M	N	.	20.1	.	.	.	.	.	.	.	.	.
Advanta Seeds	ADV XF033	FS	M	N	.	19.7	.	.	.	.	.	.	.	.	.
American Hybrids	Val-4	FS	L	N	.	19.2	.	.	.	.	.	.	.	.	.
Sorghum Partners	SPX56216	FS	L	Y	.	18.9	.	.	.	.	.	.	.	.	.
Dyna-Gro Seed	Super Sile 30	FS	ME	N	.	17.8	.	.	.	.	.	.	.	.	.
Dyna-Gro Seed	Fullgraze BMR	SxS	ML	Y	.	17.0	.	.	.	.	.	.	.	.	.
Dyna-Gro Seed	FX18878 BMR	FS	M	Y	.	16.8	.	.	.	.	.	.	.	.	.
Dyna-Gro Seed	FX18851 BMR	FS	ML	Y	.	16.6	.	.	.	.	.	.	.	.	.
Dyna-Gro Seed	F74FS23 BMR	FS	M	Y	.	15.9	.	.	.	.	.	.	.	.	.
Advanta Seeds	AF 7401	FS	ML	Y	.	15.9	.	.	.	.	.	.	.	.	.
Sorghum Partners	SP2876	FS	L	Y	.	15.8	.	.	.	.	.	.	.	.	.
Sorghum Partners	SP4555	SxS	M	Y	.	15.7	.	.	.	.	.	.	.	.	.
Dyna-Gro Seed	F76FS77 BMR	FS	ML	Y	.	15.4	.	.	.	.	.	.	.	.	.
Sorghum Partners	NK300	FS	ME	N	.	15.2	.	.	.	.	.	.	.	.	.
Advanta Seeds	ADV XF372	FS	M	Y	.	14.6	.	.	.	.	.	.	.	.	.
Sorghum Partners	SP3808SB BMR	FS	ML	Y	.	13.0	.	.	.	.	.	.	.	.	.
Mojo Seed Enterprises	Opal	FS	ML	N	.	11.0	.	.	.	.	.	.	.	.	.
Mojo Seed Enterprises	EXP-715	FS	ML	N	.	10.7	.	.	.	.	.	.	.	.	.
Mojo Seed Enterprises	EXP-719	FS	ML	N	.	10.1	.	.	.	.	.	.	.	.	.
Dyna-Gro Seed	GX16921	FS/GS	ML	N	.	7.3	.	.	.	.	.	.	.	.	.
	Trial Mean					18.2	.	.	.	.	.	.	.	.	.
	LSD P<0.05					7.1	.	.	.	.	.	.	.	.	.
	CV					23.8	.	.	.	.	.	.	.	.	.
	F Test					<0.0001	.	.	.	.	.	.	.	.	.

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

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

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

Table 12B. New Mexico 2018 Dryland Forage Sorghum Performance Test - Agricultural Science Center at Clovis

Results

Brand/Company Name	Hybrid/Variety Name	Sorghum [†] Type	Maturity [§] Group	Brown Midrib	Moisture			CP %	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 %								
Dyna-Gro Seed	FX18811	FS	M	N	.	24.2	.	.	.	.	.	.	.	.	.
Dyna-Gro Seed	Super Sile 20	FS	ML	Y	.	17.0	.	.	.	.	.	.	.	.	.
Dyna-Gro Seed	Super Sile 30	FS	ME	N	.	16.8	.	.	.	.	.	.	.	.	.
Dyna-Gro Seed	FX18878 BMR	FS	M	Y	.	14.3	.	.	.	.	.	.	.	.	.
Dyna-Gro Seed	705F	FS	ME	N	.	14.2	.	.	.	.	.	.	.	.	.
Dyna-Gro Seed	FX18851 BMR	FS	ML	Y	.	13.8	.	.	.	.	.	.	.	.	.
Dyna-Gro Seed	GX16921	FS/GS	ML	N	.	12.0	.	.	.	.	.	.	.	.	.
Dyna-Gro Seed	F76FS77 BMR	FS	ML	Y	.	12.0	.	.	.	.	.	.	.	.	.
Dyna-Gro Seed	Dual Forage SCA	FS/GS	ML	N	.	11.8	.	.	.	.	.	.	.	.	.
Dyna-Gro Seed	F74FS23 BMR	FS	M	Y	.	11.4	.	.	.	.	.	.	.	.	.
	Trial Mean					14.8	.	.	.	.	.	.	.	.	.
	LSD P<0.05					3.0	.	.	.	.	.	.	.	.	.
	CV					11.7	.	.	.	.	.	.	.	.	.
	F Test					<0.0001	.	.	.	.	.	.	.	.	.

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

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

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

Appendix A

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

New Mexico 2018 Grain Corn Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Relative Maturity
Dyna-Gro Seed P.O. Box 38, 103 E. Mill Rd Artesia, NM 88210 Shawn Carter 318-282-9804	D58VC65	118
	D55VC45	115
	D57VC17	117
	D57VC51	117
	D54VC14	114
	D52VC63	112
	D49VC70	109
	D52VC91	112
	D54DC94	114
	D45SS65	105
	D41SS71	101
	D44VC36	104
	D50VC30	110
	D43VC81	103
D47SS29	107	
Golden Acres Genetics/LG Seeds 205 Old Hewitt Rd Waco, TX 76712 Chris Sheppard 254-761-9838	LG 66C32 STX	116
	ES 7667 VT2PRO	117
Golden Harvest Seeds 443 West County Rd Sutherland, NE 69165 John Flynn 308-386-8725	G11B63-3010A	111
	G13T43-3010	113
	G13Z50-3110	113
	G18D87-3111	118
	G95D32-3220	95
	G97N86-3110	97
	G00H12-3010	100
	G03C84-3120	103
	G05K08-3010A	105
G06Q68-3220	106	

New Mexico 2018 Forage Corn Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Relative Maturity
Blue River Organic Seed	62G22	110
2326 230th St.	66G25	112
Ames, IA 50014	70A47	114
Scott Ausborn 800-370-7979		
Dyna-Gro Seed	D52VC15	112
P.O. Box 38, 103 E. Mill Rd	D55SS45	115
Artesia, NM 88210	D55VC77	115
Shawn Carter	D57VC17	117
318-282-9804	D58RR70	118
	D58SS65	118
	D54DC94	114
Golden Acres Genetics/LG Seeds	ES 7667 VT2PRO	117
205 Old Hewitt Rd	LG 68C22 VT2PRO	118
Waco, TX 76712	LG 68C88 VT2PRO	118
Chris Sheppard 254-761-9838		
Golden Harvest Seeds	G14H66-3010A	114
443 West County Rd	G16K01-3111	116
Sutherland, NE 69165	G18D87-3111	118
John Flynn	G18H82-3111	118
308-386-8725	NK1860-3111	118
	G07B39-3111A	109
	G11B63-3010A	111
	G13Z50-3110	113
Masters Choice	MCT 6552	115
305 W. Vienna St	MCT 6653	116
Anna, IL 62906	MCT 6733	117
Kyle Vosburgh	EXP 672T	117
618-697-7031	EXP 621T	114
	EXP 671T	114

New Mexico 2018 Forage Corn Hybrid Performance Test, Con't.

Company/Brand Name	Hybrid/Variety Name	Relative Maturity
Wilbur-Ellis Company	CX841118-3110	118
2219 229 th Place	CX842118-3110	118
Ames, IA 50014	CX711118-3110	118
Aaron Peterson	CX618118-VT2PRIB	118
402-290-0373	CX801117 SS	117
	CX801115 DGVT2PRO	115
	CX851110 SS	110
	INT9684 VT2PRO	118
	INT6709 VT3PRO	118
	INT9678 VT2PRO	117
	INT STP6498R	114
	INT 6474 DGVT2PRIB	114

New Mexico 2018 Grain Sorghum Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Maturity Group*
Advanta Seeds	ADV XG602	ME
201 E John Carpenter Fwy #660	ADV XG629	E
Irving, TX 75062	ADV XG001	ME
Zach Eder	AG 1203	ME
979-332-5138	AG 1201	ME
Browning Seed, Inc.	Challenger BMX	M
3101 S. I-27	775 W	M
Plainview, TX 79072	Phoenix	ME
Rodney Smith	Blaze	M
806-293-5271		
Dyna-Gro Seed	M60GB88	ME
P.O. Box 38, 103 E. Mill Rd	M60GB31	ME
Artesia, NM 88210	M68GR41	M
Shawn Carter	GX17948	M
318-282-9804	M69GR88	M
	GX16833	MF
	GX17962	MF
	GX17968	MF
	M73GR55	MF
	M74GB17	MF
	GX17379	MF
Golden Acres Genetics	2620C	ME
205 Old Hewitt Rd	2730B	ME
Waco, TX 76712		
Chris Sheppard		
254-761-9838		

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

**New Mexico 2018 Forage Sorghum/SxS Hybrid Performance Test
(Single Cut)**

Company/Brand Name	Hybrid/Variety Name	Forage Type	Maturity Group*	Brown Midrib
Advanta Seeds	AF 7401	FS	ML	Y
201 John Carpenter Fwy #660	ADV XF372	FS	M	Y
Irving, TX 75062	AF 8301	FS	M	N
Zach Eder	ADV XF033	FS	M	N
979-332-5138	ADV S6504	SxS	PS	Y
American Hybrids	Val-4	FS	L	N
3101 S. I-27				
Plainview, TX 79072				
Rodney Smith				
806-293-5271				
Dyna-Gro Seed	705F	FS	ME	N
P.O. Box 38, 103 E. Mill Rd	Super Sile 30	FS	ME	N
Artesia, NM 88210	FX18878 BMR	FS	M	Y
Shawn Carter	F74FS23 BMR	FS	M	Y
318-282-9804	FX18811	FS	M	N
	FX18851 BMR	FS	MF	Y
	F76FS77 BMR	FS	MF	Y
	Super Sile 20	FS	MF	Y
	Dual Forage SCA	FS/G	MF	N
	GX16921	FS/G	MF	N
	Danny Boy BMR	SxS	PS	Y
	Danny Boy II BMR	SxS	PS	Y
	Fullgraze BMR	SxS	MF	Y
	FX18835SS	SxS	MF	N
	FX18843SS BMR	SxS	MF	Y
Mojo Seed Enterprises	Opal	FS	ML	N
P.O. Box 1716	EXP-715	FS	ML	N
Hereford, TX 79045	EXP-719	FS	ML	N
Jerry O'Rear				
806-445-6442				

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

**New Mexico 2018 Forage Sorghum/SxS Hybrid Performance Test (Single Cut),
Con't.**

Company/Brand Name	Hybrid/Variety Name	Forage Type	Maturity Group*	Brown Midrib
Sorghum Partners / Chromatin, Inc.	SPX56216	FS	L	Y
1301 E. 50th St	NK 300	FS	ME	N
Lubbock, TX 79404	SS 405	FS	L	N
Rick Kochenower	SP 4555	SxS	M	Y
405-206-8186	SP 2876	FS	L	Y
	SP 3808SB BMR	FS	ML	Y

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

New Mexico 2018 Forage Sorghum/SxS Hybrid Performance Test (Multi Cut)

Company/Brand Name	Hybrid/Variety Name	Forage Type	Maturity Group*	Brown Midrib
American Hybrids	Brighton	SxS	ML	N
3101 S. I-27	Lincoln	SxS	M	Y
Plainview, TX 79072	Navion	SxS	ML	Y
Rodney Smith				
806-293-5271				
Browning Seed, Inc.	Cadan 99B	SxS	ML	N
3101 S. I-27	Sweet Sioux BMR	SxS	M	Y
Plainview, TX 79072				
Rodney Smith				
806-293-5271				
Dyna-Gro Seed	Danny Boy BMR	SxS	PS	Y
P.O. Box 38, 103 E. Mill Rd	Danny Boy II BMR	SxS	PS	Y
Artesia, NM 88210	Fullgraze BMR	SxS	ML	Y
Shawn Carter	FX18835SS	SxS	ML	N
318-282-9804	FX18843SS BMR	SxS	ML	Y

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

Appendix B
Glossary of Terms

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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