New Mexico 2019 Corn and Sorghum Performance Tests

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

New Mexico
2019
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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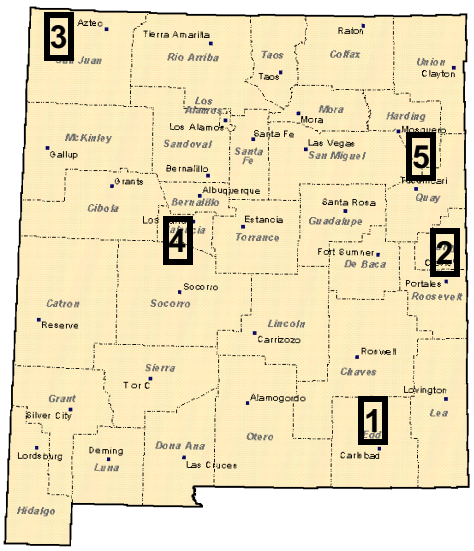
INTRODUCTION

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 2019 (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.

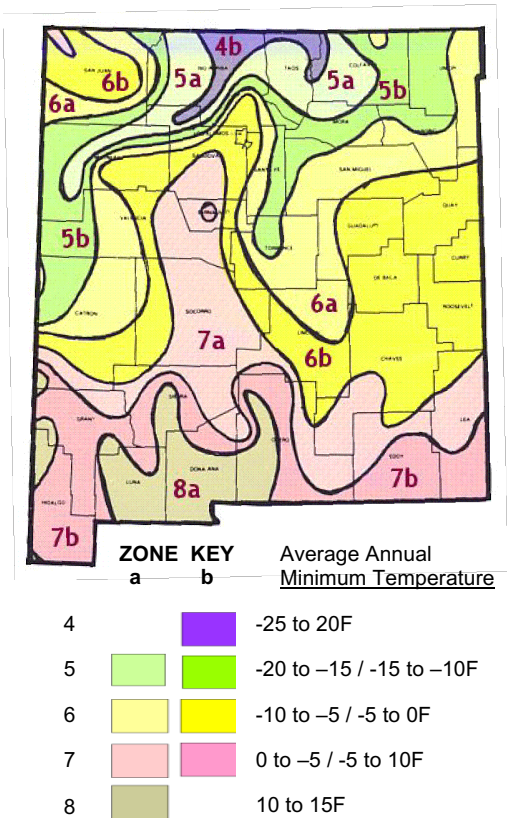


Table 1. Historical average monthly precipitation (inches) and temperatures (°F) for cooperating agricultural science centers.					
	Artesia	Clovis	Farmington	Los Lunas	Tucumcari
	Precipitation (inches)				
January	0.39	0.36	0.56	0.38	0.37
February	0.41	0.39	0.55	0.41	0.46
March	0.41	0.70	0.66	0.47	0.74
April	0.61	0.80	0.62	0.49	1.09
May	1.06	1.98	0.62	0.46	1.96
June	1.39	2.37	0.24	0.56	1.87
July	1.77	2.87	0.86	1.37	2.62
August	1.68	3.07	1.07	1.65	2.69
September	1.82	1.92	1.05	1.16	1.52
October	1.21	1.79	0.86	1.05	1.30
November	0.54	0.52	0.69	0.49	0.65
December	0.50	0.45	0.53	0.52	0.59
Total	11.63	17.11	8.31	8.95	15.91
	Average Temperature (°F)				
January	40.5	37.6	30.4	34.5	38.5
February	45.3	41.3	36.2	40.2	42.3
March	52.0	48.0	44.0	47.3	49.4
April	60.5	56.1	51.2	54.9	57.7
May	69.2	64.6	60.0	63.4	66.3
June	77.7	74.0	70.5	72.7	75.8
July	79.9	76.5	75.7	77.0	79.2
August	78.5	74.8	73.4	74.8	77.4
September	71.7	68.6	66.1	67.5	70.8
October	61.0	58.2	53.8	55.9	59.7
November	48.8	46.4	41.0	43.5	47.6
December	40.8	38.8	31.3	35.1	39.4
Average	60.4	57.0	52.8	55.7	58.8
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 2019 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 2020 Corn and Sorghum Performance Tests will be mailed to seed companies in February 2020. Additional 2020 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 2019 corn and sorghum variety tests are shown in Tables 2-14 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.

The forage sorghum results from tests conducted at the Artesia science center are not published in this report due to high CV values. To obtain the results from the sorghum tests at Artesia, contact:

Dr. Robert Flynn
NMSU Agricultural Science Center at Artesia
67 E. Four Dinkus Rd.
Artesia, NM 88210
575-748-1228
rflynn@nmsu.edu

Grain sorghum tests at Tucumcari were planted and emerged; however, due to irrigation supply problems and subsequent drought stress, crops were not harvestable in 2019.

Due to irrigation system problems, the forage sorghum-sorghum x sudangrass, multi-cut test at Tucumcari was harvested only once at the end of the season.

Table 2A. New Mexico 2019 Grain Corn Performance Test - Agricultural Science Center at Clovis

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

Test Description

Location:

County/Area:	Curry
Longitude:	-103.22
Latitude:	34.60
Elevation:	4435 ft.
Soil Name:	Olton
Soil Texture:	clay loam
Soil Depth:	>60 in.

Test Design:

Replications:	3
Plot Length:	20 ft.
Rows per Plot:	2
Row Spacing:	30 in.
Seeding Rate:	27,000 seed/a

Management Practices:

Previous Crop:	fallow
Planting Date:	22-May
Harvest Date:	1-Nov

Production Inputs

	Rate		Date
Fertilizer:			
Nitrogen	38	lb/ac	carryover
Nitrogen	78	lb/ac	pre plant
S	25	lb/ac	pre plant
Nitrogen	18	lb/ac	6-Feb
Phos	60	lb/ac	6-Feb
Chelated Zn	3	lb/ac	6-Feb
Nitrogen	90	lb/ac	24-May
Phos	3	lb/ac	24-May
Herbicides:			
Atrazine	1	pt/ac	pre plant
Balance Flexx	3	oz/ac	pre plant
LV 6	1	pt/ac	pre plant
Glyphosate	32	oz/ac	pre plant
Atrazine	1	pt/ac	24-May
Glyphosate	32	oz/ac	24-May
Verdict	10	oz/ac	24-May
DiFlexx Duo	32	oz/ac	1-Jul
Warrant	2	qt/ac	1-Jul
Insecticides:			
Onager	16	oz/ac	1-Jul
Prevathon	20	oz/ac	30-Jul
Oberon	8	oz/ac	30-Jul
Fungicides:			
Stratego Yield	5	oz/ac	30-Jul

Growing Conditions:

	Average Temp.	Precip.	Irrigation
	°F	in.	in.
January	38.5		
February	41.4		
March	45.7		
April	56.0		
May 22-31	63.2	0.95	1.40
June	72.7	2.09	3.20
July	78.0	4.45	5.30
August	78.5	3.15	4.40
September	74.0	0.06	1.70
October	58.5	7.53	
November	43.0		
December			

Seasonal Precipitation:	18.2 in.
Total Irrigation:	16.0 in.
Date of Last Spring Frost:	15-Apr
Date of First Fall Frost:	11-Oct
Frost Free Period:	178 days

Table 2B. New Mexico 2019 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	
Dyna-Gro Seed	D55VC80	270.5	13.3	61.4	120.3	48.4	31-Jul
Dyna-Gro Seed	D54VC14	265.6	13.3	62.2	122.7	57.0	29-Jul
Dyna-Gro Seed	D57VC17	264.1	14.0	61.7	106.0	43.3	30-Jul
Dyna-Gro Seed	D57VC51	262.9	14.8	61.8	112.3	51.2	30-Jul
Dyna-Gro Seed	CX18116	262.0	13.7	60.7	111.7	50.8	28-Jul
Dyna-Gro Seed	D58VC65	256.1	14.2	62.1	115.3	52.6	30-Jul
Dyna-Gro Seed	D53TC19	255.0	13.4	61.4	105.3	50.1	26-Jul
Dyna-Gro Seed	CX18413	252.1	13.5	60.8	120.0	49.1	28-Jul
LG Seeds	LG64C30TRC	249.5	13.8	62.0	109.0	48.8	27-Jul
LG Seeds	LG66C32VT2PRO	244.2	14.3	61.7	123.0	47.5	30-Jul
Dyna-Gro Seed	D52VC15	226.0	12.9	61.4	106.7	47.4	27-Jul
	Trial Mean	255.0	13.7	61.6	113.0	49.7	30-Jul
	LSD (P > 0.05)	NS	0.9	0.8	2.4	2.2	NS
	CV	9.1	3.7	1.8	1.2	2.6	1.2
	F Test	0.3664	0.0066	0.0100	<0.0001	<0.0001	0.2116

Table 3A. New Mexico 2019 Early Season Grain Corn Performance Test - Agricultural Science Center at Farmington

Investigators: Koffi Djaman (PI), Samuel Allen, Dallen Begay, Nathan Begay, Margaret West, F. Jason Thomas, Jonah Joe

Test Description

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.

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

Management Practices:

Previous Crop:	2018 haygrazer, 2017 winter barley, 2016 potatoes, 2015 corn
Planting Date:	17-May
Harvest Date:	6-Nov

Production Inputs

	Rate		Date
Fertilizer:			
Dry Nitrogen	51.6	lb/a	10-May
Nitrogen	19.7	lb/a	5-Jul
Nitrogen	39.4	lb/a	8-Jul
Nitrogen	39.4	lb/a	11-Jul
Nitrogen	39.4	lb/a	15-Jul
Nitrogen	39.4	lb/a	16-Jul
Nitrogen	39.4	lb/a	23-Jul
Nitrogen	39.4	lb/a	31-Jul
Total Nitrogen	308.0	lb/a	
Herbicides:			
Atrazine 4L	1	qt/a	16-Jun
Non-ionic surfactant	1.22	qt/a	16-Jun
Accent Q	0.7	oz/a	16-Jun

Growing Conditions:

	Average Temp.	Precip.	Approx. Irrigation
	°F	in.	in.
January			
February			
March			
April			
May	57.0	1.93	2.25
June	64.8	0.29	3.75
July	71.9	0.31	13.00
August	71.8	0.07	9.25
September	68.1	0.53	2.75
October	43.0	0.16	1.50
November			
December			

Seasonal Precipitation:	3.3 in.
Total Irrigation:	32.5 in.
Date of Last Spring Frost:	21-May
Date of First Fall Frost:	11-Oct
Frost Free Period:	143 days

Table 3B. New Mexico 2019 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	D51VC67	286.4	16.4	55.8	91	35	7-Aug	33977
Dyna-Gro Seed	D48VC76	275.0	15.7	55.9	96	38	7-Aug	33541
Dyna-Gro Seed	D43VC81	260.6	13.1	58.2	104	38	7-Aug	32997
Dyna-Gro Seed	D41SS71	223.2	13.3	58.3	93	38	7-Aug	33432
	Trial Mean	261.3	14.6	57.0	96	37	7-Aug	33487
	LSD P < 0.05	25.4	0.8	0.7	6.4	NS		NS
	CV	6.1	3.5	0.7	4.2	13.3		3.5
	F Test	0.0017	<0.0001	<0.0001	<0.0001	0.7388		0.7071

Table 4A. New Mexico 2019 Full Season Grain Corn Performance Test - Agricultural Science Center at Farmington

Investigators: Koffi Djaman (PI), Samuel Allen, Dallen Begay, Nathan Begay, Margaret West, F. Jason Thomas, Jonah Joe

Test Description

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.

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

Management Practices:

Previous Crop:	2018 haygrazer, 2017 winter barley, 2016 potatoes, 2015 corn
Planting Date:	17-May
Harvest Date:	6-Nov

Production Inputs

	Rate		Date
Fertilizer:			
Dry Nitrogen	51.6	lb/a	10-May
Nitrogen	19.7	lb/a	5-Jul
Nitrogen	39.4	lb/a	8-Jul
Nitrogen	39.4	lb/a	11-Jul
Nitrogen	39.4	lb/a	15-Jul
Nitrogen	39.4	lb/a	16-Jul
Nitrogen	39.4	lb/a	23-Jul
Nitrogen	39.4	lb/a	31-Jul
Total Nitrogen	308.0	lb/a	
Herbicides:			
Atrazine 4L	1	qt/a	16-Jun
Non-ionic surfactant	1.22	qt/a	16-Jun
Accent Q	0.7	oz/a	16-Jun

Growing Conditions:

	Average Temp.	Precip.	Approx. Irrigation
	°F	in.	in.
January			
February			
March			
April			
May	57.0	1.93	2.25
June	64.8	0.29	3.75
July	71.9	0.31	13.00
August	71.8	0.07	9.25
September	68.1	0.53	2.75
October	43.0	0.16	1.50
November			
December			

Seasonal Precipitation:	3.3 in.
Total Irrigation:	32.5 in.
Date of Last Spring Frost:	21-May
Date of First Fall Frost:	11-Oct
Frost Free Period:	143 days

Table 4B. New Mexico 2019 Full 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	D53TC19	255.9	18.9	53.7	97	40	7-Aug	32997
Dyna-Gro Seed	D57VC17	251.5	18.7	56.4	96	42	7-Aug	35284
Dyna-Gro Seed	D54VC14	240.4	18.5	56.9	95	35	7-Aug	33215
Dyna-Gro Seed	D54SS74	240.2	21.5	53.4	97	37	7-Aug	31254
Dyna-Gro Seed	D55VC80	235.5	17.8	55.9	98	43	7-Aug	34412
Dyna-Gro Seed	D52VC15	227.9	15.6	57.5	92	36	7-Aug	35719
Dyna-Gro Seed	D57VC51	227.8	24.2	51.7	101	40	7-Aug	32452
Dyna-Gro Seed	D53VC33	223.4	15.2	55.2	100	40	7-Aug	33432
Dyna-Gro Seed	D58VC65	212.6	20.6	55.3	92	34	7-Aug	31799
	Trial Mean	235.0	19.0	55.1	96	38	7-Aug	33396
	LSD P < 0.05	NS	1.6	3.1	NS	6		1948
	CV	13.3	5.8	3.8	6.7	9.9		4.0
	F Test	0.6340	<0.0001	0.0151	0.5374	0.0223		0.0009

Table 5A. New Mexico 2019 Grain Corn Peformance Test - Agricultural Science Center at Tucumcari

Investigators: L.M. Lauriault, G. Martinez, J. Box, L.J. Salas, J. Jennings, and S. Jennings

Test Description

Location:

County/Area:	Quay
Longitude:	-103.68
Latitude:	35.20
Elevation:	4086 ft.
Soil Name:	Redona
Soil Texture:	Fine sandy loam
Soil Depth:	>60 in.

Test Design:

Replications:	4
Plot Length:	20 ft.
Rows per Plot:	2
Row Spacing:	30 in.
Seeding Rate:	30,000 seeds/ac

Management Practices:

Previous Crop:	Fallow
Planting Date:	5/28/19
Harvest Date:	10/16/19

Production Inputs

	Rate	Date
Fertilizer:		
Nitrogen	100 lb/a	30-May
P2O5	lb/a	

Pesticides (herbicides and insecticides):

Sharpen	3.5 fl oz/ A	5-May
Roundup	2% Vol/Vol	9-Jul
Roundup PowerMax	2% Vol/Vol	29-May

Growing Conditions:

	Average Temp. °F	Precip. in.	Irrigation in.
January	39	0.14	0.00
February	42	0.03	0.00
March	48	0.23	0.00
April	58	0.93	0.00
May	63	1.87	1.00
June	75	1.23	3.25
July	82	2.02	6.05
August	82	1.33	4.21
September	77	1.69	0.00
October	55	1.39	0.00
November	46	0.98	0.00
December	42	0.61	0.00

Seasonal Precipitation	9.5 in.
Total Seasonal Irrigation	14.5 in.
Date of Last Spring Frost:	11-Apr
Date of First Fall Frost:	11-Oct
Frost Free Period:	183 days

Table 5B. New Mexico 2019 Grain Corn Performance Test - Agricultural Science Center at Tucumcari

Results

Brand/Company Name	Hybrid/Variety Name	CRM	Population	Grain Yield Adjusted to 15.5% Moisture	Moisture at Evaluation	Test wt.
		-----	Plants/ac	bu/ac	%	lb/bu
Dyna-GroSeed	D43VC81	103	23740	47	8.4	59.3
Dyna-GroSeed	D54SS74	114	24394	47	10.3	60.4
Dyna-GroSeed	D48VC76	108	24394	43	8.7	58.9
Dyna-GroSeed	D53TC19	113	21998	43	8.7	61.8
Dyna-GroSeed	D57VC17	117	24612	41	8.9	60.5
Dyna-GroSeed	D51VC67	110	26354	39	8.8	59.4
Dyna-GroSeed	D41SS71	101	23305	38	8.3	58.2
Dyna-GroSeed	D52VC15	112	22651	38	8.7	57.7
Dyna-GroSeed	D54VC14	114	25047	36	8.9	61.3
Dyna-GroSeed	D55VC80	115	24612	32	9.6	59.9
Dyna-GroSeed	D53VC33	113	23740	31	8.6	58.6
Dyna-GroSeed	D57VC51	117	26354	26	8.4	56.1
Dyna-GroSeed	D58VC65	118	25701	26	10.4	59.8
		Trial Mean	24377	37.4	9.0	59.4
		LSD P < 0.05	NS	NS	NS	3.0
		CV	9.4	32.5	11.6	3.5
		F Test	0.2619	0.2564	0.0891	0.0349

Table 6A. New Mexico 2019 Forage Corn Performance Test - Agricultural Science Center at Clovis

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

Test Description

Location:

County/Area:	Curry
Longitude:	-103.22
Latitude:	34.60
Elevation:	4435 ft.
Soil Name:	Olton
Soil Texture:	clay loam
Soil Depth:	>60 in.

Test Design:

Replications:	3
Plot Length:	20 ft.
Rows per Plot:	2
Row Spacing:	30 in.
Seeding Rate:	27,000 seed/a

Management Practices:

Previous Crop:	fallow
Planting Date:	22-May
Harvest Date:	5-Sep

Production Inputs

	Rate	Date
Fertilizer:		
Nitrogen	38 lb/ac	carryover
Nitrogen	78 lb/ac	pre plant
S	25 lb/ac	pre plant
Nitrogen	18 lb/ac	6-Feb
Phos	60 lb/ac	6-Feb
Chelated Zn	3 lb/ac	6-Feb
Nitrogen	90 lb/ac	24-May
Phos	3 lb/ac	24-May
Herbicides:		
Atrazine	1 pt/ac	pre plant
Balance Flexx	3 oz/ac	pre plant
LV 6	1 pt/ac	pre plant
Glyphosate	32 oz/ac	pre plant
Atrazine	1 pt/ac	24-May
Glyphosate	32 oz/ac	24-May
Verdict	10 oz/ac	24-May
DiFlexx Duo	32 oz/ac	1-Jul
Warrant	2 qt/ac	1-Jul
Insecticides:		
Onager	16 oz/ac	1-Jul
Prevathon	20 oz/ac	30-Jul
Oberon	8 oz/ac	30-Jul
Fungicides:		
Stratego Yield	5 oz/ac	30-Jul

Growing Conditions:

	Average Temp.	Precip.	Irrigation
	°F	in.	in.
January	38.5		
February	41.4		
March	45.7		
April	56.0		
May 27-31	63.2	0.95	1.60
June	72.7	2.09	2.00
July	78.0	4.45	5.75
August	78.5	3.15	5.00
September 1-5	74.0	0.06	0.80
October	58.5		
November			
December			

Seasonal Precipitation:	10.7 in.
Total Irrigation:	15.2 in.
Date of Last Spring Frost:	15-Apr
Date of First Fall Frost:	11-Oct
Frost Free Period:	178 days

Table 6B. New Mexico 2019 Forage Corn Performance Test - Agricultural Science Center at Clovis

Results

Brand/Company Name	Hybrid/Variety Name	Dry Forage	Green Forage	Moisture at Harvest	CP	NDF	NDFD 48hr	Starch	Ash	TDN	NE_l	Milk/ Ton	Milk/ Acre
		t/a	t/a	%	%	%	%	%	%	%	Mcal/lb	lb/t	lb/a
Dyna-Gro	D55VC80	7.7	24.6	68.5	8.9	46.2	65.0	27.1	4.9	67.2	0.692	3294	25589
Dyna-Gro	D58QC72	7.7	26.7	71.1	8.8	48.0	63.4	24.3	4.9	66.3	0.682	3219	24836
Wilbur-Ellis Integra	6709 VT3P	7.7	26.6	71.1	8.8	47.4	64.2	25.1	5.0	66.6	0.686	3250	24947
Blue River Organic Seed	74B75	7.6	26.8	71.5	8.7	43.4	67.8	31.1	5.4	67.6	0.697	3350	25593
LG Seeds	LG67C01VT2PRO	7.6	26.5	71.4	8.9	47.6	64.8	24.1	5.7	66.3	0.682	3232	24684
LG Seeds	LG5717VT2PRO	7.6	25.3	70.0	9.3	44.9	65.2	26.6	5.6	67.1	0.691	3287	24917
LG Seeds	LG66C28-3110	7.6	25.5	70.4	9.5	48.0	63.0	23.6	5.6	65.1	0.669	3132	23689
Masters Choice, Inc.	MCT 6552	7.5	25.7	70.8	9.2	43.6	64.9	30.0	4.8	67.5	0.696	3317	24825
Dyna-Gro	D58VC65	7.5	24.7	69.8	9.2	45.2	61.1	29.4	5.2	64.9	0.666	3097	23108
Wilbur-Ellis Integra	6720 VT2P	7.4	23.9	69.1	9.5	47.4	62.9	24.6	5.4	65.5	0.673	3159	23365
Masters Choice, Inc.	MCX 19940	7.3	25.7	71.8	9.0	46.5	63.3	24.7	5.3	66.0	0.068	3198	23229
Wilbur-Ellis Integra	6880 VT2P	7.3	24.4	70.1	8.7	45.3	63.3	28.1	4.7	66.8	0.688	3252	23557
LG Seeds	ES7698-3110	7.2	26.0	72.1	9.3	48.6	61.7	24.7	5.3	64.7	0.665	3093	22417
Blue River Organic Seed	70N16	7.2	24.6	70.7	8.3	44.8	66.4	29.0	4.9	67.8	0.699	3350	24231
Dyna-Gro	D57VC51	7.2	25.3	71.5	8.8	46.4	62.5	29.1	4.9	65.5	0.673	3153	22740
Dyna-Gro	D57VC17	7.2	23.1	69.0	9.6	46.3	62.6	25.3	5.8	65.3	0.671	3143	22597
Wilbur-Ellis Integra	CX801115 DGVT2P	7.1	24.2	70.7	9.1	44.4	64.1	28.5	5.3	66.6	0.685	3243	22962
Wilbur-Ellis Integra	9678 VT2P	7.0	24.5	71.4	9.2	45.7	60.9	28.3	4.8	65.6	0.674	3149	22076
Masters Choice, Inc.	MCT 6653	7.0	23.4	70.2	9.2	46.5	64.2	27.2	5.4	66.1	0.680	3211	22398
Dyna-Gro	D58RR70	7.0	25.3	72.4	9.0	49.0	63.6	23.0	5.6	65.4	0.672	3157	22004
Masters Choice, Inc.	MCT 6733	6.9	23.5	70.4	9.1	46.8	64.2	24.9	5.3	66.5	0.684	3238	22492
Masters Choice, Inc.	EXP 672T	6.7	22.2	69.8	8.3	45.7	64.4	28.3	5.3	66.4	0.683	3231	21698
Wilbur-Ellis Integra	6498 STP RR	6.0	17.6	65.8	9.4	46.3	63.6	25.4	5.7	66.0	0.678	3198	19221
	Trial Mean	7.3	24.6	70.4	9.0	46.3	63.8	26.6	5.24	66.2	0.681	3215	23355
	LSD (P > 0.05)	0.8	2.3	0.2	0.7	NS	2.3	3.7	NS	NS	NS	142	3013
	CV	6.7	5.7	1.9	4.6	4.0	3.8	8.5	9.2	1.6	1.750	3	7.8
	F Test	0.0001	0.0001	0.0004	0.0438	0.1344	0.0192	0.0368	0.0761	0.0736	0.0732	0.0587	<0.0001

Table 7A. New Mexico 2019 Forage Corn Performance Test - Agricultural Science Center at Farmington

Investigators: Koffi Djaman (PI), Samuel Allen, Dallen Begay, Nathan Begay, Margaret West, F. Jason Thomas, Jonah Joe

Test Description

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.

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

Management Practices:

Previous Crop:	2018 haygrazer, 2017 winter barley, 2016 potatoes, 2015 corn
Planting Date:	17-May
Harvest Date:	12-13-Sep

Production Inputs

	Rate		Date
Fertilizer:			
Dry Nitrogen	51.6	lb/a	10-May
Nitrogen	19.7	lb/a	5-Jul
Nitrogen	39.4	lb/a	8-Jul
Nitrogen	39.4	lb/a	11-Jul
Nitrogen	39.4	lb/a	15-Jul
Nitrogen	39.4	lb/a	16-Jul
Nitrogen	39.4	lb/a	23-Jul
Nitrogen	39.4	lb/a	31-Jul
Total Nitrogen	308.0	lb/a	
Herbicides:			
Atrazine 4L	1	qt/a	16-Jun
Non-ionic surfactant	1.22	qt/a	16-Jun
Accent Q	0.7	oz/a	16-Jun

Growing Conditions:

	Average Temp.	Precip.	Approx. Irrigation
	°F	in.	in.
January			
February			
March			
April			
May	57.0	1.93	2.25
June	64.8	0.29	3.75
July	71.9	0.31	13.00
August	71.8	0.07	9.25
September	68.1	0.53	2.75
October	43.0	0.16	1.50
November			
December			

Seasonal Precipitation:	3.3 in.
Total Irrigation:	32.5 in.
Date of Last Spring Frost:	21-May
Date of First Fall Frost:	11-Oct
Frost Free Period:	143 days

Table 7B. New Mexico 2019 Forage Corn Performance Test - Agricultural Science Center at Farmington

Results

Brand/Company Name	Hybrid/Variety Name	Dry Forage	Green Forage	Moisture at Harvest	Plant Height	Ear Height	CP	NDF	NDFD 48hr	Starch	Ash	TDN	Milk/ Ton	Milk/ Acre
		t/a	t/a	%	in	in	%	%	%	%	%	%	lb/t	lb/a
Dyna-Gro Seed	D57VC17	11.9	36.6	67.4	98	44	6.9	44.1	69.9	24.2	5.0	68.8	2980	35463
Blue River	66G25	11.7	35.9	67.3	110	41	7.1	45.4	68.3	22.9	5.6	68.0	2932	34459
Blue River	62G22	11.6	35.7	67.4	106	42	7.4	43.7	70.9	24.3	5.3	69.6	3035	35352
Dyna-Gro Seed	D55VC80	11.0	33.7	67.4	108	47	7.1	44.3	68.5	24.3	5.2	68.2	2946	32169
Dyna-Gro Seed	D58RR70	10.9	33.5	67.4	113	50	7.4	42.3	70.1	26.6	5.8	69.8	3068	33646
Dyna-Gro Seed	D57VC51	10.8	33.2	67.4	103	40	7.6	43.6	69.2	24.4	5.6	68.4	2961	32034
Dyna-Gro Seed	D58VC65	9.7	29.8	67.4	98	38	7.5	45.5	68.4	21.6	5.7	66.7	2825	27539
Dyna-Gro Seed	D58QC72	9.3	28.4	67.4	114	41	7.5	42.3	72.0	25.3	5.7	69.9	3057	28374
	Trial Mean	10.9	33.4	67.4	106	43	7.3	43.9	69.7	24.2	5.5	68.7	2975	32379
	LSD P < 0.05	NS	NS	NS	7.8	4.4	0.4	NS	NS	NS	0.5	NS	NS	NS
	CV	11.4	11.5	0.1	5.0	7.1	3.4	5.0	2.6	9.1	6.1	2.4	4.2	12.6
	F Test	0.0618	0.0628	0.2439	0.0014	0.0002	0.0038	0.3529	0.0757	0.1355	0.0292	0.1484	0.1827	0.0782

Table 8A. New Mexico 2019 Dryland Grain Sorghum Performance Test - Agricultural Science Center at Clovis

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

Test Description

Location:

County/Area:	Curry
Longitude:	-103.22
Latitude:	34.60
Elevation:	4435 ft.
Soil Name:	Olton
Soil Texture:	clay loam
Soil Depth:	>60 in.

Test Design:

Replications:	3
Plot Length:	20 ft.
Rows per Plot:	2
Row Spacing:	30 in.
Seeding Rate:	29000 seed/ac

Management Practices:

Previous Crop:	fallow
Planting Date:	14-Jun
Harvest Date:	11-Oct

Production Inputs

	Rate	Date
Fertilizer:		
Nitrogen	28 lb/ac	carryover
Nitrogen	50 lb/ac	16-Apr
Phos	20 lb/ac	16-Apr
S	8 lb/ac	16-Apr
Chelated Zn	3 qt/ac	16-Apr
Herbicides:		
Atrazine	1.5 pt/ac	at plant
Verdict	10 oz/ac	at plant
Glyphosate	32 oz/ac	at plant
Huskie	1 pt/ac	10-Jul
Atrazine	1 pt/ac	10-Jul
Warrant	1.5 qt/ac	10-Jul
Insecticides:		
Sivanto	10.5 oz/ac	30-Aug
Onager	20 oz/ac	30-Aug

Growing Conditions:

	Average Temp.	Precip.	Irrigation
	°F	in.	in.
January	38.5		
February	41.4		
March	45.7		
April	56.0		
May	63.2	1.69	
June	72.7	2.09	
July	78.0	4.45	
August	78.5	3.15	
September	74.0	0.10	
October 1-11	52.5	7.48	
November			
December			

Seasonal Precipitation:	19.0 in.
Total Irrigation:	0.0 in.

Date of Last Spring Frost:	15-Apr
Date of First Fall Frost:	11-Oct
Frost Free Period:	178 days

Table 8B. New Mexico 2019 Dryland Grain Sorghum Performance Test - Agricultural Science Center at Clovis

Results

Brand/Company Name	Hybrid/Variety Name	Grain Yield	Grain Yield	Moisture at Harvest	Test Weight	Plant Height	Head Exertion	Lodging	Heading Date
		bu/a	lb/a	%	lb/bu	in	in	%	
Dyna-Gro Seed	GX18395	140.7 ***	7881 ***	15.6 ***	60.7 *	22.0	2.7	0	7-Aug
Dyna-Gro Seed	GX19981	139.6 *	7818 *	14.3 *	61.9 *	24.7	2.0	0	11-Aug *
Dyna-Gro Seed	M69GB38	135.8 *	7608 *	14.6 *	62.0 *	27.3 *	8.3 *	0	10-Aug *
Dyna-Gro Seed	GX18991	134.4 *	7527 *	14.2 *	63.1 ***	26.3 *	4.0	0	10-Aug *
Dyna-Gro Seed	M57GB19	129.5 *	7254 *	11.8	59.2	22.0	6.0	0	4-Aug
Dyna-Gro Seed	M69GR88	129.1 *	7227 *	14.9 *	60.8 *	26.3 *	5.0	0	12-Aug ***
Golden Acres	2730B	125.1 *	7005 *	11.8	57.0	21.0	7.0 *	0	1-Aug
Advanta Seeds	ADV G2106	122.7 *	6869 *	13.1	56.2	20.3	4.7	0	5-Aug
Dyna-Gro Seed	M60GB31	121.5	6803	12.6	58.8	23.0	4.3	0	6-Aug
Golden Acres	2620C	121.2	6784	12.3	58.7	21.7	6.3	0	30-Jul
Advanta Seeds	AG 1203	118.7	6645	11.9	61.3 *	22.3	2.3	0	8-Aug *
Golden Acres	3020B	117.2	6561	13.4	61.3 *	25.7	5.3	0	8-Aug *
Dyna-Gro Seed	GX17973	117.0	6554	12.2	60.9 *	28.7 ***	6.3	0	6-Aug
Advanta Seeds	AG 1201	115.9	6489	12.0	58.2	20.3	2.7	0	2-Aug
Dyna-Gro Seed	M74GB17	115.6	6471	14.3 *	58.6	25.0	5.7	0	10-Aug *
Sorghum Partners	SP 68M57	114.4	6406	12.6	58.0	21.0	4.0	0	2-Aug
Sorghum Partners	SP 43M80	114.3	6399	13.2	57.0	18.7	3.3	0	27-Jul
Sorghum Partners	SP 31A15	113.7	6366	12.5	57.3	20.0	3.7	0	5-Aug
Dyna-Gro Seed	M62GB77	112.2	6284	13.4	59.7	22.3	6.0	0	6-Aug
Advanta Seeds	ADV XG9127	111.8	6259	14.6 *	59.0	24.3	8.7 ***	0	9-Aug *
Advanta Seeds	ADV XG629	106.9	5982	12.3	57.4	19.7	2.0	0	3-Aug
Advanta Seeds	ADV G1150	103.9	5816	12.3	54.7	20.7	7.0 *	0	8-Aug *
Sorghum Partners	SP 33S40	101.9	5706	11.5	59.46	21.7	6.0	0	1-Aug
	Trial Mean	120.1	6727	13.1	59.2	22.8	4.9	0.0	5-Aug
	LSD (P > 0.05)	19.0	1065	1.9	3.1	2.7	1.9	0.0	4.8
	CV	9.6	9.6	8.8	3.2	7.3	23.9	0.0	1.3
	F Test	0.0037	0.0036	0.0006	<0.0001	<0.0001	<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 2019 Irrigated Forage Sorghum Performance Test - Agricultural Science Center at Clovis

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

Test Description

Location:

County/Area:	Curry
Longitude:	-103.22
Latitude:	34.60
Elevation:	4435 ft.
Soil Name:	Olton
Soil Texture:	clay loam
Soil Depth:	>60 in.

Test Design:

Replications:	3
Plot Length:	20 ft.
Rows per Plot:	2
Row Spacing:	30 in.
Seeding Rate:	75,000 seed/a

Management Practices:

Previous Crop:	fallow
Planting Date:	29-May
Harvest Date:	17-Sep

Production Inputs

	Rate	Date
Fertilizer:		
Nitrogen	28 lb/ac	carryover
Nitrogen	120 lb/ac	pre-plant
Phos	30 lb/ac	pre-plant
S	20.5 lb/ac	pre-plant
Chelated Zn	3 qt/ac	pre-plant
Herbicides:		
Atrazine	2 pt/ac	at plant
Brawl	1.5 pt/ac	at plant
Glyphosate	32 oz/ac	at plant
Huskie	1 pt/ac	10-Jul
Atrazine	1 pt/ac	10-Jul
Warrant	1.5 qt/ac	10-Jul
Insecticides:		
Sivanto	10.5 oz/ac	30-Aug
Onager	20 oz/ac	30-Aug

Growing Conditions:

	Average Temp.	Precip.	Irrigation
	°F	in.	in.
January	38.5		
February	41.4		
March	45.7		
April	56.0		
May	63.2	1.69	
June	72.7	2.09	1.00
July	78.0	4.45	3.80
August	78.5	3.15	2.65
September 1-18	74.0	0.10	0.00
October			
November			
December			

Seasonal Precipitation:	11.5 in.
Total Irrigation:	7.5 in.
Date of Last Spring Frost:	15-Apr
Date of First Fall Frost:	11-Oct
Frost Free Period:	178 days

Table 9B. New Mexico 2019 Irrigated Forage Sorghum Performance Test - Agricultural Science Center at Clovis

Results

Brand/Company Name	Hybrid/Variety Name	Sorghum† Type	Maturity§ Group	Brown Midrib	Dry Forage	Green Forage	Moisture at Harvest	CP	NDF	NDFD 48hr	Ash	TDN	NE_l	Milk/ Ton	Milk/ Acre
					t/a	t/a	%	%	%	%	%	%	Mcal/lb	lb/t	lb/a
Warner Seeds, Inc.	WXF-1737	FS	M	N	8.9	28.7	68.9	7.9	51.3	64.0	6.7	63.7	0.653	3038	26992
Sorghum Partners	SP1880	FS	ML	N	8.7	30.6	71.7	7.0	61.4	64.1	6.3	61.7	0.631	2895	25070
Sorghum Partners	SS405	FS	M	N	8.5	24.9	66.0	7.4	55.7	62.1	6.6	62.5	0.640	2935	24990
Dyna-Gro Seed	Super Sile 20	FS	M	N	8.2	27.3	70.0	8.2	52.2	64.5	7.1	64.2	0.658	3077	25157
Dyna-Gro Seed	Top Ton	FS	ML	N	8.1	27.2	70.4	8.1	48.6	68.9	6.7	65.4	0.672	3195	25720
Dyna-Gro Seed	Fullgraze II BMR	SS	M	Y	7.8	26.6	70.5	7.7	57.0	70.4	7.1	63.3	0.649	3058	23898
Dyna-Gro Seed	Fullgraze II	SS	M	N	7.5	21.2	64.3	7.5	58.1	66.2	7.0	62.9	0.644	2996	22603
Sorghum Partners	SS506	FS	ML	N	7.5	26.4	71.6	7.3	61.0	62.0	6.7	60.5	0.618	2791	20905
Dyna-Gro Seed	Super Sile 30	FS	ME	N	7.3	23.1	68.5	8.7	49.6	64.7	7.2	64.5	0.662	3101	22481
Advanta Seeds	ADV XF033	FS	M	N	6.7	19.7	66.2	8.4	52.3	63.4	7.2	63.2	0.647	2995	19976
Warner Seeds, Inc.	WXF-1714	FS	M	N	6.7	20.0	66.7	8.6	50.7	62.6	6.9	62.9	0.645	2970	19823
Advanta Seeds	AF 8301	FS	M	N	6.6	16.7	60.7	8.3	51.5	63.4	7.3	63.3	0.648	3002	19692
Sorghum Partners	SP2774	FS	ME	Y	6.5	19.4	55.5	8.3	52.4	67.5	7.3	65.8	0.676	3213	20868
Advanta Seeds	AF 7201	FS	ME	Y	6.3	15.2	58.7	7.7	51.1	66.7	7.7	65.4	0.673	3184	20207
Dyna-Gro Seed	F75FS13	FS	M	N	6.2	16.8	63.1	8.6	49.5	63.5	8.4	64.0	0.657	3057	18914
Warner Seeds, Inc.	W7706-W	GS	E	N	5.9	16.3	63.6	8.3	47.7	68.3	7.1	66.1	0.680	3244	19234
Advanta Seeds	AF 7401	FS	ML	Y	5.7	20.5	72.4	9.2	50.7	73.2	8.5	66.5	0.684	3300	18682
Sorghum Partners	SP3904	FS	ML	Y	5.5	21.8	74.6	9.3	52.2	71.2	8.7	66.4	0.683	3285	18156
Dyna-Gro Seed	F74FS72 BMR	FS	M	Y	5.5	20.9	73.7	8.7	52.8	72.3	8.4	66.7	0.687	3318	18270
Warner Seeds, Inc.	W7051	GS	E	N	5.3	13.8	61.6	8.1	50.0	67.4	7.2	65.6	0.674	3201	17013
Advanta Seeds	ADV XF025	FS	ME	Y	5.0	12.4	59.5	7.8	52.6	67.9	8.0	65.7	0.676	3211	16104
Advanta Seeds	ADV F7232	FS	M	Y	4.9	18.2	73.0	9.5	52.2	70.1	8.4	65.1	0.666	3182	15722
Sorghum Partners	NK300	FS	ME	N	4.9	11.6	57.3	8.1	51.7	65.2	8.3	63.5	0.651	3030	14896
Mojo Seed Enterprises	x033	FS	M	N	4.6	15.0	69.6	8.8	52.3	66.2	7.1	65.1	0.668	3154	14415
	Trial Mean				6.6	20.6	67.0	8.2	52.7	66.4	7.4	64.3	0.660	3101	20407
	LSD (P< 0.05)				1.1	3.2	3.0	0.9	4.8	3.0	1.0	1.9	0.021	153	3718
	CV				10.4	9.5	2.7	7.0	5.6	2.7	7.9	1.8	2.0	3.0	11.1
	F Test				0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

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

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

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

Table 10A. New Mexico 2019 Dryland Forage Sorghum Performance Test - Agricultural Science Center at Clovis

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

Test Description

Location:

County/Area:	Curry
Longitude:	-103.22
Latitude:	34.60
Elevation:	4435 ft.
Soil Name:	Olton
Soil Texture:	clay loam
Soil Depth:	>60 in.

Test Design:

Replications:	3
Plot Length:	20 ft.
Rows per Plot:	2
Row Spacing:	30 in.
Seeding Rate:	75,000 seed/a

Management Practices:

Previous Crop:	fallow
Planting Date:	4-Jun
Harvest Date:	24-Sep

Production Inputs

	Rate	Date
Fertilizer:		
Nitrogen	28 lb/ac	carryover
Nitrogen	50 lb/ac	16-Apr
Phos	20 lb/ac	16-Apr
S	8 lb/ac	16-Apr
Chelated Zn	3 lb/ac	16-Apr
Herbicides:		
Atrazine	1.5 pt/ac	at plant
Verdict	10 oz/ac	at plant
Glyphosate	32 oz/ac	at plant
Huskie	1 pt/ac	10-Jul
Atrazine	1 pt/ac	10-Jul
Warrant	1.5 qt/ac	10-Jul
Insecticides:		
Sivanto	10.5 oz/ac	30-Aug
Onager	20 oz/ac	30-Aug

Growing Conditions:

	Average Temp.	Precip.	Irrigation
	°F	in.	in.
January	38.5		
February	41.4		
March	45.7		
April	56.0		
May	63.2	1.69	
June	72.7	2.09	
July	78.0	4.45	
August	78.5	3.15	
September 1-18	74.0	0.10	
October			
November			
December			

Seasonal Precipitation:	11.5 in.
Total Irrigation:	0.0 in.
Date of Last Spring Frost:	15-Apr
Date of First Fall Frost:	11-Oct
Frost Free Period:	178 days

Table 10B. New Mexico 2019 Dryland Forage Sorghum Performance Test - Agricultural Science Center at Clovis

Results

Brand/Company Name	Hybrid/Variety Name	Sorghum† Type	Maturity§ Group	Brown Midrib	Dry Forage	Green Forage	Moisture at Harvest	CP	NDF	NDFD 48hr	Ash	TDN	NE_l	Milk/ Ton	Milk/ Acre
					t/a	t/a	%	%	%	%	%	%	Mcal/lb	lb/t	lb/a
Sorghum Partners	SP1880	FS	ML	N	6.2	22.8	72.8	8.1	55.3	68.9	6.9	61.8	0.632	2937	18153
Sorghum Partners	SS405	FS	M	N	5.8	17.9	67.6	7.7	52.6	65.1	6.4	62.4	0.639	2953	17178
Sorghum Partners	SS506	FS	ML	N	5.5	20.3	73.1	8.3	52.8	69.2	6.8	61.1	0.624	2889	15795
Dyna-Gro Seed	Top Ton	FS	ML	N	4.9	17.7	72.3	7.7	50.0	70.7	6.8	61.3	0.627	2919	14308
Sorghum Partners	NK300	FS	ME	N	4.8	11.4	58.2	8.1	49.2	65.8	6.6	65.6	0.674	3186	15230
Dyna-Gro Seed	Fullgraze II BMR	SS	M	Y	4.6	16.8	72.7	8.3	52.2	73.7	8.0	61.4	0.627	2946	13639
Sorghum Partners	SP2774	FS	ME	Y	4.5	13.2	66.1	8.5	49.4	69.2	6.4	66.6	0.686	3290	14728
Dyna-Gro Seed	Super Sile 20	FS	M	N	4.4	14.5	69.3	8.2	48.6	66.0	6.3	63.0	0.645	3000	13326
Dyna-Gro Seed	Super Sile 30	FS	ME	N	4.3	14.1	69.1	8.2	50.2	67.0	7.1	62.9	0.645	3005	13058
Dyna-Gro Seed	Fullgraze II	SS	M	N	4.3	13.2	67.7	6.6	55.8	67.6	6.5	60.7	0.620	2853	12143
Dyna-Gro Seed	F74FS72 BMR	FS	M	Y	3.7	13.3	72.1	9.1	50.7	73.6	8.1	64.1	0.657	3137	11669
Sorghum Partners	SP3904	FS	ML	Y	3.7	13.1	72.1	9.0	49.7	73.9	7.8	63.3	0.648	3083	11307
Dyna-Gro Seed	F75FS13	FS	M	N	3.6	9.6	63.1	8.1	46.3	64.6	6.6	65.5	0.672	3168	11408
	Trial Mean				4.6	15.2	68.9	8.1	51.0	68.9	6.93	63.1	0.646	3028	13995
	LSD (P < 0.05)				0.7	1.8	2.2	0.70	3.4	3.05	0.62	1.63	0.018	132	2207
	CV				9.1	6.9	1.9	5.1	4.0	2.6	5.3	1.5	1.660	3	9.4
	F Test				0.0002	<0.0001	<0.0001	<0.0001	0.0003	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

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

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

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

Table 11A. New Mexico 2019 Irrigated Forage Sorghum Performance Test - Agricultural Science Center at Los Lunas

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

Test Description

Location:

County/Area:	Valencia
Longitude:	-106.45
Latitude:	34.46
Elevation:	4840 ft.
Soil Name:	Gila
Soil Texture:	loam
Soil Depth:	60 in.

Test Design:

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

Management Practices:

Previous Crop:	alfalfa/oats
Planting Date:	28-May
Harvest Date:	10-Oct

Production Inputs

	Rate	Date
Fertilizer:		
Nitrogen	102 lb/a	14-Jun
Nitrogen	40 lb/a	9-Jul
P_2O_5	lb/a	
K_2O	lb/a	
Fe	lb/a	
Herbicides:		
Unison	2 pts/ac	20-Jun
Insecticides:		
None		

Growing Conditions:

	Average Temp.	Precip.	Irrigation
	°F	in.	in.
January			
February			
March			
April			
May	60.2	0.40	5.30
June	71.7	0.53	5.00
July	79.2	1.13	9.77
August	77.6	0.44	9.24
September	70.8	0.53	9.15
October 1-1(	62.4	0.64	0.00
November			
December			

Seasonal Precipitation	3.67 in.
Total Irrigation	38.46 in.
Date of Last Spring Frost:	15-Apr
Date of First Fall Frost:	11-Oct
Frost Free Period:	179 days

Table 11B. New Mexico 2019 Irrigated Forage Sorghum Performance Test - Agricultural Science Center at Los Lunas

Results

Brand/Company Name	Hybrid/Variety Name	Sorghum† Type	Maturity§ Group	Brown Midrib	Dry Forage	65% Adj Green Forage	Moisture at Harvest	Plant Height
					t/a	t/a	%	in
Dyna-Gro Seed	Fullgraze II	SxS	M	N	9.8	27.9	67.4	153
Dyna-Gro Seed	Fullgraze II BMR	SxS	M	Y	9.4	27.0	68.9	138
Browning Seed, Inc.	Silage Master	FS	L	N	9.3	26.7	72.2	117
Dyna-Gro Seed	Top Ton	FS	ML	N	9.3	26.6	73.4	116
Dyna-Gro Seed	Super Sile 20	FS	M	N	8.9	25.3	74.0	110
Dyna-Gro Seed	Super Sile 30	FS	ME	N	8.8	25.0	74.8	109
Browning Seed, Inc.	Cadan PPS	SxS	PS	N	8.7	24.8	78.4	123
Dyna-Gro Seed	F75FS13	FS	M	N	5.3	15.0	69.6	87
Mojo Seed Enterprises	x033	FS	M	N	4.0	11.4	74.7	79
Dyna-Gro Seed	F74FS72 BMR	FS	M	Y	3.0	8.6	76.1	69
	Trial Mean				7.6	21.8	72.9	110
	LSD (P > 0.05)				1.7	4.7	4.7	8
	CV				9.6	9.6	3.7	4.0
	F Test				<0.0001	<0.0001	0.0042	<0.0001

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

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

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

Table 11C. New Mexico 2019 Irrigated Forage Sorghum Performance Test - Agricultural Science Center at Los Lunas

Results

Brand/Company Name	Hybrid/Variety Name	Sorghum† Type	Maturity§ Group	Brown Midrib	CP	NDF	NDFD 30hr	ADF	Ash	TDN	NE_l	Milk/ Ton	Milk/ Acre	Milk/ Irrigation
					%	%	%	%	%	%	Mcal/lb	lb/t	lb/a	lb/ac-inch
Dyna-Gro Seed	Fullgraze II	SxS	M	N	5.2	64.7	46.7	40.3	6.4	59.9	0.612	2764	26912	698
Dyna-Gro Seed	Fullgraze II BMR	SxS	M	Y	7.5	59.0	48.5	36.8	8.6	61.8	0.632	2941	27834	722
Browning Seed, Inc.	Silage Master	FS	L	N	7.3	54.1	46.1	34.5	8.1	62.3	0.638	2961	27745	720
Dyna-Gro Seed	Top Ton	FS	ML	N	5.8	61.2	42.5	39.7	9.0	60.9	0.622	2852	26586	690
Dyna-Gro Seed	Super Sile 20	FS	M	N	6.7	59.2	43.4	38.1	8.7	60.0	0.612	2784	24735	642
Dyna-Gro Seed	Super Sile 30	FS	ME	N	6.5	65.0	40.3	43.1	9.7	57.1	0.581	2549	22427	582
Browning Seed, Inc.	Cadan PPS	SxS	PS	N	7.2	61.8	40.3	39.6	9.7	61.2	0.626	2917	25413	659
Dyna-Gro Seed	F75FS13	FS	M	N	6.9	60.3	43.8	38.3	8.6	60.8	0.621	2849	13063	339
Mojo Seed Enterprises	x033	FS	M	N	7.3	63.8	37.2	41.1	9.8	60.3	0.616	2812	11212	291
Dyna-Gro Seed	F74FS72 BMR	FS	M	Y	7.4	61.8	37.6	39.3	11.2	64.8	0.665	3193	9596	249
Trial Mean					6.8	61.1	42.6	39.1	9.0	60.9	0.622	2862	21552	559
LSD (P > 0.05)					1.4	NS	5.3	NS	1.7	3.3	0.037	266	5747	NS
CV					10.3	8.3	7.3	9.5	10.7	3.1	3.4	5.4	10.5	10.5
F Test					0.0505	0.3392	0.0032	0.3521	0.0015	0.0214	0.0213	0.0133	<0.0001	0.7749

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

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

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

Table 12A. New Mexico 2019 Irrigated Forage Sorghum (Single-Cut) Performance Test - Agricultural Science Center at Tucumcari

Investigators: L.M. Lauriault, G. Martinez, J. Box, L.J. Salas, J. Jennings, and S. Jennings

Test Description

Location:

County/Area:	Quay
Longitude:	-103.68
Latitude:	35.20
Elevation:	4086 ft.
Soil Name:	Canez
Soil Texture:	Fine sandy loam
Soil Depth:	>60 in.

Test Design:

Replications:	4
Plot Length:	20 ft.
Rows per Plot:	2
Row Spacing:	30 in.
Seeding Rate:	80,000 seeds/ac

Management Practices:

Previous Crop:	Fallow
Planting Date:	5-Jun
Harvest Dates:	24-Sep

Production Inputs

	Rate		Date
Fertilizer:			
Nitrogen	lb/a		carryover
Nitrogen	lb/a		
P2O5	lb/a		
Nitrogen	lb/a		

Pesticides (herbicides and insecticides):

Growing Conditions:

	Average Temp.	Precip.	Irrigation
	°F	in.	in.
January	39	0.14	0
February	42	0.03	1.25
March	48	0.23	1.00
April	58	0.93	1.75
May	63	1.87	3.00
June	75	1.23	5.25
July	82	2.02	4.00
August	82	1.33	0
September	77	1.69	0
October	55	1.39	0
November	46	0.98	0
December	42	0.61	0

Seasonal Precipitation	6.3 in.
Total Irrigation	16.3 in.
Date of Last Spring Frost:	11-Apr
Date of First Fall Frost:	11-Oct
Frost Free Period:	183 days

Table 12B. New Mexico 2019 Irrigated Forage Sorghum (Single-Cut) Performance Test - Agricultural Science Center at Tucumcari

Results

Brand/Company Name	Hybrid/Variety Name	Sorghum† Type	Dry Forage	Green Forage	Moisture at Harvest	CP	NDF	NDFD 48hr	Starch	Ash	TDN	NE_l	Milk/ Ton	Milk/ Acre
			t/a	t/a	%	%	%	%	%	%	%	Mcal/lb	lb/t	lb/a
Advanta Seeds	AF 8301	FS	3.1	9.6	32.4	3.8	67.1	55.3	4.7	2.1	63.0	0.647	2363	7392
Dyna-Gro Seed	Fullgraze II BMR	FS	2.6	9.4	27.6	4.5	69.1	58.8	3.9	2.6	61.9	0.635	2639	6817
Advanta Seeds	ADV XF033	FS	2.3	7.3	30.4	4.3	64.9	56.8	4.6	2.9	64.5	0.663	2360	5412
Dyna-Gro Seed	F74FS72 BMR	FS	2.3	7.5	29.9	5.6	63.3	64.3	4.4	2.6	66.1	0.681	2588	5893
Dyna-Gro Seed	Top Ton	FS	2.3	8.4	27.8	3.5	67.3	59.3	3.5	3.4	61.7	0.633	2455	5757
Dyna-Gro Seed	Fullgraze II	FS	2.2	6.8	30.3	4.3	65.9	56.0	5.3	1.9	64.9	0.667	2432	5194
Dyna-Gro Seed	Super Sile 30	FS	2.2	7.2	30.4	5.0	65.4	56.8	4.7	3.1	64.7	0.667	2461	5451
Advanta Seeds	AF 7201	FS	1.9	5.6	34.3	4.9	64.1	62.5	6.1	3.0	64.7	0.666	2672	5149
Advanta Seeds	ADV F7232	FS	1.8	5.7	30.9	4.5	65.9	61.0	3.9	3.5	62.6	0.643	2589	4703
Dyna-Gro Seed	Super Sile 20	FS	1.8	5.6	30.5	4.0	67.1	57.0	4.3	2.8	62.8	0.644	2460	4380
Advanta Seeds	ADV XF025	FS	1.7	4.9	34.7	4.3	66.6	60.3	6.5	3.4	63.0	0.648	2713	4693
Advanta Seeds	AF 7401	FS	1.7	6.3	26.5	5.7	63.1	63.0	3.9	3.8	65.4	0.674	2568	4356
Dyna-Gro Seed	F75FS13	FS	1.6	4.7	33.2	2.8	66.8	55.8	6.7	3.2	62.2	0.638	2448	3857
Mojo Seed Enterprises	x033	FS	1.2	3.8	31.1	4.2	67.6	57.3	4.4	2.2	63.8	0.656	2502	3017
	Trial Mean		2.0	6.6	30.7	4.4	66.0	58.8	4.8	2.9	63.7	0.654	2518	5148
	LSD P < 0.05		NS	3.5	3.4	1.0	3.1	2.7	1.3	1.0	2.3	0.026	113	NS
	CV		35.6	36.6	7.8	15.4	3.3	3.2	19.3	25.4	2.5	2.7	3.1	34.7
	F Test		0.0804	0.0426	0.0004	0.0001	0.0137	0.0001	0.0001	0.0145	0.0043	0.0047	0.0001	0.1219

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

Table 13A. New Mexico 2019 Irrigated Forage Sorghum-SxS (Multi-Cut) Performance Test - Agricultural Science Center at Tucumcari

Investigators: L.M. Lauriault, G. Martinez, J. Box, L.J. Salas, J. Jennings, and S. Jennings

Test Description

Location:

County/Area:	Quay
Longitude:	-103.68
Latitude:	35.20
Elevation:	4086 ft.
Soil Name:	Canez
Soil Texture:	Fine sandy loam
Soil Depth:	>60 in.

Test Design:

Replications:	4
Plot Length:	20 ft.
Rows per Plot:	8
Row Spacing:	6 in.
Seeding Rate:	25 lb/ac

Notes:

Due to irrigation system problems during summer, plots were harvested only once at the end of the season.

Management Practices:

Previous Crop:	Small grain forage
Planting Date:	5-Jun
Harvest Dates:	23-Oct

Production Inputs

	Rate	Date
Fertilizer:		
Nitrogen	lb/a	
P2O5	lb/a	

Pesticides (herbicides and insecticides):

Growing Conditions:

	Average Temp. °F	Precip. in.	Irrigation in.
January	39	0.14	0
February	42	0.03	1.25
March	48	0.23	1.00
April	58	0.93	1.75
May	63	1.87	3.00
June	75	1.23	5.25
July	82	2.02	4.00
August	82	1.33	0
September	77	1.69	0
October	55	1.39	0
November	46	0.98	0
December	42	0.61	0

Seasonal Precipitation	7.7 in.
Total Irrigation	16.3 in.
Date of Last Spring Frost:	11-Apr
Date of First Fall Frost:	11-Oct
Frost Free Period:	183 days

Table 13B. New Mexico 2019 Irrigated Forage Sorghum-SxS (Multi-Cut) Performance Test - Agricultural Science Center at Tucumcari

Results

Brand/Company Name	Hybrid/Variety Name	Sorghum† Type	Dry Forage††	Green Forage	Moisture at Harvest	CP	NDF	NDFD 48hr	Starch	Ash	TDN	NE_i	Milk/ Ton	Milk/ Acre
			t/a	t/a	%	%	%	%	%	%	%	Mcal/lb	lb/t	lb/a
Browning Seed, Inc.	Cadan 99B WMR	SxS	2.9	6.5	44.1	3.0	74.5	52.0	3.8	4.1	56.2	0.571	2349	6720
Browning Seed, Inc.	Wondergreen SX 66	SxS	2.9	6.1	47.7	3.2	79.1	46.0	3.1	4.6	52.3	0.527	1973	5752
Dyna-Gro Seed	Fullgraze II	SxS	2.8	7.6	36.5	2.2	70.6	57.0	3.7	2.6	59.7	0.611	2395	6646
Dyna-Gro Seed	First Graze	SxS	2.7	6.3	43.1	2.1	79.0	49.5	2.7	4.3	51.5	0.519	2158	5848
Dyna-Gro Seed	F75FS13	FS	2.6	7.1	36.9	2.2	67.2	57.5	5.3	3.8	59.8	0.611	2369	6204
Dyna-Gro Seed	Super Sweet 10	SxS	2.6	6.5	39.7	2.1	78.8	48.3	3.0	3.9	52.4	0.529	2171	5651
Dyna-Gro Seed	Danny Boy II BMR	SxS	2.3	6.9	33.5	3.4	69.5	63.5	2.7	4.1	59.9	0.612	2593	6003
Dyna-Gro Seed	Fullgraze II BMR	SxS	2.3	7.7	30.3	2.4	71.6	62.3	2.9	3.6	58.8	0.600	2620	6099
Browning Seed, Inc.	Cadan PPS	SxS	2.2	6.4	34.8	3.6	73.0	60.3	1.8	5.8	56.9	0.579	2741	6090
Dyna-Gro Seed	Top Ton	FS	2.2	7.2	30.2	3.0	67.8	61.0	2.9	4.4	60.5	0.619	2429	5237
	Trial Mean		2.6	6.8	37.7	2.7	73.1	55.7	3.2	4.1	56.8	0.578	2380	6025
	LSD P < 0.05		0.5	0.7	7.4	1.0	4.0	3.0	1.1	0.9	3.4	0.037	195	NS
	CV		13.8	6.7	13.5	25.5	3.8	3.8	24.6	14.5	4.1	4.5	5.6	14.1
	F Test		0.0384	0.0003	0.0003	0.0162	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.3996

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

†† Due to irrigation system problems during summer, plots were harvested only once at the end of the season.

Table 14A. New Mexico 2019 Forage Corn Performance Test - Agricultural Science Center at Artesia

Investigators: Robert Flynn, Ruben Pacheco, Martin Lopez

Test Description

Location:

County/Area:	Eddy
Longitude:	-104.23
Latitude:	32.45
Elevation:	3360 ft.
Soil Name:	Reagan
Soil Texture:	loam
Soil Depth:	0-24 in.

Test Design:

Replications:	3
Plot Length:	20 ft.
Rows per Plot:	2
Row Spacing:	30 in.
Seeding Rate:	27000 seed/a

Management Practices:

Previous Crop:	Sorghum
Planting Date:	11-Jun
Harvest Date:	10-Oct

Production Inputs

	Rate	Date
Fertilizer:		
Nitrogen	66 lb/a	carryover
Nitrogen	21 lb/a	15-Jul
Phosphorus	100 lb/a	15-Jul
Nitrogen	273 lb/a	16-Jul

Growing Conditions:

	Average Temp.	Precip.	Irrigation
	°F	in.	in.
January	41.1	0.13	
February	46.9	0.00	
March	51.3	0.31	
April	61.4	0.44	
May	68.4	0.33	1.40
June	77.2	2.00	3.20
July	82.7	1.12	5.30
August	84.8	0.56	4.40
September	77.4	1.69	
October	58.3	3.72	
November	47.7	0.41	
December	44.0	0.00	

Seasonal Precipitation:	6.5 in.
Total Irrigation:	14.3 in.
Date of Last Spring Frost:	29-Apr
Date of First Fall Frost:	31-Oct
Frost Free Period:	185 days

Table 14B. New Mexico 2019 Forage Corn Performance Test - Agricultural Science Center at Artesia

Results

Brand/Company Name	Hybrid/Variety Name	Dry Forage	Green Forage	Moisture at Harvest	CP	NDF	NDFD 48hr	Starch	Ash	Milk/ Ton	Milk/ Acre
		t/a	t/a	%	%	%	%	%	%	lb/t	lb/a
Dyna-Gro Seed	D58RR70	7.0	19.6	64.3	7.9	41.8	62.0	23.4	4.5	2815	19842
Dyna-Gro Seed	D55VC80	6.8	17.5	61.3	7.8	37.4	63.0	31.8	3.1	3116	21012
Dyna-Gro Seed	D57VC51	6.7	17.6	61.4	7.6	37.4	60.3	33.5	2.9	3168	21321
Dyna-Gro Seed	D58QC72	6.5	18.7	65.3	8.0	43.9	64.0	23.0	4.1	2989	19314
Blue River Organic Seed	70N16	6.4	17.5	63.3	7.6	36.7	63.3	31.1	3.5	3110	19889
Blue River Organic Seed	74B75	5.9	15.7	62.5	7.2	36.4	65.3	33.3	3.5	3180	18619
Dyna-Gro Seed	D57VC17	5.9	16.7	64.4	7.8	41.3	59.7	26.3	3.6	2937	17269
LG Seeds	ES7698_3110	5.7	16.7	66.4	8.1	40.3	62.3	25.9	4.4	3042	17542
LG Seeds	LG67C01 VT2PRO	5.7	15.6	63.1	7.9	39.0	63.0	30.7	3.3	3208	18374
LG Seeds	LG66C28-3110	5.3	15.1	65.1	8.3	39.8	60.3	27.5	4.0	3107	16647
Dyna-Gro Seed	D58VC65	4.9	15.1	67.5	7.7	44.4	63.0	22.6	3.8	2929	14250
LG Seeds	LG5717 VT2PRO	4.8	13.2	63.7	7.8	41.4	63.0	26.9	3.4	3058	14669
	Trial Mean	6.0	16.6	64.0	7.8	40.0	62.4	28.0	3.7	3055	18229
	LSD P < 0.05	NS	NS	NS	NS	NS	3.1	NS	NS	NS	NS
	CV	15.9	15.4	4.7	8.0	12.7	2.9	22.4	23.4	8.6	18.4
	F Test	0.1065	0.2359	0.3719	0.8215	0.5999	0.0307	0.3424	0.4519	0.7994	0.2553

Appendix A

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

New Mexico 2019 Grain Corn Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Relative Maturity
Dyna-Gro Seed	D52VC15	112
P.O. Box 38, 103 E. Mill Rd	D53TC19	113
Artesia, NM 88210	D53VC33	113
Shawn Carter	D54SS74	114
318-282-9804	D54VC14	114
	D55VC80	115
	D57VC17	117
	D57VC51	117
	D58VC65	118
	D41SS71	101
	D43VC81	103
	D48VC76	108
	D51VC67	110
LG Seeds	LG66C32 VT2 PRO	116
205 Old Hewitt Rd	LG64C30 TRC	114
Waco, TX 76712		
Chris Sheppard		
254-313-8720		

New Mexico 2019 Forage Corn Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Relative Maturity
Blue River Organic Seed	74B75	116
2326 230th St.	70N16	114
Ames, IA 50014	62G22	110
Ruth McCabe	66G25	112
515-239-5925		
Dyna-Gro Seed	D55VC80	115
P.O. Box 38, 103 E. Mill Rd	D57VC17	117
Artesia, NM 88210	D57VC51	117
Shawn Carter	D58QC72	118
318-282-9804	D58VC65	118
	D58RR70	118
LG Seeds	LG67C01 VT2PRO	117
205 Old Hewitt Rd	ES7698-3110	118
Waco, TX 76712	LG5717 VT2PRO	117
Chris Sheppard	LG66C28-3110	116
254-313-8720		
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	MCX 19940	117
Wilbur-Ellis Integra Seed	6880 VT2P	118
2219 229th Place	6720 VT2P	117
Ames, IA 50014	CX801115 DGVT2P	115
Aaron Peterson	6709 VT3P	117
402-290-0373	9678 VT2P	117
	6498 STP RR	114

New Mexico 2019 Grain Sorghum Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Maturity Group*
Advanta Seeds	AG 1201	ME
8600 Freeport Pkwy, Suite 220	ADV G1150	ME
Irving, TX 75063	ADV G2106	M
Zachary Eder	ADV XG629	ME
979-332-5138	ADV XG9127	ME
	AG 1203	ME
Golden Acres Genetics	3020B	M
205 Old Hewitt Rd	2620C	ME
Waco, TX 76712	2730B	ME
Chris Sheppard		
254-313-8720		
Dyna-Gro Seed	M57GB19	E
P.O. Box 38, 103 E. Mill Rd	M60GB31	ME
Artesia, NM 88210	M62GB77	ME
Shawn Carter	M69GB38	M
318-282-9804	M69GR88	M
	GX17973	M
	GX18395	M
	GX18991	M
	GX19981	ML
	M74GB17	ML
Sorghum Partners	SP 31A15	ME
1309 E. 50th St	SP 33S40	ME
Lubbock, TX 79404	SP 43M80	ME
Scott Staggenborg	SP 68M57	M
785-313-3115		

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

New Mexico 2019 Forage Sorghum/SxS Hybrid Performance Test (Single Cut)

Company/Brand Name	Hybrid/Variety Name	Forage Type	Maturity Group*	Brown Midrib
Advanta Seeds	AF 7201	FS	ME	Y
8600 Freeport Pkwy, Suite 220	ADV F7232	FS	M	Y
Irving, TX 75063	AF 8301	FS	M	N
Zachary Eder	ADV XF025	FS	ME	Y
979-332-5138	ADV XF033	FS	M	N
	AF 7401	FS	ML	Y
Browning Seed, Inc.	Silage Master	FS	L	N
3101 S. I-27	Cadan PPS	SxS	PS	N
Plainview, TX 79072				
John Browning				
806-293-5271				
Dyna-Gro Seed	Super Sile 30	FS	ME	N
P.O. Box 38, 103 E. Mill Rd	F75FS13	FS	M	N
Artesia, NM 88210	F74FS72 BMR	FS	M	Y
Shawn Carter	Super Sile 20	FS	M	N
318-282-9804	Top Ton	FS	ML	N
	Fullgraze II	SS	M	N
	Fullgraze II BMR	SS	M	Y
Mojo Seed Enterprises	x033	FS	M	N
P.O. Box 1716				
Hereford, TX 79045				
Jerry O'Rear				
806-445-6442				

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

New Mexico 2019 Forage Sorghum/SxS Hybrid Performance Test (Single Cut), Con't.

Company/Brand Name	Hybrid/Variety Name	Forage Type	Maturity Group*	Brown Midrib
Sorghum Partners	NK300	FS	ME	N
1309 E. 50th St	SP2774	FS	ME	Y
Lubbock, TX 79404	SS405	FS	M	N
Scott Staggenborg	SP3904	FS	ML	Y
785-313-3115	SP1880	FS	ML	N
	SS506	FS	ML	N
Warner Seeds, Inc.	W7051	GS	E	N
120 S. Lawton	W7706-W	GS	E	N
Hereford, TX 79045	WXP-1714	FS	M	N
Chad Krueger	WXP-1737	FS	M	N
806-364-4470				

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

New Mexico 2019 Forage Sorghum/SxS Hybrid Performance Test (Multi Cut)

Company/Brand Name	Hybrid/Variety Name	Forage Type	Maturity Group*	Brown Midrib
Browning Seed, Inc.	Wondergreen SX 66	SxS	E	N
3101 S. I-27	Tridan II	SxS	ME	N
Plainview, TX 79072	Cadan 99B WMR	SxS	ME	N
John Browning	Cadan PPS	SxS	PS	N
806-293-5271	Sweet Sioux BMR VI	SxS	ME	Y
	Sweet Sioux WMR	SxS	M	N
	Bundle King	FS	M	N
Dyna-Gro Seed	First Graze	SS	ME	N
P.O. Box 38, 103 E. Mill Rd	F75FS13	FS	M	N
Artesia, NM 88210	Super Sweet 10	SS	ME	N
Shawn Carter	Danny Boy II BMR	SS	PS	Y
318-282-9804	Fullgraze II	SS	M	N
	Fullgraze II BMR	SS	ML	Y
	Top Ton	FS	L	N
Sorghum Partners	SP4105 BMR	SxS		Y
1309 E. 50th St	SP4555 BMR	SxS		Y
Lubbock, TX 79404	Sordan 79	SxS		N
Scott Staggenborg	Sordan Headless	SxS		N
785-313-3115	SP7106 BMR	Sud x Sud		Y

*E=early, ME=medium early, ML=meduim 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, *S*tarch 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 Removal = dry forage (t/a) x 2000 x 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.

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