New Mexico
2009 Corn and Sorghum
Performance Tests

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

New Mexico
2009
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
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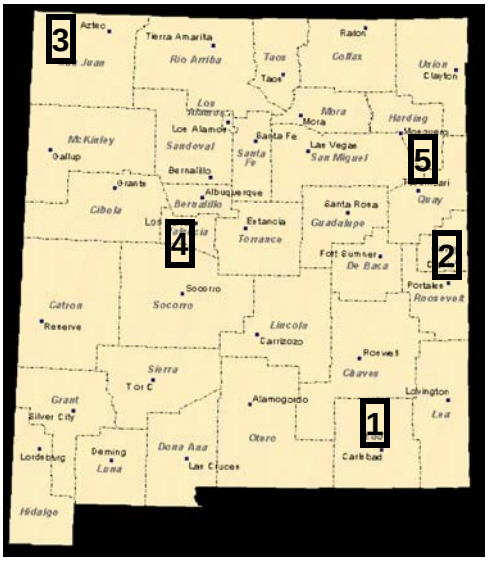
New Mexico 2009 Corn and Sorghum Performance Tests

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, Los Lunas and Tucumcari, New Mexico in 2009 (Figure 1). This report contains information from all Agricultural Science Center corn and sorghum tests.

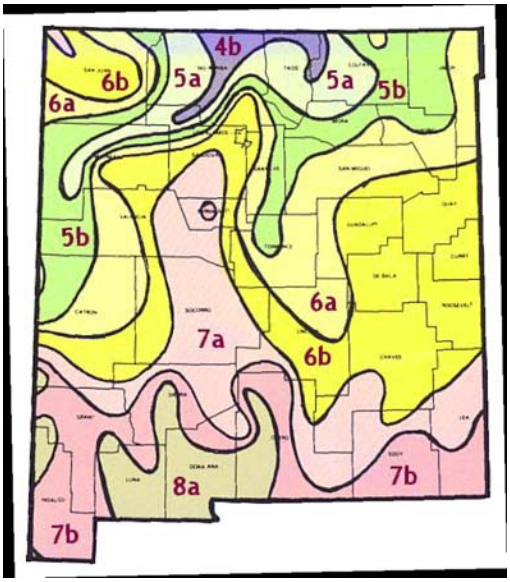
The New Mexico corn and sorghum performance testing program is part of an ongoing program to provide farmers, Extension workers and seed industry personnel with reliable, unbiased, information that will allow a valid comparison of corn and sorghum varieties/hybrids at various locations throughout the 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.



ZONE a	KEY b	Average Annual Minimum Temperature
4		-25 to 20F
5		-20 to –15 / -15 to –10F
6		-10 to –5 / -5 to 0F
7		0 to –5 / -5 to 10F
8		10 to 15F

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

	Artesia	Clovis	Farmington	Los Lunas	Tucumcari
	Precipitation (inches)				
January	0.38	0.35	0.51	0.36	0.37
February	0.42	0.38	0.57	0.42	0.46
March	0.44	0.73	0.73	0.52	0.76
April	0.63	0.82	0.65	0.46	1.12
May	1.22	1.94	0.57	0.48	2.00
June	1.42	2.41	0.22	0.63	1.90
July	1.75	2.84	0.87	1.27	2.64
August	1.70	3.00	1.08	1.72	2.72
September	1.82	1.88	1.06	1.16	1.54
October	1.18	1.67	0.91	1.06	1.30
November	0.54	0.54	0.76	0.48	0.68
December	0.49	0.49	0.48	0.51	0.57
Total	11.98	17.04	8.43	9.08	16.04
	Average Temperature (°F)				
January	40.5	37.9	30.7	34.6	38.3
February	45.1	41.6	36.3	40.2	42.1
March	51.9	47.8	43.7	47.0	49.0
April	60.3	56.1	51.0	54.6	57.4
May	69.4	64.9	60.4	63.4	66.2
June	77.6	73.6	70.0	72.1	75.5
July	79.8	76.4	75.6	76.7	79.0
August	78.3	74.7	73.1	74.6	77.3
September	71.3	68.5	65.7	67.2	70.5
October	60.8	58.4	53.7	55.8	59.5
November	48.9	46.4	40.8	43.6	47.4
December	40.8	39.0	31.2	35.0	39.1
Average	60.4	57.1	52.7	55.4	58.4

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 fees paid by 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 2009 fee-test program and relevant contact information are presented in Appendix A. Additional company names and contacts may be added to the list of prospective companies by contacting the Agricultural Science Center at Clovis, 2346 State Road 288, Clovis, NM 88101, (575) 985-2292, clovis@nmsu.edu. Entry forms for the 2010 Corn and Sorghum Performance Tests will mailed to seed companies in February 2010. Additional 2010 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 (designated with an 'A' suffix) that immediately precede the summary tables of results for the tests (designated with a 'B' or 'C' suffix). The 'Test Description' tables contain information on location, test design, management practices and growing conditions.

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 variability (CV) and F test values. All LSD's are reported at the 95% probability level. For the LSD value to be considered significant, the F test value in that same column must be less than 0.05. If the F test value is greater than 0.05, the LSD is non-significant at the 95% probability level. 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, uniform data. 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 forage yields reported for the forage tests are in tons per acre. Moisture at harvest was calculated from a representative sample (approximately 1 lb) from harvested plots. Samples from variety tests at the Agricultural Science Centers were dried in a forced air oven (150°F) to determine moisture content. Moisture content determinations at Farmington were derived from air-dried samples. Sub-samples of the dried material from all locations were submitted to the University of Wisconsin Soil and Forage Analysis Laboratory, Marshfield, WI, 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 2009 corn and sorghum hybrid/variety tests are shown in Tables 2 through 20 (designated with ‘B’ or ‘C’ suffixes). Within tables, hybrids and varieties are ranked according to grain yield or total dry forage yield. A glossary of terms used in the tables is presented in Appendix B.

Grain Corn

Entries for grain corn tests were accepted by the Agricultural Science Centers at Clovis, Farmington and Los Lunas.

The Clovis grain corn test contained 14 entries. Mean grain yield was 240 bu/ac, and significant yield differences among varieties were observed (Tables 2A-B).

Two grain corn tests were conducted at Farmington. The early season grain corn test contained 9 entries. Mean grain yield was 134 bu/ac, and yields were different (Tables 3A-B). Farmington’s full-season grain corn test contained 7 entries. Mean grain yield was 181 bu/ac, and yield differences among hybrids were non-significant (Tables 4A-B).

The grain corn test at Los Lunas contained 4 hybrids, with a mean grain yield of 262 bu/ac (Tables 5A-B). There were no statistical yield differences for grain corn entries at Los Lunas.

Grain Sorghum

Grain sorghum tests were conducted at the Clovis and Los Lunas science centers in 2009. The Clovis site contained dryland and limited irrigation trials. It should be noted that the dryland test at Clovis was irrigated once after planting in order to aid in establishment. The researchers recognize that this is not a true ‘dryland’ representation, but also recognize that no data would have been collected if the test did not establish due to drought after planting. A one-time irrigation after planting was deemed more logical than a complete crop disaster that yielded no information. Several entries included in the Clovis dryland test were part of a larger, regional testing program conducted by Texas A&M University. Although yield results are reported, company contact information and variety characteristics of these entries are not included in this report.

At Clovis, 6 grain sorghum varieties were entered into the limited irrigation test. Mean yield was 184 bu/ac (10,286 lb/ac) for the trial under limited irrigation (<10 in.; Tables 6A-B). The dryland grain sorghum test contained 40 entries; mean test yield was 133 bu/ac (7,466 lb/ac), and yields ranged from 91 to 159 bu/ac (Tables 7A-B). Excellent in-season precipitation, 2-yr fallow ground, and adequate N fertility contributed to high yields.

At Los Lunas, 3 entries produced an average 99 bu/ac yield (5,564 lb/ac), with yield differences among varieties (Tables 8A-B).

Forage Corn

Forage corn tests were conducted at the Agricultural Science Centers at Artesia, Clovis, Farmington and Los Lunas. The Artesia forage corn test contained 14 entries. Mean dry forage yield was 8.7 ton/ac, and yield and forage quality differences were observed (Tables 9A-B).

There were 19 entries in the Clovis forage corn test. Mean dry forage yield was 11.1 ton/ac and wet yields averaged 29.5 ton/ac (Tables 10A-B). Hybrids differed in all yield and some nutrient composition parameters.

Five hybrids were evaluated in the Farmington forage corn test. Dry forage yield averaged 10.7 ton/ac, and yields were similar among hybrids (Tables 11A-B). Differences were not observed for any measures of nutrient composition or yield.

The Los Lunas forage corn test contained 6 hybrids. Mean dry forage yield was 11.9 ton/ac. Differences only existed for green forage yield and ash components (Tables 12A-B).

Forage Sorghum

Entries for irrigated forage sorghum evaluations were accepted at the Agricultural Science Centers at Artesia, Clovis, Los Lunas and Tucumcari. There were 5 entries in the irrigated forage sorghum test at Artesia. Mean dry forage yield was 6.7 ton/ac (Tables 13A-B). Forage yields and quality estimates were different among the entries.

At Clovis, there were 8 entries in the irrigated forage sorghum test. Mean dry forage yield was 9.2 ton/ac, and differences were observed for yield and nutritive parameters (Tables 14A-B). A separate dryland forage sorghum trial (7 entries) was conducted at Clovis, and one cutting was obtained. Total dry forage yield was excellent and averaged 6.8 ton/ac for the year (Tables 15A-B). Large amounts of in-season rainfall contributed to the high dryland yields.

Los Lunas had 3 entries in its irrigated forage sorghum test. Mean dry forage yield was 7.9 ton/ac (Tables 16A-B). Yield and quality measurements were significantly different among the varieties.

Tucumcari received 4 entries in the dryland forage sorghum test (Tables 17A-B). Average dry matter yields were low (0.4 ton/ac), and yields and several quality parameters were not different.

Sorghum x Sudangrass

Entries for sorghum x sudangrass tests were accepted by the Agricultural Science Centers at Artesia, Los Lunas and Tucumcari. All plots were harvested twice at Artesia and only once at both Los Lunas and Tucumcari.

There were 9 entries in the irrigated sorghum x sudangrass test at Artesia. Plots were harvested on August 4 and October 6, and mean dry forage yields were 4.5 and 3.9 ton/ac, respectively (Tables 18A-C). Dry forage yield differences were significant for both harvests.

Irrigated sorghum x sudangrass trials at Los Lunas contained 6 entries and were harvested only once. Mean dry yields were good and approached 8 ton/ac (Tables 19A-B).

The sorghum x sudangrass trial at Tucumcari was not irrigated and contained 8 entries (Tables 20A-B). Mean dry yield was low (0.8 ton/ac), which was likely due to poor stand establishment (<52%). No yield differences existed among varieties for yield.

Table 2A. New Mexico 2009 Grain Corn Performance Test - Agricultural Science Center at Clovis

Investigators: R.E. Kirksey, M.A. Marsalis, 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:	4
Plot Length:	20 ft.
Rows per Plot:	2
Row Spacing:	30 in.
Seeding Rate:	32000 seed/a

Management Practices:

Previous Crop:	fallow
Planting Date:	28-Apr
Harvest Date:	27-Oct

Production Inputs

	Rate	Date
Fertilizer:		
Nitrogen	10 lb/a	carryover
Nitrogen	275 lb/a	9-Mar
P_2O_5	60 lb/a	9-Mar
S	30 lb/a	9-Mar
Zn	1 lb/a	9-Mar
Herbicides:		
Bicep Lite II Mag	3 pt/a	30-Apr
Dual II Mag	12 oz/a	12-Jun
Insecticides:		
Onager	10 oz/a	12-Jun

Growing Conditions:

	Average Temp.	Precip.	Irrigation
	°F	in.	in.
January			
February			
March	48.2	0.35	
April	53.7	0.83	3.30
May	62.0	0.24	1.20
June	72.8	1.35	4.80
July	74.5	6.56	3.10
August	74.0	4.25	4.70
September	64.0	0.87	1.00
October	52.5	2.38	
November			
December			

Seasonal Precipitation:	16.5 in.
Total Irrigation:	18.1 in.

Date of Last Spring Frost:	20-Apr
Date of First Fall Frost:	23-Sep
Frost Free Period:	156 days

Table 2B. New Mexico 2009 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	
Eureka Seeds, Inc.	X9082VT3	272.9	15.23	61.53	96.7	40.9	14-Jul
Mycogen Seeds	2T804	272.9	15.08	60.63	102.7	47.0	18-Jul
Mycogen Seeds	2W814	272.3	15.85	60.30	104.4	46.3	15-Jul
Grand Valley Hybrids	X6GB147	264.7	15.80	59.20	115.2	53.6	17-Jul
Monsanto Company	DKC69-40	257.3	16.10	62.43	99.9	47.5	15-Jul
Eureka Seeds, Inc.	X9032VT3	249.6	15.33	59.15	104.8	47.4	18-Jul
Grand Valley Hybrids	X6R136	245.3	14.30	59.00	102.7	44.4	15-Jul
Grand Valley Hybrids	23T51	237.3	13.98	60.15	100.2	45.8	14-Jul
Mycogen Seeds	2T832	231.5	16.95	58.78	105.5	43.6	16-Jul
Monsanto Company	DKC61-69	222.4	14.70	59.98	97.3	43.7	14-Jul
Monsanto Company	DKC64-79	221.3	15.08	61.63	100.6	45.8	16-Jul
Grand Valley Hybrids	X5T138	209.5	15.03	60.93	97.1	41.3	14-Jul
Grand Valley Hybrids	X6RHX132	209.4	14.18	60.55	102.6	47.3	17-Jul
Mycogen Seeds	2G847	186.8	15.28	61.18	98.4	45.7	13-Jul
	Trial Mean	239.5	15.20	60.39	102.0	45.7	15-Jul
	LSD (P > 0.05)	34.6	0.48	0.99	5.0	4.8	2.0
	CV	10.11	2.19	1.14	3.44	7.31	0.71
	F Test	<0.0001	<0.0001	<0.0001	<0.0001	0.0013	<0.0001

Table 3A. New Mexico 2009 Early Season Grain Corn Performance Test - Agricultural Science Center at Farmington

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

Test Description

Location:

County/Area:	San Juan
Longitude:	-108.3061
Latitude:	36.6812
Elevation:	5,640 ft.
Soil Name:	Wall
Soil Texture:	sandy loam
Soil Depth:	> 75 in.

Test Design:

Replications	3
Plot Length:	18.5 ft.
Rows per Plot:	4
Row Spacing:	34 in.
Seeding Rate:	35,000 seed/a
Harvest area:	2 row 18.5 feet long (104.83 sq.ft.)

Management Practices:

Previous Crop:	winter canola
Planting Date:	14-May
Harvest Date:	17-Nov

Production Inputs

	Rate	Date
Fertilizer:		
Nitrogen	10 lb/a	11-Mar
Nitrogen	16 lb/a	15-Jun
Nitrogen	18 lb/a	22-Jun
Nitrogen	18 lb/a	1-Jul
Nitrogen	14 lb/a	6-Jul
Nitrogen	24 lb/a	13-Jul
Nitrogen	30 lb/a	21-Jul
Nitrogen	18 lb/a	28-Jul
Nitrogen	42 lb/a	5-Aug
P2O5	48 lb/a	11-Mar
K2O	56 lb/a	11-Mar
Zn	3.4 lb/a	11-Mar
Herbicides:		
Bicep Lite II Mag	1.2 qt/a	27-May
Clarity	3 oz/a	27-May
Instecticides:		
None		

Growing Conditions:

	Average Temp.	Precip.	Irrigation
	°F	in.	in.
January			
February			
March			
April			
May	63.5	0.78	2.1
June	67.6	0.47	7.6
July	77.1	0.15	10.4
August	73.1	0.27	6.6
September	66.6	0.09	3.0
October			
November			
December			

Seasonal Precipitation	1.76 in.
Total water	31.4 in.

Date of Last Spring Freeze	27-Apr
Date of First Fall Freeze	22-Sep
Frost Free Period	147 days

Table 3B. New Mexico 2009 Early Season Grain Corn Performance Test - Agricultural Science Center at Farmington

Results

Brand/Company Name	Hybrid/Variety Name	Yield	Moisture at Harvest	Test Weight	Plant Height	Ear Height	Plant Population	Silk Date	Days to Silk	Lodging	Relative Maturity
		bu/a	%	lb/bu	in	in	# plants/a	date	# days	%	days
Pioneer Hi-Bred Int'l	36V75	169.5	11.8	53.5	94	48	33,655	5-Aug	84	3.8	102
Pioneer Hi-Bred Int'l	PO541HR	167.6	11.6	57.1	100	47	31,439	8-Aug	87	7.4	105
Monsanto Company	Dekalb DKC52-59(VT3)	150.6	10.7	56.0	93	46	31,577	6-Aug	84	11.5	102
Monsanto Company	Dekalb DKC50-66(VT3)	146.1	11.1	56.5	89	44	35,040	2-Aug	80	2.8	100
Triumph Seed Co.	1121V	144.9	12.4	56.5	95	47	31,439	7-Aug	85	6.6	110
Monsanto Company	Dekalb DKC50-44(VT3)	121.2	11.3	55.6	97	41	31,023	4-Aug	82	15.2	100
Triumph Seed Co.	5501X	118.6	12.7	55.1	101	49	33,655	6-Aug	85	36.5	104
Monsanto Company	Dekalb DKC46-60(VT3)	114.2	11.0	56.6	87	41	35,317	3-Aug	81	3.2	96
Pioneer Hi-Bred Int'l	PO125HR	69.8	11.9	55.4	91	40	30,746	6-Aug	84	46.7	101
	Trial Mean	133.6	11.6	55.8	94	45	32,654	5-Aug	83	14.8	102
	LSD	51.4	NS	1.4	NS	6	2763	3	3	11.5	-
	LSD P >	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	-
	CV	22.2	6.4	1.4	5.5	7.8	4.9	0.0	1.8	44.7	-
	F Test	0.0192	0.0729	0.0016	0.0556	0.0373	0.0123	0.0012	0.0012	<0.0001	-

Table 4A. New Mexico 2009 Full Season Grain Corn Performance Test - Agricultural Science Center at Farmington

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

Test Description

Location:

County/Area:	San Juan
Longitude:	-108.3061
Latitude:	36.6812
Elevation:	5,640 ft.
Soil Name:	Wall
Soil Texture:	sandy loam
Soil Depth:	> 75 in.

Test Design:

Replications	3
Plot Length:	18.5 ft.
Rows per Plot:	4
Row Spacing:	34 in.
Seeding Rate:	35,000 seed/a
Harvest area:	2 rows 18.5 feet long (104.83 sq.ft.)

Management Practices:

Previous Crop:	winter canola
Planting Date:	14-May
Harvest Date:	19-Nov

Production Inputs

	Rate	Date
Fertilizer:		
Nitrogen	10 lb/a	11-Mar
Nitrogen	16 lb/a	15-Jun
Nitrogen	18 lb/a	22-Jun
Nitrogen	18 lb/a	1-Jul
Nitrogen	14 lb/a	6-Jul
Nitrogen	24 lb/a	13-Jul
Nitrogen	30 lb/a	21-Jul
Nitrogen	18 lb/a	28-Jul
Nitrogen	42 lb/a	5-Aug
P2O5	48 lb/a	11-Mar
K2O	56 lb/a	11-Mar
Zn	3.4 lb/a	11-Mar
total:	190-48-56-3.4zn	
Herbicides:		
Bicep Lite II Mag	1.2 qt/a	27-May
Clarity	3 oz/a	27-May
Instecticides:		
None		

Growing Conditions:

	Average Temp. °F	Precip. in.	Irrigation in.
January			
February			
March			
April			
May	63.5	0.28	2.1
June	67.6	0.78	7.6
July	77.1	0.15	10.4
August	73.1	0.27	6.6
September	66.6	0.09	3.0
October			
November			
December			

Seasonal Precipitation	1.57 in.
Total water	31.4 in.
Date of Last Spring Freeze	27-Apr
Date of First Fall Freeze	22-Sep
Frost Free Period	147 days

Table 4B. New Mexico 2009 Full Season Grain Corn Performance Test - Agricultural Science Center at Farmington

Results

Brand/Company Name	Hybrid/Variety Name	Yield	Moisture at Harvest	Test Weight	Plant Height	Ear Height	Plant Population	Silk Date	Days to Silk	Lodging	Relative Maturity
		bu/a	%	lb/bu	in	in	# plants/a	date	# days	%	days
Monsanto	Dekalb DKC50-44(VT3)	199.7	12.1	56.2	99	49	33,239	31-Jul	78	0	100
Eureka Seeds, Inc.	X9082VT3	199.0	14.5	55.1	98	42	34,624	6-Aug	84	0	n/a
Monsanto	Dekalb DKC50-66(VT3)	188.3	12.3	56.9	103	47	33,932	1-Aug	79	0	100
Triumph	1121V	176.9	12.9	56.4	103	46	33,101	5-Aug	84	1	110
Monsanto	Dekalb DKC52-59(VT3)	170.9	12.1	55.6	99	48	32,131	4-Aug	82	15	102
Eureka Seeds, Inc.	X9032VT3	170.0	14.6	52.3	106	49	32,270	7-Aug	86	14	n/a
Monsanto	Dekalb DKC46-60(VT3)	159.2	12.3	56.3	99	43	34,624	31-Jul	78	0	96
	Trial Mean	180.6	13.0	55.5	101	46	33,417	3-Aug	82	4	101.6
	LSD	NS	0.7	1.7	NS	NS	NS	3	3	NS	-
	LSD P >	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	-
	CV	29.0	3.1	1.7	8.8	11.8	3.7	0	2.1	229.5	-
	F Test	0.9444	<0.0001	0.0013	0.9006	0.5931	0.1293	0.0006	0.0006	0.2843	-

Table 5A. New Mexico 2009 Grain Corn Performance Test - Agricultural Science Center at Los Lunas

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

Test Description

Location:

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

Test Design:

Replications:	4
Plot Length:	10 ft.
Rows per Plot:	2
Row Spacing:	30 in.
Seeding Rate:	38000 seed/a

Management Practices:

Previous Crop:	Alfalfa
Planting Date:	13-May
Harvest Date:	26-Oct

Production Inputs

	Rate	Date
Fertilizer:		
33-0-0-11	275 lb/a	6-Jun
46-0-0	275 lb/a	19-Jun
46-0-0	100 lb/a	25-Feb

Total:	N	P	K	S
	262	0	0	30

Herbicides:

Insecticides:

Growing Conditions:

	Average Temp.	Precip.	Irrigation
	°F	in.	in.
January	37.5	0.00	
February	42.4	0.00	
March	48.8	0.30	
April	55.0	0.14	
May	68.2	0.96	3
June	72.9	0.98	6
July	79.5	1.92	9
August	75.3	0.98	6
September	67.5	2.20	
October	55.1	1.31	
November	44.2	0.14	
December	38.0	0.15	

Seasonal Precipitation:	7.2 in.
Total Irrigation:	24.0 in.
Date of Last Spring Frost:	20-Apr
Date of First Fall Frost:	2-Oct
Frost Free Period:	165 days

Table 5B. New Mexico 2009 Grain Corn Performance Test - Agricultural Science Center at Los Lunas

Results

Brand/Company Name	Hybrid/Variety Name	Grain Yield	Moisture at Harvest	Test Weight	Plant Height	Ear Height
		bu/a	%	lb/bu	in	in
Monsanto Co.	DKC61-69VT3	271.2	11.6	59.2	97.5	42.8
Eureka Seeds, Inc.	X9082VT3	267.7	13.8	61.6	95.0	43.0
Eureka Seeds, Inc.	X9032VT3	266.3	13.4	59.6	102.3	45.8
Monsanto Co.	DKC64-79VT3	242.3	12.7	62.4	93.0	37.3
	Trial Mean	261.9	12.90	60.7	96.9	42.2
	LSD	NS	0.6	0.9	NS	4.6
	LSD P >	0.05	0.05	0.05	0.05	0.05
	CV	8.6	2.8	0.9	5.4	6.9
	F Test	0.3094	<0.0001	<0.0001	0.1451	0.0154

Table 6A. New Mexico 2009 Limited Irrigated Grain Sorghum Performance Test - Agricultural Science Center at Clovis

Investigators: R.E. Kirksey, M.A. Marsalis, 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:	80,000 seed/a

Management Practices:

Previous Crop:	fallow
Planting Date:	3-Jun
Harvest Date:	10-Nov

Production Inputs

	Rate	Date
Fertilizer:		
Nitrogen	21 lb/a	carryover
Nitrogen	110 lb/a	13-Mar
P_2O_5	50 lb/a	13-Mar
S	17 lb/a	13-Mar
Zn	2 qt/a	13-Mar
Herbicides:		
Bicep Lite II Mag	3 pt/a	4-Jun
Aatrex	2 pt/a	4-Jun

Growing Conditions:

	Average Temp.	Precip.	Irrigation
	°F	in.	in.
January			
February			
March			
April			
May	62.0	0.24	
June	72.8	1.35	2.1
July	74.5	6.56	0.0
August	74.0	4.25	2.7
September	64.0	0.87	0.0
October	52.5	2.38	
November†	51.9	0.00	
December			

† Nov. 1-10

Seasonal Precipitation:	15.7 in.
Total Irrigation:	4.8 in.

Date of Last Spring Frost:	20-Apr
Date of First Fall Frost:	23-Sep
Frost Free Period:	156 days

Table 6B. New Mexico 2009 Limited Irrigated 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
		lb/a	bu/a	%	lb/bu	in	in	%	
Triumph Seed Co., Inc.	TRX85001	11616	207.4	15.2	58.9	55.5	6.0	0	19-Aug
Sorghum Partners, Inc.	SP6680	11111	198.4	15.3	61.7	47.2	3.8	0	14-Aug
Sorghum Partners, Inc.	NK7633	10945	195.5	14.5	61.3	45.5	6.0	0	3-Aug
Triumph Seed Co., Inc.	TR481	10422	186.1	15.0	61.7	47.8	5.8	0	7-Aug
Triumph Seed Co., Inc.	TRX95004	10067	179.8	14.7	59.5	46.3	5.3	0	14-Aug
Sorghum Partners, Inc.	NK5418	7557	134.9	14.5	59.9	42.3	5.6	4	31-Jul
	Trial Mean	10286	183.7	14.9	60.5	47.4	5.4	0.7	9-Aug
	LSD	1526	27.3	0.5	0.9	NS	1.4	1.3	1.8
	LSD P >	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	CV	8.2	8.2	1.9	0.8	11.0	14.3	106.1	0.5
	F Test	0.0019	0.0019	0.0127	<0.0001	0.1448	0.0422	0.0002	<0.0001

Table 7A. New Mexico 2009 Dryland Grain Sorghum Performance Test - Agricultural Science Center at Clovis

Investigators: M.A. Marsalis, 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/a

Management Practices:

Previous Crop:	fallow
Planting Date:	17-Jun
Harvest Date:	11-Nov

Production Inputs

	Rate	Date
Fertilizer:		
Nitrogen	85 lb/a	23-Apr
P_2O_5	40 lb/a	23-Apr
S	13 lb/a	23-Apr
Zn	1 lb/a	23-Apr
Herbicides:		
Aatrex	2 pts/a	18-Jun
Insecticides:		
None		

Growing Conditions:

	Average Temp.	Precip.	Irrigation
	°F	in.	in.
January			
February			
March			
April			
May	62.0	0.24	
June	72.8	1.35	0.85*
July	74.5	6.56	
August	74.0	4.25	
September	64.0	0.87	
October	52.5	2.38	
November†	51.0	0.00	
December			

* Emergence and soil crust mellowing irrigations.

† Nov. 1-11

Seasonal Precipitation:	15.7 in.
Total Irrigation:	0.85 in.

Date of Last Spring Frost:	20-Apr
Date of First Fall Frost:	23-Sep
Frost Free Period:	156 days

Table 7B. New Mexico 2009 Dryland Grain Sorghum Performance Test - Agricultural Science Center at Clovis

Results

Brand/Company Name	Hybrid/Variety Name	Maturity Class	Yield	Yield	Test Weight	Moisture at Harvest	Head Date	Plant Height	Head Exsertion
			lb/A	bu/A	lb/bu	%		in.	in.
DeKalb	DeKalb DK44	M	8899	159	59.2	15.4	15-Aug	35.7	3.0
Pioneer Hi-Bred Int., Inc.	85G46	M	8851	158	60.0	14.8	14-Aug	38.3	1.8
Pioneer Hi-Bred Int., Inc.	85G46	M	8716	156	60.0	14.7	14-Aug	37.7	1.6
DeKalb	DeKalb DKS37--07	ME	8704	155	59.7	15.3	10-Aug	37.8	3.7
Tx. Agri. Exp. Stat.	ATx378 x RTx430	ML	8644	154	57.4	15.8	19-Aug	44.8	0.8
Sorghum Partners, Inc.	NK7633	ML	8446	151	59.6	15.3	17-Aug	39.2	3.9
DynaGro Seeds	DG 771B	M	8391	150	58.9	16.1	20-Aug	38.2	0.4
Tx. Agri. Exp. Stat.	ATx2752 x RTx430	ML	8363	149	57.5	15.5	20-Aug	40.8	0.0
Sorghum Partners, Inc.	NK6638	M	8323	149	57.9	15.6	21-Aug	38.8	1.7
Pioneer Hi-Bred Int., Inc.	85G03	M	8225	147	59.3	14.7	17-Aug	38.8	1.0
Asgrow	Asgrow Pulsar	E	8156	146	59.9	15.1	10-Aug	35.7	3.1
DynaGro Seeds	DG 772B	M	7976	142	58.1	16.3	17-Aug	40.7	2.4
Pioneer Hi-Bred Int., Inc.	85G03	M	7972	142	58.8	15.3	17-Aug	37.4	0.3
Sorghum Partners, Inc.	NK5418	M	7910	141	59.4	15.3	11-Aug	34.6	2.4
Sorghum Partners, Inc.	KS585	M	7858	140	59.7	14.7	16-Aug	36.2	0.4
Tx. Agri. Exp. Stat.	ATx399 x RTx430	ML	7822	140	56.0	15.1	18-Aug	38.7	0.7
Pioneer Hi-Bred Int., Inc.	86G32	ME	7771	139	59.2	15.0	11-Aug	37.4	1.7
Sorghum Partners, Inc.	NK5418	M	7770	139	59.7	14.7	12-Aug	35.2	2.2
Triumph Seed Co., Inc.	TR452 (TRX02783)	M	7630	136	59.2	15.4	13-Aug	39.1	3.8
DynaGro Seeds	DG 764B	M	7584	135	59.6	15.3	13-Aug	37.0	3.7
Triumph Seed Co., Inc.	TR459	M	7537	135	60.5	15.6	15-Aug	38.1	3.5
Pioneer Hi-Bred Int., Inc.	86G32	ME	7500	134	58.8	14.8	10-Aug	33.6	0.7
Sorghum Partners, Inc.	KS310	E	7487	134	60.4	14.4	9-Aug	34.9	2.1
DynaGro Seeds	DG 771B	M	7361	131	58.6	15.8	19-Aug	38.5	0.8
DynaGro Seeds	DG 758B	M	7289	130	58.1	15.6	17-Aug	40.3	2.2

Table 7B (cont.). New Mexico 2009 Dryland Grain Sorghum Performance Test - Agricultural Science Center at Clovis

Results

Brand/Company Name	Hybrid/Variety Name	Maturity Class	Yield	Yield	Test Weight	Moisture at Harvest	Head Date	Plant Height	Head Exsertion
			lb/A	bu/A	lb/bu	%		in.	in.
Triumph Seed Co., Inc.	TR438	ME	7274	130	58.4	14.7	13-Aug	37.8	3.4
Sorghum Partners, Inc.	NK7829	ML	7175	128	58.3	16.1	19-Aug	40.8	3.5
DynaGro Seeds	DG 762B	M	7022	125	59.1	15.0	12-Aug	38.6	2.6
DeKalb	DeKalb DK39Y	ME	6991	125	60.1	15.2	10-Aug	36.1	4.7
Tx. Agri. Exp. Stat.	ATx631 x RTx436	ML	6907	123	55.6	17.3	22-Aug	40.3	1.4
Sorghum Partners, Inc.	NK4420	ME	6896	123	59.6	15.2	10-Aug	34.9	1.6
Triumph Seed Co., Inc.	TR458	M	6772	121	58.6	15.9	15-Aug	39.8	3.5
Sorghum Partners, Inc.	NK4420	ME	6686	119	59.9	15.3	12-Aug	34.4	0.7
DeKalb	DeKalb DK29-28	E	6597	118	60.1	15.1	7-Aug	34.4	2.5
Sorghum Partners, Inc.	SP3303	E	6334	113	60.2	14.8	12-Aug	36.2	1.8
DeKalb	DeKalb DK28E	E	6276	112	59.4	14.9	3-Aug	34.0	2.8
Triumph Seed Co., Inc.	TR463	M	6120	109	55.1	16.7	22-Aug	38.3	0.3
DynaGro Seeds	DG 732B	ME	6074	108	56.3	14.2	15-Aug	35.3	1.8
Sorghum Partners, Inc.	SP3303	E	5226	93	59.6	14.8	13-Aug	34.6	1.4
Triumph Seed Co., Inc.	TRX85001	ML	5103	91	49.1	19.3	1-Sep	42.0	3.3
	Trial Mean		7466	133	58.6	15.4	15-Aug	37.6	2.1
	LSD		1181	21.1	2.0	0.7	2.4	3.3	1.3
	LSD P >		0.05	0.05	0.05	0.05	0.05	0.05	0.05
	CV		9.7	9.7	2.1	2.7	0.65	5.5	38.1
	F Test		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Table 8A. New Mexico 2009 Irrigated Grain Sorghum Performance Test - Agricultural Science Center at Los Lunas

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

Test Description

Location:

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

Test Design:

Replications:	4
Plot Length:	10 ft.
Rows per Plot:	2
Row Spacing:	30 in.
Seeding Rate:	69000 seed/a

Management Practices:

Previous Crop:	Alfalfa
Planting Date:	13-May
Harvest Date:	27-Oct

Significant grain loss to birds

Production Inputs

	Rate	Date
Fertilizer:		
33-0-0-11	275 lb/a	4-Jun
46-0-0	275 lb/a	19-Jun
46-0-0	100 lb/a	25-Feb

Total:	N	P	K	S
	262	0	0	30

Herbicides:

Growing Conditions:

	Average Temp.	Precip.	Irrigation
	°F	in.	in.
January	37.5	0.00	
February	42.4	0.00	
March	48.8	0.30	
April	55.0	0.14	
May	68.2	0.96	3
June	72.9	0.98	6
July	79.5	1.92	9
August	75.3	0.98	6
September	67.5	2.20	
October	55.1	1.31	
November†	44.2	0.14	
December	38.0	0.15	

† Nov. 1-10

Seasonal Precipitation:	7.2 in.
Total Irrigation:	24.0 in.

Date of Last Spring Frost:	20-Apr
Date of First Fall Frost:	2-Oct
Frost Free Period:	165 days

Table 8B. New Mexico 2009 Irrigated Grain Sorghum Performance Test - Agricultural Science Center at Los Lunas

Results

Brand/Company Name	Hybrid/Variety Name	Grain Yield	Grain Yield	Moisture at Harvest	Test Weight	Plant Height	Head Exertion	Lodging
		lb/a	bu/a	%	lb/bu	in	in	%
Sorghum Partners, Inc.	NK7829	6571	117.3	11.2	58.4	47.5	6.0	0
Sorghum Partners, Inc.	NK8831	6472	115.6	10.2	57.9	42.8	4.5	0
Sorghum Partners, Inc.	SP6680	3650	65.2	9.8	53.1	51.0	2.3	0
	Trial Mean	5564	99.4	10.4	56.5	47.1	4.3	-
	LSD	933	16.7	0.8	NS	5.0	1.3	-
	LSD P >	0.05	0.05	0.05	0.05	0.05	0.05	-
	CV	9.7	9.7	4.3	4.8	6.1	18.0	-
	F Test	0.0004	0.0004	0.0103	0.0592	0.0186	0.0013	-

Table 9A. New Mexico 2009 Forage Corn Performance Test - Agricultural Science Center at Artesia

Investigators: F.E. Contreras-Govea and L. Carrasco

Test Description

Location:

County/Area:	Eddy
Longitude:	-104.38
Latitude:	32.75
Elevation:	3348 ft
Soil Name:	Reagan
Soil Texture:	loam
Soil Depth:	>80 in.

Test Design:

Replications:	4
Plot Length:	25 ft.
Rows per Plot	2
Row Spacing	40 in.
Seeding Rate:	35000 seeds/a
Plant Density	27366 plants/a

Field Notes
Maturity at harvest: From 1/3 to 1/2 starch/milk line

Management Practices:

Previous Crop:	Cotton
Planting Date:	12-May
Harvest Date:	1-Sep

Production Inputs:

	Rate	Date
Fertilizer:		
Nitrogen	73 lb/a	7-May
Nitrogen	47 lb/a	2-Jun
Nitrogen	100 lb/a	26-Jun
P_2O_5	47 lb/a	7-May
K_2O	42 lb/a	7-May
Herbicides:		
Yukon	6 oz/ac	8-Jun
Aim	6 oz/ac	2-Jul
Insecticides:		
Intrepid	6 oz/ac	2-Jul
Oberon	12 oz/ac	2-Jul

Growing Conditions:

	Average Temp. F	Precip. in.	Irrigation in.
January	41.5	0.00	
February	47.6	0.00	
March	53.2	0.46	
April	58.7	0.00	3.80
May	70.6	0.73	4.36
June	77.8	1.16	5.09
July	81.1	4.89	3.40
August	79.0	0.08	4.88
September	69.9	0.33	
October			

Precipitation:	7.65
Total Irrigation:	21.53
Date of Last Spring Frost:	18-Apr
Date of First Fall Frost:	30-Oct
Frost Free Period:	195

Table 9B. New Mexico 2009 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	NE_l	Milk/ Ton	Milk/ Acre
		t/a	t/a	%	%	%	%	%	Mcal/lb	lb/t	lb/a
Mycogen Seeds	TMF2L831	10.2	30.7	66.7	8.5	46.8	59.8	33.3	0.67	3091	31542
Eureka Seeds, Inc	X9015RR	9.8	31.2	68.6	8.2	48.9	55.7	31.5	0.64	2860	27961
Mycogen Seeds	2W814	9.2	28.0	67.3	8.5	43.7	55.8	36.9	0.68	3150	28838
Mycogen Seeds	TMF2Q759	9.0	26.3	65.8	8.1	45.3	59.1	35.0	0.67	3101	27748
Mycogen Seeds	TMF2N804	8.8	28.5	69.1	8.2	49.1	57.6	31.6	0.65	2941	25824
Buckeye Ag Testing, LLC	58V69	8.8	28.3	69.2	8.3	47.9	57.7	31.7	0.65	2974	26010
Golden Acres Genetics	28Y47	8.6	29.2	70.6	8.0	51.4	57.8	29.1	0.63	2847	24504
Golden Acres Genetics	28Y97	8.5	26.0	67.2	8.6	48.7	58.5	31.1	0.65	2974	25097
Eureka Seeds, Inc	ES-7654RR	8.4	26.1	68.0	8.8	48.3	58.3	29.1	0.66	2968	24745
Golden Acres Genetics	27Z07	8.3	27.0	69.2	8.4	45.2	55.4	34.4	0.66	2988	24860
Buckeye Ag Testing, LLC	58V24	8.3	26.8	69.2	7.9	45.3	56.4	35.2	0.67	3044	25184
Eureka Seeds, Inc	X9054RR	7.8	25.8	69.9	8.3	51.2	56.8	27.7	0.63	2792	21741
Eureka Seeds, Inc	X9064RR	7.4	22.6	66.7	8.8	48.6	57.5	30.3	0.65	2941	21776
Eureka Seeds, Inc	X8013 VT3	7.3	21.3	65.6	8.4	45.6	59.2	34.2	0.68	3141	22780
	Trial Mean	8.7	27.5	68.2	8.4	47.8	57.6	32.0	0.65	2978	25920
	LSD	1.7	5.8	2.2	ns	2.6	2.7	3.1	0.02	169	5643
	LSD P >	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	CV %	14.1	14.7	2.3	4.7	3.8	3.3	6.8	2.6	4.0	15.3
	F Test	0.0171	0.0049	0.0002	0.0533	<0.0001	0.0500	<0.0001	0.0002	0.0008	0.0305

Table 10A. New Mexico 2009 Forage Corn Performance Test - Agricultural Science Center at Clovis

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

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:	4
Plot Length:	20 ft.
Rows per Plot:	2
Row Spacing:	30 in.
Seeding Rate:	30000 seeds/a

Management Practices:

Previous Crop:	fallow
Planting Date:	28-Apr
Harvest Date:	8-Sep

Production Inputs

	Rate	Date
Fertilizer:		
Nitrogen	10 lb/a	carryover
Nitrogen	275 lb/a	9-Mar
P_2O_5	60 lb/a	9-Mar
S	30 lb/a	9-Mar
Zn	1 lb/a	9-Mar
Herbicides:		
Bicep Lite II Mag	3 pt/a	30-Apr
Dual II Mag	0.75 pt/a	12-Jun
Insecticides:		
Onager	10 oz/a	12-Jun
Intrepid 2F	8 oz/a	3-Aug

Growing Conditions:

	Average Temp.	Precip.	Irrigation
	°F	in.	in.
January			
February			
March	48.2	0.35	
April	53.7	0.83	3.30
May	62.0	0.24	1.20
June	72.8	1.35	4.80
July	74.5	6.56	3.10
August	74.0	4.25	4.70
September†	68.9	0.41	
October			
November			
December			

† Sept. 1-8

Seasonal Precipitation	14.0 in.
Total Irrigation	17.1 in.
Date of Last Spring Frost:	20-Apr
Date of First Fall Frost:	23-Sep
Frost Free Period:	156 days

Table 10B. New Mexico 2009 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
Triumph Seed Co., Inc.	8539R	12.3	34.5	64.4	8.3	49.7	59.5	24.7	4.7	62.9	0.595	2615	32015
Golden Acres Genetics	28Y47	12.0	31.6	61.8	8.3	50.2	60.3	23.7	4.8	63.6	0.601	2656	31917
Mycogen Seeds	2N804	11.6	32.3	63.9	8.5	49.6	61.5	24.9	4.4	64.1	0.605	2686	31284
Grand Valley Hybrids, Inc.	26T50	11.6	31.3	63.1	8.5	49.3	61.3	24.8	4.4	64.4	0.609	2713	31375
Grand Valley Hybrids, Inc.	X7R145	11.3	31.2	63.6	8.7	47.7	60.8	26.2	4.7	63.9	0.604	2681	30358
Golden Acres Genetics	28Y97	11.3	27.8	59.3	8.7	47.5	62.1	26.8	4.5	64.8	0.613	2741	30997
Eureka Seeds, Inc.	ES-7654RR	11.2	29.1	61.6	9.3	47.6	62.5	23.8	4.9	65.3	0.618	2776	30948
Triumph Seed Co., Inc.	1825V	11.2	27.1	58.7	8.1	48.1	60.9	26.9	4.5	64.0	0.606	2690	30034
Golden Acres Genetics	27Z07	11.0	29.1	62.1	8.2	46.1	61.5	30.0	4.3	64.7	0.612	2734	30074
Triumph Seed Co., Inc.	2288H	11.0	32.0	65.7	8.7	51.3	61.5	22.2	4.4	64.2	0.605	2691	29529
Monsanto Company	DKC67-87	10.8	29.2	62.8	9.4	48.7	61.2	25.1	4.5	64.4	0.609	2714	29422
Eureka Seeds, Inc.	X9015RR	10.8	29.7	63.6	8.1	49.3	60.8	25.0	4.6	63.6	0.600	2652	28703
Mycogen Seeds	2L831	10.7	28.3	62.1	9.1	47.8	61.4	25.2	4.5	64.7	0.613	2740	29419
Grand Valley Hybrids, Inc.	25T57	10.7	28.9	62.9	8.0	52.2	61.5	21.9	4.8	63.4	0.595	2626	28262
Eureka Seeds, Inc.	X9064RR	10.6	27.7	61.6	9.1	47.7	61.8	25.6	4.1	65.1	0.617	2767	29448
Mycogen Seeds	2W814	10.6	26.8	60.3	8.6	46.0	61.7	29.0	3.8	65.6	0.623	2807	29778
Eureka Seeds, Inc.	X8013VT3	10.6	28.5	62.8	8.9	48.6	60.0	26.0	4.4	63.7	0.603	2670	28255
Mycogen Seeds	2Q759	10.4	26.6	60.7	8.5	47.5	63.4	25.9	4.5	65.5	0.617	2778	29050
Eureka Seeds, Inc.	X9054RR	10.2	28.7	64.3	8.4	48.9	60.8	24.7	4.7	63.8	0.603	2671	27310
	Trial Mean	11.1	29.5	62.4	8.6	48.6	61.2	25.5	4.5	64.3	0.608	2703	29943
	LSD	0.9	2.1	2.6	0.5	2.5	NS	3.2	NS	NS	NS	NS	NS
	LSD P >	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	CV	5.8	5.1	2.9	4.1	3.6	2.8	8.9	10.6	2.0	2.1	3.3	7.5
	F Test	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	0.3741	0.0003	0.1290	0.1232	0.0554	0.0743	0.2764

Table 11A. New Mexico 2009 Forage Corn Performance Test - Agricultural Science Center at Farmington

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

Test Description

Location:

County/Area:	San Juan
Longitude:	-108.3061
Latitude:	36.6812
Elevation:	5,640 ft.
Soil Name:	Wall
Soil Texture:	sandy loam
Soil Depth:	> 75 in.

Test Design:

Replications	4
Plot Length:	18.5 ft.
Rows per Plot:	4
Row Spacing:	34 in.
Seeding Rate:	35,000 seed/a
Harvest area:	1 row 10 feet long (28.3 sq.ft.)

Management Practices:

Previous Crop:	winter canola
Planting Date:	14-May
Harvest Date:	28-Sep

Production Inputs

	Rate	Date
Fertilizer:		
Nitrogen	10 lb/a	11-Mar
Nitrogen	16 lb/a	15-Jun
Nitrogen	18 lb/a	22-Jun
Nitrogen	18 lb/a	1-Jul
Nitrogen	14 lb/a	6-Jul
Nitrogen	24 lb/a	13-Jul
Nitrogen	30 lb/a	21-Jul
Nitrogen	18 lb/a	28-Jul
Nitrogen	42 lb/a	5-Aug
P2O5	48 lb/a	11-Mar
K2O	56 lb/a	11-Mar
Zn	3.4 lb/a	11-Mar
Total:	190-48-56-3.4Zn	
Herbicides:		
Bicep Lite II Mag	1.2 qt/a	27-May
Clarity	3 oz/a	27-May
Instecticides:		
None		

Growing Conditions:

	Average Temp. °F	Precip. in.	Irrigation in.
January			
February			
March			
April			
May	63.5	0.28	2.1
June	67.6	0.78	7.6
July	77.1	0.15	10.4
August	73.1	0.27	6.6
September	66.6	0.09	3.0
October			
November			
December			

Seasonal Precipitation	1.57 in.
Total water	31.4 in.
Date of Last Spring Freeze	27-Apr
Date of First Fall Freeze	22-Sep
Frost Free Period	147 days

Table 11B. New Mexico 2009 Forage Corn Performance Test - Agricultural Science Center at Farmington

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
Eureka Seeds, Inc.	X9054RR	11.4	35.8	68.4	7.6	46.0	61.6	31.1	4.9	68.9	0.66	3,074	35,237
Eureka Seeds, Inc.	X8013VT3	10.9	30.8	64.3	7.8	43.5	62.8	33.9	4.1	70.3	0.68	3,180	34,758
Eureka Seeds, Inc.	ES-7654RR	10.5	29.6	64.6	7.8	45.0	65.1	29.6	4.9	70.2	0.67	3,146	33,106
Eureka Seeds, Inc.	X9015RR	10.4	33.6	69.4	7.4	43.7	64.2	29.7	4.8	71.7	0.69	3,281	33,972
Eureka Seeds, Inc.	X9064RR	10.4	30.2	65.3	7.4	45.3	63.8	30.1	4.3	70.1	0.67	3,145	32,553
	Trial Mean	10.7	32.0	66.4	7.6	44.7	63.5	30.9	4.6	70.2	0.68	3,165	33,925
	LSD	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	LSD P >	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	CV	18.0	14.5	4.6	9.3	9.4	2.4	15.5	11.7	2.7	3.4	4.8	20.4
	F Test	0.9266	0.3348	0.1080	0.8471	0.8950	0.0528	0.6985	0.1461	0.3705	0.4993	0.4443	0.9789

Table 12A. New Mexico 2009 Forage Corn Performance Test - Agricultural Science Center at Los Lunas

Investigators: M. Place and M.A. Marsalis

Test Description

Location:

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

Test Design:

Replications:	4
Plot Length:	10 ft.
Rows per Plot:	2
Row Spacing:	30 in.
Seeding Rate:	38000 seeds/a

Management Practices:

Previous Crop:	Alfalfa
Planting Date:	13-May
Harvest Date:	9-Sep

Production Inputs

		Rate	Date
Fertilizer:			
	46-0-0	100 lb/a	25-Feb
	33-0-0-11	275 lb/a	4-Jun
	46-0-0	275 lb/a	19-Jun

Total:	N	P	K	S
	262	0	0	30

Herbicides:

Insecticides:

Growing Conditions:

	Average Temp.	Precip.	Irrigation
	°F	in.	in.
January	37.5	0.00	
February	42.4	0.00	
March	48.8	0.30	
April	55.0	0.14	
May	68.2	0.96	3
June	72.9	0.98	6
July	79.5	1.92	9
August	75.3	0.98	6
September	67.5	2.20	
October	55.1	1.31	
November	44.2	0.14	
December	38.0	0.15	

Seasonal Precipitation	7.2 in.
Total Irrigation	24.0 in.

Date of Last Spring Frost:	20-Apr
Date of First Fall Frost:	2-Oct
Frost Free Period:	165 days

Table 12B. New Mexico 2009 Forage Corn Performance Test - Agricultural Science Center at Los Lunas

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
Eureka Seeds, Inc.	X9015RR	12.6	35.3	64.3	8.6	43.4	70.3	33.6	2.5	75.4	0.73	3513	44254
Eureka Seeds, Inc.	ES-7654RR	12.4	33.8	63.5	9.1	41.7	70.6	35.5	2.8	76.8	0.74	3629	44943
Eureka Seeds, Inc.	X9054RR	11.9	34.7	65.7	8.9	43.3	71.9	33.3	2.5	76.6	0.74	3591	42772
Eureka Seeds, Inc.	X8013VT3	11.8	31.3	62.4	8.8	42.0	69.8	36.6	2.7	76.9	0.75	3644	42886
Monsanto Company	DXC67-87	11.6	30.5	62.3	8.7	39.9	68.9	38.8	2.8	77.3	0.76	3696	42713
Eureka Seeds, Inc.	X9064RR	11.1	30.8	63.8	8.8	39.4	70.0	37.3	2.7	76.2	0.74	3600	40072
	Trial Mean	11.9	32.8	63.6	8.8	41.6	70.2	35.8	2.7	76.5	0.74	3611	42940
	LSD	NS	2.7	NS	NS	NS	NS	NS	0.3	NS	NS	NS	NS
	LSD P >	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	CV	8.0	5.6	2.9	3.5	5.6	2.9	8.0	6.4	1.6	2.1	2.7	8.9
	F Test	0.3309	0.0049	0.157	0.4814	0.1258	0.4669	0.1039	0.0232	0.3657	0.1912	0.2213	0.5884

Table 13A. New Mexico 2009 Irrigated Forage Sorghum Performance Test - Agricultural Science Center at Artesia

Investigators: F.E. Contreras-Govea and L. Carrasco

Test Description

Location:

County/Area:	Eddy
Longitude:	-104.38
Latitude:	32.75
Elevation:	3348 ft
Soil Name:	Reagan
Soil Texture:	loam
Soil Depth:	>80 in.

Test Design:

Replications:	4
Plot Length:	25 ft.
Rows per Plot	2
Row Spacing	40 in.
Seeding Rate:	90,000 seeds/a

Maturity at harvest flowering to late dough stage of kernel

Management Practices:

Previous Crop:	Cotton
Planting Date:	15-May
Harvest Date:	31-Aug

Production Inputs:

	Rate	Date
Fertilizer:		
Nitrogen	100 lb/a	26-Jun
Herbicides:		
Yukon	6 oz/ac	8-Jun
Insecticides:		
Cobal	6 oz/ac	14-Jul

Growing Conditions:

	Average Temp F	Precip. in.	Irrigation in.
January	41.5	0.00	
February	47.6	0.00	
March	53.2	0.46	
April	58.7	0.00	
May	70.6	0.73	4.72
June	77.8	1.16	5.77
July	81.1	4.89	4.10
August	79.0	0.08	2.21
September	69.9	0.33	
October			

Precipitation:	7.65
Total Irrigation:	16.80

Date of Last Spring Frost:	18-Apr
Date of First Fall Frost:	30-Oct
Frost Free Period:	195

Table 13B. New Mexico 2009 Irrigated Forage Sorghum 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	NE_l	Milk/ Ton	Milk/ Acre
		t/a	t/a	%	%	%	%	%	Mcal/lb	lb/t	lb/a
Sorghum Partners, Inc.	NK 300	8.0	37.5	78.8	8.4	62	63	14.3	0.55	2357	18798
Sorghum Partners, Inc.	SS 405	7.9	35.4	77.9	7.4	68	66	9.2	0.55	2329	18204
Sorghum Partners, Inc.	HIKANE II	6.4	25.0	74.4	8.4	52	61	25.9	0.62	2796	17875
Dyna-Gro/UAP	DG 712F	6.1	24.1	74.7	7.7	50	59	29.7	0.63	2829	17273
Coffey Forage Seed Inc.	FS 6810	5.5	22.1	75.0	8.1	52	65	21.4	0.64	2897	16010
	Trial Mean	6.7	28.0	75.9	7.9	56	63	21.4	0.60	2668	17530
	LSD	1.46	5.54	1.49	0.66	3.8	2.6	4.35	0.03	188	4456
	LSD P >	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	CV	14.6	13.1	1.3	5.5	4.6	2.8	13.5	3.3	4.7	16.9
	F Test	0.0113	<0.0001	<0.0001	0.0277	<0.0001	0.0003	<0.0001	<0.0001	<0.0001	0.8131

Table 14A. New Mexico 2009 Irrigated Forage Sorghum Performance Test - Agricultural Science Center at Clovis

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

Test Description

Location:

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:	90,000 seed/a

Management Practices:

Previous Crop:	fallow
Planting Date:	26-May
Harvest Date:	8-Oct

Production Inputs

	Rate	Date
Fertilizer:		
Nitrogen	12 lb/a	carryover
Nitrogen	180 lb/a	23-Apr
P_2O_5	50 lb/a	23-Apr
S	30 lb/a	23-Apr
Zn	1 lb/a	23-Apr
Herbicides:		
Atrazine	2 pt/a	27-May
Insecticides:		

Growing Conditions:

	Average Temp. °F	Precip. in.	Irrigation in.
January			
February			
March			
April	53.7	0.83	2.0
May	62.0	0.24	1.7
June	72.8	1.35	1.1
July	74.5	6.56	2.4
August	74.0	4.25	3.5
September	64.0	0.87	0.0
October†	57.8	0.00	0.0
November			
December			

† Oct. 1-8

Seasonal Precipitation	14.1 in.
Total Irrigation	10.7 in.
Date of Last Spring Frost:	20-Apr
Date of First Fall Frost:	23-Sep
Frost Free Period:	156 days

Table 14B. New Mexico 2009 Irrigated Forage Sorghum Performance Test - Agricultural Science Center at Clovis

Results

Brand/Company Name	Hybrid/Variety Name	Sorghum[1] Type	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, Inc.	SS405	Conv	12.4	31.9	61.2	5.4	56.5	64.3	5.5	62.1	0.57	2476	27225
Forage First	FS-5	Conv	11.6	29.7	60.8	6.5	47.3	65.9	6.0	61.6	0.56	2435.7	25186
Sorghum Partners, Inc.	NK300	Conv	9.6	22.7	57.6	7.0	53.9	60.5	6.6	61.3	0.57	2467	21122
Sorghum Partners, Inc.	HIKANE II	Conv	8.8	22.5	60.7	6.9	46.2	65.8	6.0	62.0	0.57	2470.7	19388
Pioneer Seed Co.	849 F	Conv	8.8	20.7	57.8	7.0	56.4	60.6	6.5	60.6	0.56	2411	18799
Coffey Forage Seeds, Inc.	EXP3017	BMR	8.1	17.0	52.5	7.3	53.9	63.8	6.9	63.4	0.59	2593	18661
Coffey Forage Seeds, Inc.	EXP2017	BMR	8.0	22.4	64.1	7.3	44.5	69.0	6.5	62.0	0.56	2441	17421
Coffey Forage Seeds, Inc.	FS6810	BMR	6.2	16.3	61.9	8.2	50.3	69.2	7.4	62.5	0.56	2451	13522
	Trial Mean		9.2	22.9	59.6	7.0	51.1	64.9	6.4	61.9	0.57	2468	20166
	LSD		1.3	3.2	2.8	0.6	4.0	2.3	1.0	NS	NS	NS	3702
	LSD P >		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	CV		8.2	7.9	2.7	5.3	4.5	2.0	9.0	2.0	2.9	4.2	10.5
	F Test		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0380	0.3328	0.4968	0.5785	<0.0001

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

Table 15A. New Mexico 2009 Dryland Forage Sorghum Performance Test - Agricultural Science Center at Clovis

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

Test Description

Location:

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:	60,000 seed/a

Management Practices:

Previous Crop:	fallow
Planting Date:	16-Jun
Harvest Date:	8-Oct

Production Inputs

	Rate	Date
Fertilizer:		
Nitrogen	23 lb/a	carryover
Nitrogen	85 lb/a	23-Apr
P_2O_5	40 lb/a	23-Apr
S	13 lb/a	23-Apr
Zn	0.75 lb/a	23-Apr
Herbicides:		
Atrazine	2 pt/a	18-Jun
Insecticides:		

Growing Conditions:

	Average Temp.	Precip.	Irrigation
	°F	in.	in.
January			
February			
March			
April			
May	62.0	0.24	
June	72.8	1.35	2.3*
July	74.5	6.56	
August	74.0	4.25	
September	64.0	0.87	
October†	57.8	0.00	
November			
December			

† Oct. 1-8

* Emergence and soil crust mellowing irrigations.

Seasonal Precipitation	13.3 in.
Total Irrigation	2.3 in.
Date of Last Spring Frost:	20-Apr
Date of First Fall Frost:	23-Sep
Frost Free Period:	156 days

Table 15B. New Mexico 2009 Dryland Forage Sorghum Performance Test - Agricultural Science Center at Clovis

Results

Brand/Company Name	Hybrid/Variety Name	Sorghum† Type	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, Inc.	SS405	Conv	8.4	26.9	68.8	7.3	50.6	66.5	6.8	61.3	0.55	2393.7	20055
Sorghum Partners, Inc.	NK300	Conv	7.7	19.5	60.6	7.4	55.3	61.9	7.5	61.4	0.57	2451.3	18837
Forage First	FS-5	Conv	7.6	22.8	66.7	7.3	47.6	66.4	6.3	61.9	0.56	2447	18614
Sorghum Partners, Inc.	HIKANE II	Conv	6.6	19.2	65.6	7.6	46.3	66.4	6.3	62.7	0.57	2515	16547
Coffey Forage Seeds, Inc.	FS6810	BMR	6.4	18.8	65.8	7.6	44.0	70.9	7.0	61.9	0.55	2411	15477
Coffey Forage Seeds, Inc.	EXP3017	BMR	5.9	13.9	57.7	7.0	54.3	65.9	7.0	63.3	0.58	2547	15031
Coffey Forage Seeds, Inc.	EXP2017	BMR	4.9	14.1	65.4	9.9	50.0	69.5	8.2	62.2	0.56	2426	11880
	Trial Mean		6.8	19.3	64.4	7.7	49.7	66.8	7.0	62.1	0.56	2456	16634
	LSD		1.0	3.1	2.6	0.8	3.0	2.3	0.7	NS	0.02	NS	2621
	LSD P >		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	CV		7.9	8.9	2.3	6.1	3.4	1.9	5.7	1.3	1.7	2.6	8.9
	F Test		<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	0.0012	0.1255	0.0490	0.1012	0.0003

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

Table 16A. New Mexico 2009 Irrigated Forage Sorghum Performance Test - Agricultural Science Center at Los Lunas

Investigators: M. Place and M.A. Marsalis

Test Description

Location:

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

Test Design:

Replications:	4
Plot Length:	10 ft.
Rows per Plot:	2
Row Spacing:	30 in.
Seeding Rate:	69000 seed/a

Management Practices:

Previous Crop:	Alfalfa
Planting Date:	13-May
Harvest Date:	15-Sep

Production Inputs

	Rate	Date
Fertilizer:		
46-0-0	100 lb/a	25-Feb
33-0-0-11	275 lb/a	4-Jun
46-0-0	275 lb/a	19-Jun

Total: N	P	K	S
262	0	0	30

Herbicides:

Insecticides:

Growing Conditions:

	Average Temp. °F	Precip. in.	Irrigation in.
January	37.5	0.00	
February	42.4	0.00	
March	48.8	0.30	
April	55.0	0.14	
May	68.2	0.96	3
June	72.9	0.98	6
July	79.5	1.92	9
August	75.3	0.98	6
September	67.5	2.20	
October†	55.1	1.31	
November	44.2	0.14	
December	38.0	0.15	

† Oct. 1-8

Seasonal Precipitation	7.2 in.
Total Irrigation	24.0 in.
Date of Last Spring Frost:	20-Apr
Date of First Fall Frost:	2-Oct
Frost Free Period:	165 days

Table 16B. New Mexico 2009 Irrigated Forage Sorghum Performance Test - Agricultural Science Center at Los Lunas

Results

Brand/Company Name	Hybrid/Variety Name	Sorghum† Type	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, Inc.	SS405	Conv	10.8	34.6	68.7	7.7	56.5	66.0	6.3	65.2	0.60	2700	29111.5
Sorghum Partners, Inc.	HIKANE11	Conv	7.2	22.9	68.7	7.9	46.9	69.5	4.5	70.5	0.66	3099.3	22224.5
Sorghum Partners, Inc.	NK300	Conv	5.8	14.3	60.0	8.7	42.7	62.1	4.9	70.2	0.68	3179.5	18327.3
	Trial Mean		7.9	23.9	65.8	8.1	48.7	65.9	5.2	68.6	0.65	2992	23221
	LSD		2.7	8.3	1.9	NS	8.1	NS	1.2	NS	0.05	360	6843
	LSD P >		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	CV		20.1	20.1	1.7	8.6	9.6	9.6	13.7	4.2	4.5	6.9	17.0
	F Test		0.0103	0.0029	<0.0001	0.1972	0.0151	0.3274	0.0292	0.0726	0.0224	0.0358	0.0225

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

Table 17A. New Mexico 2009 Dryland Forage Sorghum Performance Test - Agricultural Science Center at Tucumcari

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

Test Description

Location:

County/Area:	Quay
Longitude:	-103.69
Latitude:	35.12
Elevation:	4091 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:	5 lb/ac

Management Practices:

Previous Crop:	Teff
Planting Date:	29-May
Harvest Date:	8-Oct

Production Inputs

	Rate	Date
Fertilizer:		
Nitrogen	50 lb/a	22-May
Herbicides:		
Aatrex 80W	2.5 lb/ac	22-May

Growing Conditions:

	Average Temp. °F	Precip. in.	Irrigation in.
January			
February			
March			
April			
May	67.0	1.08	
June	76.0	0.63	
July	80.0	2.30	
August	75.0	2.81	
September	68.0	0.20	
October	55.0	1.71	
November			
December			

Seasonal Precipitation	8.7 in.
Total Irrigation	0.0 in.

Date of Last Spring Frost:	13-Apr
Date of First Fall Frost:	2-Oct
Frost Free Period:	172 days

Table 17B. New Mexico 2009 Dryland Forage Sorghum Performance Test - Agricultural Science Center at Tucumcari

Results

Brand/Company Name	Hybrid/Variety Name	Stand	Dry Forage	Green Forage	Moisture at Harvest	CP	ADF	NDF	NDFD	TDN	NEI	RFV	RFQ
		%	t/a	t/a	%	%	%	%	%	%	Mcal/lb	---	---
Coffey Forage Seeds, Inc.	FS6810	62.5	0.39	1.37	71.4	11.10	28.8	51.9	69.5	69.7	0.72	119	147
Sorghum Partners, Inc.	HiKane II	46.3	0.30	1.02	70.9	11.60	30.5	54.1	64.5	67.8	0.70	112	137
Sorghum Partners, Inc.	NK300	52.5	0.57	2.07	72.7	11.90	29.4	53.4	64.3	69.1	0.71	115	135
Sorghum Partners, Inc.	SS405	40.0	0.39	1.49	74.8	11.50	31.1	53.9	65.8	67.1	0.69	112	132
	Trial Mean	50.3	0.41	1.49	72.4	11.53	29.9	53.3	66.0	68.4	0.71	115	138
	LSD	NS	NS	NS	NS	NS	1.3	NS	4.1	1.5	0.02	NS	NS
	LSD P >	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	CV	24.9	39.8	35.4	2.8	4.9	2.8	2.5	3.8	1.4	1.5	3.4	5.6
	F Test	0.1412	0.2029	0.0951	0.0897	0.3320	0.0131	0.1698	0.0572	0.0130	0.0130	0.0910	0.1396

Table 18A. New Mexico 2009 Irrigated Sorghum x Sudan Performance Test - Agricultural Science Center at Artesia

Investigators: F.E. Contreras-Govea and L. Carrasco

Test Description

Location:

County/Area:	Eddy
Longitude:	-104.38
Latitude:	32.75
Elevation:	3348 ft
Soil Name:	Reagan
Soil Texture:	loam
Soil Depth:	>80 in.

Test Design:

Replications:	4
Plot Length:	25 ft.
Rows per Plot	2
Row Spacing	40 in.
Seeding Rate:	104,000 seeds/a

Management Practices:

Previous Crop:	Cotton
Planting Date:	15-May
Harvest Date:First Harvest	4-Aug
Second Harvest	6-Oct

Production Inputs:

		Rate	Date
Fertilizer:			
	Nitrogen	100 lb/a	26-Jun
		64 lb/a	11-Aug
Herbicides:			
	Yukon	6 oz/ac	8-Jun
Insecticides:			
	Cobal	6 oz/ac	14-Jul

Growing Conditions:

	Average Temp	Precip.	Irrigation
	F	in.	in.
January	41.5	0.00	
February	47.6	0.00	
March	53.2	0.46	
April	58.7	0.00	
May	70.6	0.73	6.58
June	77.8	1.16	5.43
July	81.1	4.89	4.71
August	79.0	0.08	2.21
September	69.9	0.33	
October	59.9	1.54	

Precipitation:	9.19
Total Irrigation:	18.93
Date of Last Spring Frost:	18-Apr
Date of First Fall Frost:	30-Oct
Frost Free Period:	195

Table 18B. New Mexico 2009 Irrigated Sorghum x Sudangrass Performance Test - Agricultural Science Center at Artesia

Brand/Company Name	Hybrid/Variety Name	Dry Forage 1st Cut	Dry Forage 2nd Cut	Dry Forage Total	Green Forage 1st Cut	Green Forage 2nd Cut	Green Forage Total	Moisture 1st Cut	Moisture 2nd Cut	Milk per Ton 1st Cut	Milk per Ton 2nd Cut	Milk per Acre 1st Cut	Milk per Acre 2nd Cut
		t/a	t/a	t/a	t/a	t/a	t/a	%	%	lb/t	lb/t	lb/ac	lb/ac
Sorghum Partners, Inc.	Sordan 79	5.9	5.3	11.2	31.9	32.0	63.9	81.7	83.3	1349	1702	7893	9113
Dyna-Gro/UAP	DG Danny Boy	5.3	4.5	10.2	34.0	29.5	46.9	84.5	84.6	2088	2144	11015	9697
Coffey Forage Seed, Inc.	Exp 3017	5.1	5.1	9.8	23.1	23.8	63.5	78.0	78.7	2148	2400	10908	12199
Sorghum Partners, Inc.	Trudan 8	4.7	5.0	9.7	20.1	25.2	45.3	76.6	80.2	1402	2068	6591	10302
Sorghum Partners, Inc.	Sordan Headless	4.4	3.5	8.0	36.5	23.8	60.3	87.9	85.2	1559	1556	6925	5553
Sorghum Partners, Inc.	Sordan BMR	4.3	2.6	7.7	28.3	19.0	47.1	84.5	86.6	2002	2135	8631	5486
Sorghum Partners, Inc.	Trudan Headless	4.1	3.5	6.9	25.4	21.8	47.3	83.8	83.8	1600	1743	6608	6177
Coffey Forage Seed, Inc.	Exp 2017	3.5	3.3	6.8	21.0	20.1	41.1	83.1	83.6	2242	2478	7904	8182
Sorghum Partners, Inc.	Trudan BMR	3.0	3.0	6.0	22.0	20.4	42.4	86.4	85.3	2008	2192	5991	6607
	Trial Mean	4.49	3.93	8.42	27.82	23.91	51.72	83.35	83.68	1792	1994	7939	7848
	LSD	0.80	0.77	1.15	3.39	4.32	6.33	2.79	0.88	166	189	1376	1640
	LSD>	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	CV	12.35	13.56	9.40	8.39	12.45	8.43	2.31	0.72	6.37	6.54	11.95	14.40
	F test	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Table 18C. New Mexico 2009 Irrigated Sorghum x Sudangrass Performance Test - Agricultural Science Center at Artesia

Brand/Company Name	Hybrid/Variety Name	Crude Protein 1st Cut	Crude Protein 2nd Cut	ADF 1st Cut	ADF 2nd Cut	NDF 1st Cut	NDF 2nd Cut	NDFD-48 1st Cut	NDFD-48 2nd Cut	TDN 1st Cut	TDN 2nd Cut	Nel 1st Cut	Nel 2nd Cut
		%	%	%	%	%	%	%	%	%	%	Mcal/lb	Mcal/lb
Sorghum Partners, Inc.	Sordan 79	8.4	8.6	52.2	48.0	75.6	71.6	46.5	48.1	42.4	47.1	0.42	0.47
Dyna-Gro/UAP	DG Danny Boy	9.6	9.6	48.0	47.7	70.9	71.2	57.6	57.7	51.2	52.0	0.52	0.52
Coffey Forage Seed, Inc.	Exp 3017	8.9	9.8	46.5	43.1	70.4	66.7	56.8	58.5	52.1	55.5	0.53	0.56
Sorghum Partners, Inc.	Trudan 8	7.7	10.0	52.1	44.1	76.5	66.0	46.6	51.0	43.1	51.8	0.43	0.52
Sorghum Partners, Inc.	Sordan Headless	9.5	8.4	50.0	52.1	72.8	75.0	48.6	50.6	45.0	44.7	0.45	0.44
Sorghum Partners, Inc.	Sordan BMR	10.7	10.9	47.1	46.8	68.5	68.7	56.2	58.0	50.2	51.8	0.50	0.52
Sorghum Partners, Inc.	Trudan Headless	9.0	10.1	50.9	50.4	73.7	73.5	49.7	51.7	45.5	47.2	0.45	0.47
Coffey Forage Seed, Inc.	Exp 2017	10.3	10.0	45.9	43.8	68.4	66.7	59.2	61.5	53.2	56.2	0.54	0.57
Sorghum Partners, Inc.	Trudan BMR	10.1	11.6	47.1	46.8	69.6	68.2	56.3	59.4	50.3	52.5	0.50	0.53
	Trial Mean	9.35	9.72	49.03	47.51	71.92	70.28	52.61	54.61	47.76	50.31	0.48	0.50
	LSD	0.73	1.58	1.90	2.34	2.28	3.43	1.86	2.15	2.08	2.41	0.02	0.03
	LSD>	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	CV	5.36	11.22	2.68	3.40	2.19	3.36	2.44	2.71	3.00	3.30	3.27	3.58
	F test	<0.0001	0.0031	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Table 19A. New Mexico 2009 Irrigated Sorghum x Sudangrass Performance Test - Agricultural Science Center at Los Lunas

Investigators: M. Place and M.A. Marsalis

Test Description

Location:

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

Test Design:

Replications:	4
Plot Length:	10 ft.
Rows per Plot:	2
Row Spacing:	30 in.
Seeding Rate:	69000 seed/a

Management Practices:

Previous Crop:	Alfalfa
Planting Date:	13-May
Harvest Date:	15-Sep

Production Inputs

Fertilizer:	Rate	Date
46-0-0	100 lb/a	25-Feb
33-0-0-11	275 lb/a	4-Jun
46-0-0	275 lb/a	19-Jun

Total: N	P	K	S
262	0	0	30

Herbicides:

Insecticides:

Growing Conditions:

	Average Temp. °F	Precip. in.	Irrigation in.
January	37.5	0.00	
February	42.4	0.00	
March	48.8	0.30	
April	55.0	0.14	
May	68.2	0.96	3
June	72.9	0.98	6
July	79.5	1.92	9
August	75.3	0.98	6
September	67.5	2.20	
October†	55.1	1.31	
November	44.2	0.14	
December	38.0	0.15	

† Oct. 1-8

Seasonal Precipitation	7.2 in.
Total Irrigation	24.0 in.

Date of Last Spring Frost:	20-Apr
Date of First Fall Frost:	2-Oct
Frost Free Period:	165 days

Table 19B. New Mexico 2009 Irrigated Sorghum x Sudangrass Performance Test - Agricultural Science Center at Los Lunas

Results

Brand/Company Name	Hybrid/Variety Name	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, Inc	Sordan Headless	N	9.7	39.9	75.7	8.0	60.4	66.3	7.2	63.5	0.58	2550.8	25076.8
Sorghum Partners, Inc	Trudan Headless	N	9.1	34.0	73.4	6.5	62.1	66.9	5.8	64.9	0.59	2640.5	23859.8
Sorghum Partners, Inc	Trudan BMR	Y	8.0	34.5	76.8	9.1	61.8	70.7	8.2	65.9	0.59	2659	21417
Sorghum Partners, Inc	Sordan 79	N	7.9	24.8	68.5	6.8	56.3	63.0	5.5	65.8	0.62	2791.5	21970.3
Sorghum Partners, Inc	Sordan BMR	Y	6.4	32.7	80.6	9.2	60.9	69.6	8.6	64.8	0.59	2594.8	16561.5
Sorghum Partners, Inc	Trudan 8	N	6.2	18.2	65.7	7.5	58.8	61.0	6.5	62.9	0.59	2586.5	16133.5
	Trial Mean		7.9	30.7	73.4	7.9	60.0	66.3	7.0	64.6	0.59	2637	20836
	LSD		1.4	4.2	3.9	0.9	2.6	4.4	0.9	NS	0.02	139	4199
	LSD P >		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	CV		12.0	9.1	3.5	7.3	2.9	4.4	8.1	2.5	2.2	3.5	13.4
	F Test		0.0004	<0.0001	<0.0001	<0.0001	0.0022	0.0018	<0.0001	0.1066	0.0066	0.0295	0.0013

Table 20A. New Mexico 2009 Dryland Sorghum x Sudangrass Performance Test - Agricultural Science Center at Tucumcari

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

Test Description

Location:

County/Area:	Quay
Longitude:	-103.69
Latitude:	35.12
Elevation:	4091 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

Management Practices:

Previous Crop:	Teff
Planting Date:	29-May
Harvest Date:	8-Oct

Production Inputs

	Rate	Date
Fertilizer:		
Nitrogen	50 lb/a	22-May
Herbicides:		
Aatrex 80W	2.5 lb/ac	22-May

Growing Conditions:

	Average Temp. °F	Precip. in.	Irrigation in.
January			
February			
March			
April			
May	67.0	1.08	
June	76.0	0.63	
July	80.0	2.30	
August	75.0	2.81	
September	68.0	0.20	
October	55.0	1.71	
November			
December			

Seasonal Precipitation	8.7 in.
Total Irrigation	0.0 in.

Date of Last Spring Frost:	13-Apr
Date of First Fall Frost:	2-Oct
Frost Free Period:	172 days

Table 20B. New Mexico 2009 Dryland Sorghum x Sudangrass Performance Test - Agricultural Science Center at Tucumcari

Results

Brand/Company Name	Hybrid/Variety Name	Stand	Dry Forage	Green Forage	Moisture at Harvest	CP	ADF	NDF	NDFD	TDN	NEI	RFV	RFQ
		%	t/a	t/a	%	%	%	%	%	%	Mcal/lb	---	---
Coffey Forage Seeds, Inc.	EXP2017	36.3	0.74	2.17	65.5	11.4	28.6	53.0	68.3	70.0	0.73	117	148
Coffey Forage Seeds, Inc.	EXP3017	42.5	0.64	1.75	64.0	9.8	30.6	53.9	67.3	67.7	0.70	113	136
Sorghum Partners, Inc.	Sordan 79	51.3	0.83	2.43	66.2	10.5	31.1	55.0	63.3	67.1	0.69	109	133
Sorghum Partners, Inc.	Sordan BMR	67.5	0.78	2.42	67.9	11.1	30.4	54.3	64.0	67.9	0.70	112	136
Sorghum Partners, Inc.	Sordan Headless	62.5	1.10	3.47	68.6	9.7	30.9	55.0	63.3	67.4	0.70	110	130
Sorghum Partners, Inc.	Trudan 8	42.5	0.57	1.47	60.9	8.3	34.0	57.5	58.8	63.9	0.66	101	117
Sorghum Partners, Inc.	Trudan BMR	67.5	0.83	2.69	68.9	10.9	30.6	53.9	67.8	67.7	0.70	112	140
Sorghum Partners, Inc.	Trudan Headless	43.8	0.71	2.29	68.5	10.4	30.9	54.8	63.5	67.3	0.70	110	133
	Trial Mean	51.7	0.77	2.34	66.3	10.3	30.9	54.7	64.5	67.4	0.70	110	134
	LSD	18.6	NS	NS	3.3	1.6	1.1	1.6	2.6	1.3	0.01	4	8
	LSD P >	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	CV	24.4	38.1	37.4	3.3	10.7	2.4	2.0	2.7	1.3	1.4	2.6	4.0
	F Test	0.0072	0.3627	0.1175	0.0004	0.0172	0.0001	0.0005	0.0001	0.0001	0.0001	0.0001	0.0001

Appendix A

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

New Mexico 2009 Grain Corn Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Relative Maturity
		(days)
DOW/Mycogen Seeds	**Full Season:**	
8401 Shady Lake Dr.	2G847	116
Canyon, TX 79105	2W814	115
(806) 367-4521	2T832	115
Peter Hill	2T804	114
Eureka Seeds, Inc.	**Full Season:**	
P.O. Box 1866	X9032 VT3	116
Woodland, CA 95776	X9082 VT3	117
(530) 661-6995		
Craig Sharp		
Grand Valley Hybrids	**Full Season:**	
859 23 Road	X5T138	110
Grand Junction, CO 81503	23T51	112
(970) 243-3115	X6R136	111
Bill Rooks	X6RHX132	112
	X6GB147	114
Monsanto Company	**Full Season:**	
800 N. Lindbergh Blvd.	Dekalb DKC 64-79 (VT3)	114
St. Louis, MO 63137	Dekalb DKC 61-69 (VT3)	111
(815) 754-4809	Dekalb DKC 69-40 (VT3)	119
Diane Freeman	Dekalb DKC 46-60 (VT3)	96
	Dekalb DKC 50-44 (VT3)	100
	Dekalb DKC 50-66 (VT3)	100
	Dekalb DKC 52-59 (VT3)	102

New Mexico 2009 Grain Corn Hybrid Performance Test (cont.)

Company/Brand Name	Hybrid/Variety Name	Relative Maturity (days)
Pioneer Hi-Bred International, Inc.	**Early Season:**	
8100 S. 15th St.	PO541 HR	105
Lincoln, NE 68512	36V75	102
(402) 328-4055	PO125 HR	101
Bill McClure		
Triumph Seed Co., Inc.	**Early Season:**	
P.O. Box 1050	1121 V	110
Ralls, TX 79357	5501 X	104
888-521-7333		
Ben Benton		

New Mexico 2009 Forage Corn Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Relative Maturity
DOW/Mycogen Seeds	2L831	118
8401 Shady Lake Dr.	2N804	116
Canyon, TX 79105	2Q759	113
(806) 367-4521	2Q716	109
Peter Hill	2W814	115
Eureka Seeds, Inc.	X8013 VT3	118
P.O. Box 1866	X9015 RR	118
Woodland, CA 95776	X9054 RR	118
(530) 661-6995	X9064 RR	117
Craig Sharp	ES-7654 RR	116
Golden Acres Genetics	27Z07	117
P.O. Box 579	28Y47	118
Buchanan Dam, TX 78609	28Y97	118
(512) 793-5205		
James Allison		
Grand Valley Hybrids	26T50	119
859 23 Road	25T57	116
Grand Junction, CO 81503	X7R145	118
(970) 243-3115		
Bill Rooks		
Monsanto Company		
800 N. Lindbergh Blvd.	Dekalb DKC 67-87 (RR2/YGCB)	117
St. Louis, MO 63137		
(815) 754-4809		
Diane Freeman		
Triumph Seed Co., Inc.		
P.O. Box 1050	1825V	119
Ralls, TX 79357	2288H	122
(888) 521-7333	8539R	118
Ben Benton		

New Mexico 2009 Grain Sorghum Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Maturity Group*
Dyna-Gro Seed (UAP Southwest)	**Limited Irrigation:**	
3492 Long Prairie Road, Suite 200	DG 772 B	M
Flower Mound, TX 75022		
(318) 282-9804	**Dryland:**	
Shawn Carter	DG 771 B	M
Sorghum Partners, Inc.	**Limited Irrigation:**	
P.O. Box 189	NK7633	ML
New Deal, TX 79350	SP 6680	M
(806) 746-5566	NK5418	M
David Thomas	NK 4420	ME
	Dryland:	
	NK 5418	M
	NK 4420	ME
	SP 3303	E
	Full Irrigation:	
	NK 7829	ML
	NK 8831	L
	SP 6680	M
Pioneer Hi-Bred International, Inc.	**Dryland:**	
8100 S. 15th St.	86G32	ME
Lincoln, NE 68512	85G46	M
(402) 328-4055	85G03	M
Bill McClure		
Triumph Seed Co., Inc.	**Limited Irrigation:**	
P.O. Box 1050	TRX 85001	ML
Ralls, TX 79357	TRX 95004	ML
(888) 521-7333	TR 481	ML
Ben Benton		

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

New Mexico 2009 Forage Sorghum Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Maturity Group*	Brown Midrib
Coffey Forage Seeds, Inc.	**Irrigated:**		
2106 South Date Street	FS 6810	ML	Y
Plainview, TX 79072	EXP 2017	M	Y
(806) 293-5304	EXP 3017	M	Y
Brad Smith	**Dryland:**		
	FS 6810	ML	Y
	EXP 2017	M	Y
	EXP 3017	M	Y
Dyna-Gro Seed (UAP Southwest)	**Irrigated:**		
3492 Long Prairie Road, Suite 200	DG 712 F		N
Flower Mound, TX 75022			
(318) 282-9804			
Shawn Carter			
Pioneer Hi-Bred International, Inc.	**Irrigated:**		
8100 South 15th St.	849F	M	N
Lincoln, NE 68512			
(402) 328-4055			
Bill McClure			
Sorghum Partners, Inc.	**Irrigated:**		
P.O. Box 189	NK 300	ME	N
New Deal, TX 79350	HIKANE II	M	N
(806) 746-5566	SS 405	L	N
David Thomas	**Dryland:**		
	NK 300	ME	N
	HIKANE II	M	N
	SS 405	L	N

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

New Mexico 2009 Sorghum X Sudangrass Hybrid Performance Test

Company/Brand Name	Hybrid/Variety Name	Maturity Group*	Brown Midrib
Coffey Forage Seeds, Inc.	**Irrigated:**		
2106 South Date Street	EXP 2017	M	Y
Plainview, TX 79072	EXP 3017	M	Y
(806) 293-5304			
Brad Smith			
Dyna-Gro Seed UAP	**Irrigated:**		
3492 Long Prairie Road, Suite 200	DG Danny Boy	PS	N
Flower Mound, TX 75022			
(318) 282-9804			
Shawn Carter			
Sorghum Partners, Inc.	**Irrigated:**		
P.O. Box 189	Sordan 79		N
New Deal, TX 79350	Sordan Headless		N
(806) 746-5566	Sordan BMR		Y
David Thomas	Trudan BMR		Y
	Trudan Headless		N
	Trudan 8		N

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

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; in recent years, however, research has indicated that ADF is not as strongly correlated with decreased digestibility as once thought.

Ash: 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. Instead, CP is an estimate of total protein based on the nitrogen content of a sample. This fraction consists of non-protein nitrogen as well.

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

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

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

Green Forage: 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: 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 lb.

Lodging: 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 quality. Milk/ton is calculated from the Milk2006 Excel spreadsheet (http://www.uwex.edu/ces/crops/uwforage/dec_soft.htm). This index uses forage analyses (CP, NDF, NDFD 48hr, Starch and non-fiber carbohydrate) to estimate energy content, and uses dry matter intake and NDFD 48hr to predict Milk/ton. Forage corn quality was predicted using the new Milk2006 program.

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

NDF (Neutral Detergent Fiber): 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): 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): The energy value of feeds for lactating cows.

N Removal: The total amount of nitrogen, in pounds per acre, that is removed from the field at harvest. N Removal = dry forage (ton/ac) x 2000 x N (%), where N (%) = CP (%) / 6.25.

Plant Height: The average height of the plant measured from the ground to the top of the canopy at harvest.

Population: 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): An index that estimates the overall quality of the forage for a ruminant. The equation uses ADF to estimate the digestible dry matter content of the forage; this is then combined with an estimate of dry matter intake, which is an estimate of the amount of forage an animal will eat in a given time period. RFV is the most widely used forage quality index in the United States. It is scaled so that full-bloom alfalfa hay would score 100. Typically, hay must score above 150 RFV to be considered ‘dairy quality’ hay.

RFQ (Relative Forage Quality): RFQ is similar to RFV in that it is an estimate of overall quality of a forage, but it differs in the way it is calculated. RFQ takes TDN into account rather than digestible dry matter calculated from ADF values. This TDN, combined with dry matter intake, is derived from *in vitro* estimates of digestible fiber. The RFQ value is considered an improved method over RFV and is rapidly becoming the new ‘standard’ in forage quality testing.

Silk Date: The date when 50% of plants have begun to show silks.

Starch: The percentage of starch in the forage.

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: The bushel weight equivalent of a sample of grain.