The Agriculture Program
The Texas A&M University System

2007 Texas Panhandle Forage Sorghum Silage Trial

Brent Bean[1], Ted McCollum[1], Bob Villareal[2],
Jake Robinson[2], Emalee Buttrey, Rex VanMeter[2], and Dennis Pietsch[3]

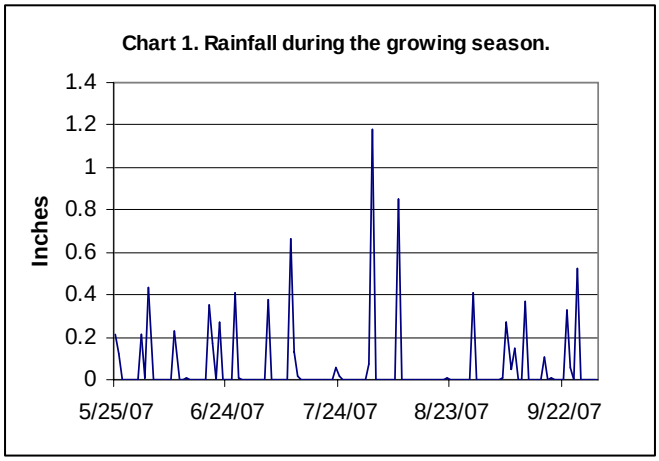
Texas Cooperative Extension and Texas Agricultural Experiment Station

Introduction

The summer of 2007 we completed our ninth year of consecutive sorghum silage variety trials conducted at the Texas Agricultural Experiment Station Bush Farm, located approximately 8 miles west of Amarillo. Results of trials from previous years can be found at http://amarillo.tamu.edu/programs/agronomy/. In addition, this year we conducted a hay trial where two cuttings were collected during the season. The hay is summarized in a separate report. This year's silage trial is made up mostly of true forage sorghums. Most of the sorghum/sudangrass hybrids were entered in the hay trial.

Methods and Materials

The trial was made up of 69 hybrids provided mostly by seed companies on a per fee basis. Several male sterile hybrids were included. With the exception of the photoperiod sensitive hybrids all entries were capable of producing grain due to cross-pollination that occurred in the field with other hybrids. Seed companies will provide pollinator seed for male sterile hybrids if desired. The hybrids were planted in a randomized block design in four row plots planted on 30-inch raised beds. Irrigation was applied by furrow and the three replications (blocks) were stacked with the first replication being closest to the gated pipe, followed by the second and third replications. Irrigation scheduling was determined by monitoring gypsum blocks placed in the soil at depths of 1, 2, and 3 feet. Gypsum blocks were read every two to three days and plots were irrigated when the average of the three moisture blocks fell below 60. Approximately 5.25 inches of water was applied during the season along with a pre-irrigation of 4.7 inches. The photoperiod sensitive hybrids received an additional 2.9 inches on August 27th. Rainfall totaled 8.1inches during the growing season (May 25 – Oct 1) (Chart 1). Each hybrid was harvested for forage yield when grain reached the soft dough stage. Photoperiod sensitive hybrids were harvested on the last harvest date of the season (Sep 25).



[1] Extension Agronomist and Beef Cattle Specialist, respectively, Texas A&M Agricultural Research & Extension Center, Amarillo, phone: 806-677-5600, Email: b-bean@tamu.edu and ft-mccollum@tamu.edu .
[2] Ext. or Res. Assistants or Associates. Texas A&M Research and Extension Center, Amarillo.
[3] Res. Assoc., Crop Testing Program, TAMU College Station, Phone: 979-845-8505, Email: croptesting@tamu.edu.

Other cultural practices and study information are listed below:

Trial Location:	Bush farm located one mile north of Bushland, TX
Cooperator:	Texas Agricultural Experiment Station
Previous Crop:	Wheat
Soil Type:	Pullman Clay Loam, pH = 7.4
Plot Size:	Four, 30 inch rows by 25 ft
Replications:	3
Study Design:	Randomized complete block
Planting Date:	May 30, 2007
Planting Rate:	90,000 seed/acre
Seed Method:	John Deere Max-emerge Planter
Fertilizer:	170 lbs N. No P needed based on soil test for a 27 ton yield
Herbicide:	One lb/acre atrazine applied immediately after planting
Irrigation:	Furrow irrigated based on moisture block readings Approximately 5.25 inches applied during the growing season The PS hybrids received an additional late season irrigation of 2.9 inches on August 27th
Silage Harvest Date:	Plots were checked weekly and harvested when grain was in the soft dough stage. Harvest dates ranged from September 4 to September 25 and are reported in Table 2.
Grain Harvest Date:	November

Data Collected:

- Plant height (ft) at silage harvest
- Lodging at silage harvest. Percent of fallen or significantly leaning plants per plot.
- Silage yield. Collected at or near the soft dough stage from 10 feet of row. Yield is reported at 65% moisture in tons/acre.
- Nutrient analysis: Whole plant sub-samples were collected from the yield sample immediately after harvest, chopped, and frozen. These sub-samples were sent to Dairy One Laboratory, Ithaca, NY for analysis. All nutrient constituents were adjusted to a 100% moisture-free basis.
- Grain yield was collected from 10 feet of row from each plot. Samples were thrashed and yield reported in lb/acre. No moisture correction was made.
- Key Nutrient Analysis Definitions

Crude Protein:	6.25 * % total nitrogen
TDN:	Estimate of total digestible nutrients
NDF:	Neutral detergent fiber; cell wall fraction of the forage
ADF:	% acid detergent fiber; constituent of the cell wall includes cellulose and lignin; inversely related to energy availability
NEl:	Estimate of Net Energy for lactation
NEm:	Estimate of Net Energy for maintenance
NEg:	Estimate of Net Energy for gain
IVTD:	% in vitro true digestibility; positively related to energy availability

RFV: Relative Feed Value is an index for comparing forages based on digestibility and intake potential. RFV is calculated from ADF and NDF. An RFV of 100 is considered the average score and represents alfalfa hay containing 41% ADF and 53% NDF on a dry matter digestibility.

RFQ: Relative Forage Quality is an index for comparing forages. RFQ is calculated from CP, ADF, NDF, fat, ash and NDF digestibility measured at 48 hours. It should be more reflective of the feeding value of the forage. RFQ is based on the same scoring system as RFV with an average score of 100. The higher the RFQ score the better the quality.

Milk lbs/ton: A projection of potential milk yield per ton for forage dry matter.

Results and Discussion

A summary of yield, agronomic traits, and nutrient composition, are reported by groups of different sorghum types in Table 1. See Table 2 for a listing of each specific hybrid's agronomy characteristics, yield, and nutrient composition.

Table 1. Summary of key characteristics by sorghum type.

Sorghum Type[1)]	% Lodging @ Harvest	% Moist. @ Harvest	Tons/Ac @ 65% Moist.	% Crude Protein	% ADF	% NDF	TDN	% Lignin	% IVTD	Milk lbs/ton DM	Relative Forage Quality (RFQ)
F. Sorghum NonBMR (34)	12.6	68.7	19.2	7.2	32.0	51.0	62.6	4.1	75.7	2,556	121
F. Sorghum BMR (18)	44.7	68.5	15.7	7.8	29.2	47.2	68.4	3.3	81.1	2,894	143
F. Sorghum PS (3)	5.6	76.4	24.9	6.0	40.7	64.1	55.6	5.4	69.1	2,047	92
F. Sorghum BMR PS (2)	9.8	77.4	22.8	6.4	37.0	60.1	64.3	3.2	77.3	2,495	116
Grain Sorghum (2)	0.0	60.7	16.2	8.5	30.5	49.3	63.3	4.3	77.5	2,583	127
Sorghum/Sudan NonBMR (3)	3.3	68.2	16.8	7.1	32.8	51.1	63.0	4.0	76.4	2,586	131
Sorghum/Sudan BMR (5)	27.7	68.0	16.7	7.2	32.2	51.8	65.3	3.7	78.9	2,662	126
Sorghum/Sudan PS (2)	0.0	75.4	24.1	7.0	38.2	59.9	57.8	4.8	71.0	2,192	103
Test Avg.	20.6	69.1	18.4	7.3	32.0	51.1	64.0	3.9	77.1	2,620	126

[1)] Number in parenthesis is the number of hybrids that make up each sorghum type. BMR = Brown midrib, PS = Photoperiod sensitive.

Excellent precipitation during the preceding winter and spring led to excellent deep soil moisture at the time of planting. All plots were pre-irrigated to insure good seed-bed moisture for germination and stand establishment. Temperatures were relatively mild and timely rainfall was received through most of the growing season (Chart 1). Gypsum blocks placed at the 1, 2, and 3 ft soil depth did not indicate the need for as much irrigation as in previous years. Only 5.25

inches of irrigation water was applied to the majority of the plots during the year. The photoperiod sensitive entries received an additional 2.9 inches of irrigation water during August.

Average yield of the BMR forage sorghums was considerably less than in previous years. Possibly because of the lower amount of irrigation water applied in 2007. BMR forage sorghum silage yield was approximately 18.2% less than nonBMR forage sorghum (Table 1). As in previous years the highest yielding hybrids were the photoperiod nonBMR entries averaging approximately 24.5 ton/acre. When the photoperiod sensitive hybrids were also BMR, yield averaged 2.0 ton/acre less than the nonBMR photoperiod sensitive entries.

Average lodging score of BMR hybrids was the highest we have seen in the eight years we have been conducting silage trials. Corn borer infestation, as well as anthracnose and other stalk rots, were observed throughout the trial and likely led to an increase in lodging that was more pronounced in the BMR hybrids. In some entries where no significant lodging had occurred in previous years, significant lodging was present. For example, Dekalb 5909 has never lodged in previous trials but had a very high lodging score this year.

Grain yield were extremely variable. This was largely due to the unusual amount of lodging that occurred. Additional lodging took place in many of the entries after silage harvest but before grain harvest. No attempt was made to harvest grain from severely lodged plants. As a result, no grain yield is recorded for some entries that did in fact produce significant grain.

As seen in previous tests, on average, the % IVTD was higher for the types of sorghum containing the BMR mutation compared to the similar types without the BMR trait (Tables 1 and 2). IVTD for the nonBMR forage sorghums ranged from 67.7 to 80.0% while the IVTD of the BMR forage sorghums ranged from 77.3 to 84.0%. As noted in previous tests, the photoperiod sensitive (PS) hybrids had the lower IVTD values. Combining the BMR trait with PS improved the IVTD of the PS hybrids.

Table. 2007 Comparison of sorghum hybrids for agronomic characteristics, yield and nutrient composition.

Variety Information [1)]						Agronomic Information at Forage Harvest [2)]								
Hybrid	Company	Sorghum Type	Maturity	BMR	Male Sterile	Height, Ft		% Lodging		% Moisture		Ton/ac @ 65% Moist.		Grain Yield, lb/ac
4 Ever Green	Walter Moss Seed Inc.	Forage Sorghum	PS	N	N	11.3	abc	6.7	h	80.3	a	20.6	c-j	
Mega Green	Walter Moss Seed Inc.	Sorghum/Sudan	PS	N	N	10.9	a-d	0.0	h	75.7	bcd	23.2	bcd	
4 Ever Green BMR	Walter Moss Seed Inc.	Forage Sorghum	PS	Y	N	11.4	ab	4.7	h	77.2	abc	22.3	b-g	
Pacesetter BMR	Richardson Seeds, Ltd.	Forage Sorghum	PS	Y	N	11.9	ab	15.0	fgh	77.5	ab	23.3	bcd	
1990	Sorghum Partners, Inc.	Forage Sorghum	PS	N	N	10.9	a-d	6.7	h	73.2	d-h	28.7	a	
Sugargraze Ultra	Coffey Seed	Sorghum/Sudan	PS	N	N	11.5	ab	0.0	h	75.2	b-e	25.0	abc	
811F	Pioneer Hi-Bred Int., Inc	Forage Sorghum	PS	N	N	11.3	abc	3.3	h	75.6	bcd	25.4	ab	
AR-B Sweet Choice BMR	AR-B Seeds Inc.	Forage Sorghum	M	Y	Y	7.0	g-p	28.3	e-h	69.2	h-t	16.1	i-s	
GW8528Fbmr	Crosbyton Seed Co.	Forage Sorghum	M	Y	N	6.4	j-p	60.0	cd	67.4	l-w	13.4	s	
GW3072	Crosbyton Seed Co.	Forage Sorghum	ML	N	N	5.4	n-r	100.0	a	64.7	u-z	18.1	f-s	
DG 710F	DynaGro Seed	Forage Sorghum	M	N	N	7.7	f-n	0.0	h	66.5	n-w	20.0	d-l	
DG 727F ST	DynaGro Seed	Forage Sorghum	M	Y	Y	6.9	g-p	13.3	gh	71.4	e-m	16.4	h-s	
Garst 318	Garst Seed Co.	Forage Sorghum	M	N	N	7.3	f-o	1.7	h	64.1	v-z	20.9	b-i	
Garst 311	Garst Seed Co.	Forage Sorghum	ME	N	N	7.2	f-p	1.7	h	68.0	k-w	18.9	d-q	
DeKalb FS5	Monsanto	Forage Sorghum	M	N	N	7.6	f-n	0.0	h	71.4	e-l	19.7	d-n	
DeKalb DKS 59-09	Monsanto	Forage Sorghum	M	N	N	5.8	l-r	73.3	bc	65.9	p-x	18.3	e-r	
DeKalb SX71	Monsanto	Sorghum/Sudan	M	N	Y	7.5	f-n	10.0	h	69.7	g-s	14.4	p-s	
MMR 381/73	MMR Genetics	Forage Sorghum	ML	N	N	5.1	pqr	13.3	gh	64.6	u-z	15.6	k-s	
MMR 366/82	MMR Genetics	Sorghum/Sudan	L	Y	N	9.0	d-g	8.3	h	70.1	g-p	20.7	c-j	
MMR 327(381/366)/38	MMR Genetics	Sorghum/Sudan	M	Y	N	6.7	h-p	60.0	cd	67.8	k-w	15.9	j-s	
Millennium BMR	Walter Moss Seed Inc.	Forage Sorghum	L	Y	N	7.7	f-n	61.7	cd	72.0	d-k	14.3	p-s	
SU-2-LM	Walter Moss Seed Inc.	Sorghum/Sudan	L	N	N	9.3	c-f	0.0	h	68.1	k-v	18.3	f-s	
Century BMR	Walter Moss Seed Inc.	Sorghum/Sudan	L	Y	N	7.1	g-p	0.0	h	63.8	w-A	15.7	k-s	
38 Special BMR	Walter Moss Seed Inc.	Sorghum/Sudan	L	Y	N	7.3	f-o	16.7	fgh	70.0	g-q	17.3	h-s	
NC+ Nutri-Choice II	NC+ Hybrids, Inc	Forage Sorghum	ML	N	N	5.6	m-r	0.0	h	69.3	h-t	17.7	f-s	
NC+ Nutri-Ton II	NC+ Hybrids, Inc	Forage Sorghum	ML	N	N	6.9	g-p	0.0	h	70.5	g-o	20.4	c-k	
NC+ Nutri-Cane II	NC+ Hybrids, Inc	Forage Sorghum	M	N	N	7.0	g-p	6.7	h	69.1	h-t	16.9	h-s	
NC+ BMR77F	NC+ Hybrids, Inc	Forage Sorghum	M	Y	N	6.5	i-p	41.7	def	61.0	zA	15.9	j-s	
849F	Pioneer Hi-Bred Int., Inc	Forage Sorghum	M	N	N	7.2	f-p	1.7	h	66.3	o-w	18.9	d-q	
979	Pioneer Hi-Bred Int., Inc	Sorghum/Sudan	M	N	Y	7.0	g-p	0.0	h	66.7	n-w	17.8	f-s	
81T91	Pioneer Hi-Bred Int., Inc	Forage Sorghum	ML	N	N	5.2	o-r	0.0	h	67.1	m-w	20.1	d-l	
Dairymaster BMR	Richardson Seeds, Ltd.	Forage Sorghum	ML	Y	N	8.1	e-l	51.7	cde	68.2	j-v	16.7	h-s	
Sweeter N Honey BMR	Richardson Seeds, Ltd.	Sorghum/Sudan	M	Y	N	7.4	f-n	53.3	cde	68.3	i-v	13.8	rs	
Silo 700D	Richardson Seeds, Ltd.	Forage Sorghum	ML	N	N	6.1	k-q	0.0	h	65.6	s-x	19.8	d-m	
BMR 601D	Scott Seed Co.	Forage Sorghum	ML	Y	N	6.1	k-q	1.7	h	67.4	l-w	16.0	i-s	
SS Silage	Scott Seed Co.	Forage Sorghum	ME	N	N	8.3	e-k	6.7	h	67.9	k-w	17.5	g-s	
Canex BMR208	Sharp Bros. Seed Co.	Forage Sorghum	ME	Y	N	6.6	h-p	50.0	cde	69.5	g-s	14.1	qrs	

Variety Information [1]						Agronomic Information at Forage Harvest [2]								
Hybrid	Company	Sorghum Type	Maturity	BMR	Male Sterile	Height, Ft		% Lodging		% Moisture		Ton/ac @ 65% Moist.		Grain Yield, lb/ac
Canex BMR x403x	Sharp Bros. Seed Co.	Forage Sorghum	M	Y	Y	7.1	g-p	45.0	de	65.1	t-y	19.4	d-o	
Canex BMR x402x	Sharp Bros. Seed Co.	Forage Sorghum	M	Y	Y	7.0	g-p	3.3	h	64.7	u-z	19.4	d-o	
Canex BMR x404x	Sharp Bros. Seed Co.	Forage Sorghum	ME	Y	N	7.1	g-p	66.7	cd	70.2	g-o	13.8	rs	
Canex BMR x405x	Sharp Bros. Seed Co.	Forage Sorghum	ME	Y	Y	7.3	f-o	65.0	cd	70.4	g-o	13.4	rs	
Canex BMR x406x	Sharp Bros. Seed Co.	Forage Sorghum	ME	Y	N	7.2	f-p	41.7	def	67.0	n-w	15.8	j-s	
Canex BMR x407x	Sharp Bros. Seed Co.	Forage Sorghum	ME	Y	Y	7.3	f-p	53.3	cde	66.5	n-w	17.1	h-s	
HIKANE II	Sorghum Partners, Inc.	Forage Sorghum	E	N	N	7.4	f-n	11.7	h	70.4	g-o	15.3	l-s	
SS405	Sorghum Partners, Inc.	Forage Sorghum	L	N	N	9.3	c-f	0.0	h	69.9	g-r	22.3	b-g	
SS506	Sorghum Partners, Inc.	Forage Sorghum	L	N	N	10.2	b-e	0.0	h	68.5	i-u	20.8	b-i	
NK300	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	5.4	n-r	93.3	ab	62.1	x-A	16.7	h-s	
X901	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	5.5	n-r	0.0	h	65.1	t-y	17.2	h-s	
X905	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	12.8	a	16.7	fgh	70.0	g-q	19.7	d-n	
X906	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	8.3	e-k	3.3	h	70.0	g-q	19.0	d-q	
X907	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	8.0	f-l	0.0	h	72.5	d-i	17.9	f-s	
X910	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	7.8	f-m	0.0	h	72.0	d-k	20.6	c-j	
X911	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	8.7	e-j	0.0	h	73.1	d-h	22.5	b-f	
X912	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	8.8	e-h	6.7	h	71.4	e-m	20.4	c-k	
X913	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	8.3	e-k	3.3	h	70.3	g-o	20.9	b-i	
X915	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	8.8	e-i	3.3	h	73.6	c-g	23.1	b-e	
X916	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	8.3	e-k	0.0	h	71.5	e-l	21.1	b-h	
TRX76776	Triumph Seed Co., Inc.	Forage Sorghum	ML	Y	N	7.3	f-o	95.0	ab	74.8	b-f	14.7	o-s	
Super Sile 30	Triumph Seed Co., Inc.	Forage Sorghum	ML	N	N	7.1	g-p	1.7	h	68.6	i-u	23.3	bcd	
2 Way F104	Warner Seeds, Inc.	Forage Sorghum	M	N	N	5.9	l-r	6.7	h	67.6	l-w	16.4	h-s	
2 Way BMR	Warner Seeds, Inc.	Forage Sorghum	M	Y	N	7.5	f-n	60.0	cd	71.5	e-l	16.6	h-s	
Sweet Bee	Warner Seeds, Inc.	Forage Sorghum	M	N	N	7.4	f-n	15.0	fgh	70.1	g-p	17.1	h-s	
Silmaker 6500	Frontier Seed Co.	Forage Sorghum	M	N	N	5.6	m-r	45.0	de	65.8	q-x	19.0	d-p	
DeKalb FS25E	Monsanto	Forage Sorghum	L	N	N	8.3	e-k	0.0	h	72.4	d-j	22.3	b-g	
Sucrosse 6-R BMR	Warner Seeds, Inc.	Sorghum/Sudan	M	Y	N	6.9	g-p	40.0	d-g	65.7	r-x	14.9	n-s	
Sweet Bee Sterile II	Warner Seeds, Inc.	Forage Sorghum	ME	N	Y	6.6	h-p	18.3	fgh	69.7	g-s	14.6	o-s	
Red Top Plus	Production Plus	Forage Sorghum	ML	Y	N	6.9	g-p	26.7	e-h	70.7	f-n	15.1	m-s	
P84G62 (check)	Pioneer Hi-Bred Int., Inc	Grain Sorghum	ML	N	N	3.9	r	0.0	h	60.1	A	15.9	j-s	
Monsanto A571 (check)	Tx. Agri. Exp. Stat.	Grain Sorghum	M	N	N	4.3	qr	0.0	h	61.3	yzA	16.5	h-s	
LSD (P=.05)						1.77		22.77		3.38		3.84		
Standard Deviation						1.09		14.09		2.09		2.38		
CV						14.34		68.46		3.03		12.90		
Treatment Prob(F)						0.0001		0.0001		0.0001		0.0001		

[1] Variety information provided by seed companies. Male sterile entries were cross pollinated by other varieties.

[2] Means followed by the same letter do not significantly differ at (P=0.05).

Table. 2007 Comparison of sorghum hybrids for agronomic characteristics, yield and nutrient composition.

Variety Information [1)]						Nutrient Compostion & Calculations [2)]									
Hybrid	Company	Sorghum Type	Maturity	BMR	Male Sterile	% Crude Protein		% ADF		% NDF		% Lignin		% TDN	
4 Ever Green	Walter Moss Seed Inc.	Forage Sorghum	PS	N	N	5.9	mno	41.0	a	63.0	ab	5.30	ab	54.0	p
Mega Green	Walter Moss Seed Inc.	Sorghum/Sudan	PS	N	N	7.1	d-o	38.0	a-e	59.8	abc	4.57	a-i	57.7	m-p
4 Ever Green BMR	Walter Moss Seed Inc.	Forage Sorghum	PS	Y	N	6.4	h-o	36.7	a-i	60.0	abc	3.43	j-r	64.0	d-k
Pacesetter BMR	Richardson Seeds, Ltd.	Forage Sorghum	PS	Y	N	6.3	i-o	37.3	a-g	60.2	abc	2.97	o-s	64.7	c-j
1990	Sorghum Partners, Inc.	Forage Sorghum	PS	N	N	5.6	o	40.8	ab	65.0	a	5.60	a	55.0	p
Sugargraze Ultra	Coffey Seed	Sorghum/Sudan	PS	N	N	6.8	e-o	38.4	a-d	60.1	abc	4.97	a-e	58.0	l-p
811F	Pioneer Hi-Bred Int., Inc	Forage Sorghum	PS	N	N	6.6	g-o	40.2	abc	64.4	a	5.33	ab	57.7	m-p
AR-B Sweet Choice BMR	AR-B Seeds Inc.	Forage Sorghum	M	Y	Y	8.2	a-h	28.9	m-w	45.8	k-r	2.77	qrs	67.7	a-f
GW8528Fbmr	Crosbyton Seed Co.	Forage Sorghum	M	Y	N	8.7	a-e	28.7	n-w	47.2	h-q	3.23	m-s	69.0	a-d
GW3072	Crosbyton Seed Co.	Forage Sorghum	ML	N	N	7.8	a-l	31.2	i-v	51.1	e-p	4.67	a-g	61.7	g-m
DG 710F	DynaGro Seed	Forage Sorghum	M	N	N	8.7	a-f	28.3	o-w	44.1	n-r	3.53	h-r	62.7	e-m
DG 727F ST	DynaGro Seed	Forage Sorghum	M	Y	Y	7.9	a-l	30.3	j-w	48.8	e-q	2.77	qrs	68.0	a-e
Garst 318	Garst Seed Co.	Forage Sorghum	M	N	N	9.1	abc	27.3	s-x	44.0	o-r	3.77	f-q	68.0	a-e
Garst 311	Garst Seed Co.	Forage Sorghum	ME	N	N	7.2	d-o	32.3	f-v	50.9	e-p	4.03	c-o	62.0	f-m
DeKalb FS5	Monsanto	Forage Sorghum	M	N	N	6.2	j-o	32.7	e-s	51.0	e-p	4.07	c-o	62.3	e-m
DeKalb DKS 59-09	Monsanto	Forage Sorghum	M	N	N	8.4	a-g	30.0	k-w	47.1	h-q	4.00	c-o	65.0	c-j
DeKalb SX71	Monsanto	Sorghum/Sudan	M	N	Y	7.6	b-n	28.1	p-w	43.8	o-r	2.80	p-s	69.7	abc
MMR 381/73	MMR Genetics	Forage Sorghum	ML	N	N	7.9	a-l	31.3	i-v	50.3	e-p	4.43	b-l	64.0	d-k
MMR 366/82	MMR Genetics	Sorghum/Sudan	L	Y	N	7.1	d-o	32.9	e-s	52.6	c-l	2.97	o-s	65.7	b-j
MMR 327(381/366)/38	MMR Genetics	Sorghum/Sudan	M	Y	N	7.1	d-o	33.1	d-q	53.1	c-l	4.07	c-o	64.7	c-j
Millennium BMR	Walter Moss Seed Inc.	Forage Sorghum	L	Y	N	7.1	d-o	28.9	m-w	45.4	l-r	3.20	n-s	67.7	a-f
SU-2-LM	Walter Moss Seed Inc.	Sorghum/Sudan	L	N	N	5.8	no	35.2	c-k	54.8	c-i	4.53	a-j	58.3	l-p
Century BMR	Walter Moss Seed Inc.	Sorghum/Sudan	L	Y	N	7.2	d-o	33.0	d-r	52.5	c-m	4.03	c-o	62.3	e-m
38 Special BMR	Walter Moss Seed Inc.	Sorghum/Sudan	L	Y	N	7.3	c-o	30.1	k-w	48.6	f-q	3.57	g-r	67.3	a-g
NC+ Nutri-Choice II	NC+ Hybrids, Inc	Forage Sorghum	ML	N	N	7.4	c-o	33.8	d-o	54.3	c-j	4.95	a-e	63.5	d-l
NC+ Nutri-Ton II	NC+ Hybrids, Inc	Forage Sorghum	ML	N	N	7.2	d-o	32.9	e-s	52.9	c-l	4.13	c-n	64.0	d-k
NC+ Nutri-Cane II	NC+ Hybrids, Inc	Forage Sorghum	M	N	N	6.8	f-o	29.4	l-w	46.9	i-q	3.53	h-r	65.3	c-j
NC+ BMR77F	NC+ Hybrids, Inc	Forage Sorghum	M	Y	N	9.6	a	22.6	x	38.8	r	3.07	n-s	72.0	a
849F	Pioneer Hi-Bred Int., Inc	Forage Sorghum	M	N	N	8.1	a-j	27.9	q-w	46.0	k-r	4.33	b-m	64.0	d-k
979	Pioneer Hi-Bred Int., Inc	Sorghum/Sudan	M	N	Y	8.0	a-k	35.2	c-k	54.6	c-i	4.63	a-h	61.0	i-n
81T91	Pioneer Hi-Bred Int., Inc	Forage Sorghum	ML	N	N	8.1	a-j	33.0	d-r	53.1	c-l	5.07	abc	62.3	e-m
Dairymaster BMR	Richardson Seeds, Ltd.	Forage Sorghum	ML	Y	N	7.6	b-n	26.9	u-x	43.9	o-r	3.47	i-r	69.0	a-d
Sweeter N Honey BMR	Richardson Seeds, Ltd.	Sorghum/Sudan	M	Y	N	7.3	c-o	32.0	g-v	52.0	d-n	3.90	d-p	66.3	b-i
Silo 700D	Richardson Seeds, Ltd.	Forage Sorghum	ML	N	N	8.5	a-f	29.3	l-w	48.0	g-q	4.03	c-o	65.0	c-j
BMR 601D	Scott Seed Co.	Forage Sorghum	ML	Y	N	8.9	a-d	27.1	t-x	43.1	pqr	2.27	s	68.7	a-d
SS Silage	Scott Seed Co.	Forage Sorghum	ME	N	N	5.8	no	35.1	c-k	56.3	b-f	4.80	a-f	60.3	j-o
Canex BMR208	Sharp Bros. Seed Co.	Forage Sorghum	ME	Y	N	7.1	d-o	30.0	k-w	48.0	g-q	3.40	k-r	68.7	a-d

Variety Information [1]						Nutrient Compostion & Calculations [2]									
Hybrid	Company	Sorghum Type	Maturity	BMR	Male Sterile	% Crude Protein		% ADF		% NDF		% Lignin		% TDN	
Canex BMR x403x	Sharp Bros. Seed Co.	Forage Sorghum	M	Y	Y	7.7	b-m	29.3	l-w	47.9	g-q	3.60	g-q	69.0	a-d
Canex BMR x402x	Sharp Bros. Seed Co.	Forage Sorghum	M	Y	Y	8.2	a-h	25.6	wx	41.9	qr	3.03	n-s	72.0	a
Canex BMR x404x	Sharp Bros. Seed Co.	Forage Sorghum	ME	Y	N	8.0	a-j	30.0	k-w	50.1	e-p	3.87	e-q	69.0	a-d
Canex BMR x405x	Sharp Bros. Seed Co.	Forage Sorghum	ME	Y	Y	6.5	g-o	33.7	d-p	55.6	b-g	3.80	f-q	64.0	d-k
Canex BMR x406x	Sharp Bros. Seed Co.	Forage Sorghum	ME	Y	N	8.1	a-j	27.3	s-x	44.6	m-r	2.47	rs	71.0	ab
Canex BMR x407x	Sharp Bros. Seed Co.	Forage Sorghum	ME	Y	Y	7.3	c-o	30.5	j-w	49.2	e-q	3.60	g-q	67.0	a-h
HIKANE II	Sorghum Partners, Inc.	Forage Sorghum	E	N	N	7.4	c-o	27.5	r-x	43.8	o-r	3.37	l-r	65.3	c-j
SS405	Sorghum Partners, Inc.	Forage Sorghum	L	N	N	6.0	l-o	37.1	a-h	59.1	a-d	5.37	ab	55.7	op
SS506	Sorghum Partners, Inc.	Forage Sorghum	L	N	N	6.1	k-o	37.7	a-f	59.7	a-d	4.57	a-i	56.0	nop
NK300	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	7.2	c-o	35.5	c-k	56.2	b-f	4.93	a-e	59.0	k-p
X901	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	8.2	a-h	30.8	j-w	49.3	e-q	4.50	b-k	62.3	e-m
X905	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	6.0	l-o	32.5	f-u	50.9	e-p	4.03	c-o	62.3	e-m
X906	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	7.0	d-o	32.5	e-t	50.4	e-p	3.47	i-r	64.0	d-k
X907	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	6.9	e-o	32.8	e-s	51.0	e-p	4.17	c-n	62.3	e-m
X910	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	6.8	e-o	33.5	d-q	53.4	c-k	3.87	e-q	61.3	h-n
X911	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	7.2	c-o	31.8	g-v	51.3	e-o	3.77	f-q	64.0	d-k
X912	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	6.3	i-o	31.7	h-v	50.6	e-p	3.53	h-r	62.0	f-m
X913	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	6.6	g-o	31.2	i-v	49.5	e-q	3.53	h-r	63.3	d-l
X915	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	6.3	i-o	31.8	g-v	51.0	e-p	3.33	l-s	64.3	c-k
X916	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	6.9	e-o	31.7	h-v	50.4	e-p	4.00	c-o	64.3	c-k
TRX76776	Triumph Seed Co., Inc.	Forage Sorghum	ML	Y	N	6.3	i-o	34.7	d-l	55.9	b-g	4.07	c-o	65.7	b-j
Super Sile 30	Triumph Seed Co., Inc.	Forage Sorghum	ML	N	N	7.5	b-n	31.7	h-v	50.7	e-p	4.07	c-o	62.3	e-m
2 Way F104	Warner Seeds, Inc.	Forage Sorghum	M	N	N	8.2	a-i	30.9	j-w	49.9	e-p	4.60	a-h	63.3	d-l
2 Way BMR	Warner Seeds, Inc.	Forage Sorghum	M	Y	N	6.4	h-o	31.1	j-w	48.9	e-q	3.77	f-q	67.3	a-g
Sweet Bee	Warner Seeds, Inc.	Forage Sorghum	M	N	N	6.9	e-o	30.0	k-w	46.9	i-q	3.23	m-s	64.3	c-k
Silmaker 6500	Frontier Seed Co.	Forage Sorghum	M	N	N	7.1	d-o	35.7	b-j	56.7	b-e	5.00	a-d	59.0	k-p
DeKalb FS25E	Monsanto	Forage Sorghum	L	N	N	6.6	g-o	31.8	g-v	51.2	e-o	3.73	f-q	63.0	e-m
Sucrosse 6-R BMR	Warner Seeds, Inc.	Sorghum/Sudan	M	Y	N	8.1	a-j	28.8	n-w	46.5	j-q	3.90	d-p	67.7	a-f
Sweet Bee Sterile II	Warner Seeds, Inc.	Forage Sorghum	ME	N	Y	6.6	g-o	34.4	d-m	55.0	c-h	4.63	a-h	60.3	j-o
Red Top Plus	Production Plus	Forage Sorghum	ML	Y	N	8.1	a-j	30.6	j-w	47.6	h-q	3.03	n-s	67.7	a-f
P84G62 (check)	Pioneer Hi-Bred Int., Inc	Grain Sorghum	ML	N	N	9.4	ab	26.9	vwx	44.1	n-r	3.80	f-q	65.3	c-j
Monsanto A571 (check)	Tx. Agri. Exp. Stat.	Grain Sorghum	M	N	N	7.6	b-n	34.1	d-n	54.5	c-j	4.80	a-f	61.3	h-n
LSD (P=.05)						1.49		4.39		6.29		0.89		4.46	
Standard Deviation						0.92		2.72		3.89		0.55		2.76	
CV						12.62		8.50		7.62		13.95		4.32	
Treatment Prob(F)						0.0001		0.0001		0.0001		0.0001		0.0001	

[1] Variety information provided by seed companies. Male sterile entries were cross pollinated by other varieties.

[2] Means followed by the same letter do not significantly differ at (P=0.05).

Table. 2007 Comparison of sorghum hybrids for agronomic characteristics, yield and nutrient composition.

Variety Information [1)]						Nutrient Compostion & Calculations [2)]											
Hybrid	Company	Sorghum Type	Maturity	BMR	Male Sterile	NEL Mcal/lb		NEM Mcal/lb		NEG Mcal/lb		% Ca		% P		% Mg	
4 Ever Green	Walter Moss Seed Inc.	Forage Sorghum	PS	N	N	0.47	st	0.46	v	0.21	x	0.25	b-e	0.21	a-g	0.16	a-g
Mega Green	Walter Moss Seed Inc.	Sorghum/Sudan	PS	N	N	0.52	p-t	0.51	r-v	0.26	t-x	0.28	b-e	0.19	d-h	0.15	b-g
4 Ever Green BMR	Walter Moss Seed Inc.	Forage Sorghum	PS	Y	N	0.58	k-q	0.61	e-q	0.35	f-s	0.29	a-e	0.19	d-h	0.15	b-g
Pacesetter BMR	Richardson Seeds, Ltd.	Forage Sorghum	PS	Y	N	0.58	j-q	0.61	e-p	0.35	e-r	0.29	a-e	0.19	c-h	0.12	fg
1990	Sorghum Partners, Inc.	Forage Sorghum	PS	N	N	0.46	t	0.46	v	0.21	x	0.22	b-e	0.18	gh	0.13	efg
Sugargraze Ultra	Coffey Seed	Sorghum/Sudan	PS	N	N	0.52	o-t	0.52	q-v	0.26	s-x	0.36	ab	0.19	e-h	0.18	a-g
811F	Pioneer Hi-Bred Int., Inc	Forage Sorghum	PS	N	N	0.49	rst	0.51	s-v	0.25	u-x	0.26	b-e	0.20	b-h	0.15	b-g
AR-B Sweet Choice BMR	AR-B Seeds Inc.	Forage Sorghum	M	Y	Y	0.68	a-g	0.68	a-i	0.41	a-j	0.21	cde	0.21	a-g	0.15	b-g
GW8528Fbmr	Crosbyton Seed Co.	Forage Sorghum	M	Y	N	0.69	a-g	0.69	a-g	0.42	a-h	0.22	b-e	0.23	a-f	0.18	a-g
GW3072	Crosbyton Seed Co.	Forage Sorghum	ML	N	N	0.60	g-p	0.58	j-s	0.32	l-u	0.27	b-e	0.22	a-g	0.19	a-f
DG 710F	DynaGro Seed	Forage Sorghum	M	N	N	0.64	c-n	0.61	e-q	0.34	g-t	0.20	cde	0.21	a-g	0.12	fg
DG 727F ST	DynaGro Seed	Forage Sorghum	M	Y	Y	0.67	a-h	0.68	a-j	0.41	a-k	0.30	a-e	0.22	a-g	0.17	a-g
Garst 318	Garst Seed Co.	Forage Sorghum	M	N	N	0.69	a-f	0.69	a-h	0.42	a-i	0.20	cde	0.25	ab	0.21	abc
Garst 311	Garst Seed Co.	Forage Sorghum	ME	N	N	0.61	f-o	0.59	i-s	0.33	j-u	0.20	cde	0.25	a	0.17	a-g
DeKalb FS5	Monsanto	Forage Sorghum	M	N	N	0.60	g-p	0.59	i-s	0.33	j-u	0.22	b-e	0.22	a-g	0.18	a-g
DeKalb DKS 59-09	Monsanto	Forage Sorghum	M	N	N	0.65	b-l	0.64	c-m	0.38	c-o	0.26	b-e	0.23	a-f	0.17	a-g
DeKalb SX71	Monsanto	Sorghum/Sudan	M	N	Y	0.71	a-d	0.71	a-d	0.44	a-d	0.17	e	0.18	gh	0.13	efg
MMR 381/73	MMR Genetics	Forage Sorghum	ML	N	N	0.63	d-n	0.62	d-o	0.36	d-q	0.27	b-e	0.22	a-g	0.18	a-g
MMR 366/82	MMR Genetics	Sorghum/Sudan	L	Y	N	0.63	d-n	0.64	c-m	0.37	c-o	0.42	a	0.19	d-h	0.18	a-g
MMR 327(381/366)/38	MMR Genetics	Sorghum/Sudan	M	Y	N	0.62	e-n	0.63	d-n	0.36	d-p	0.21	cde	0.21	a-g	0.18	a-g
Millennium BMR	Walter Moss Seed Inc.	Forage Sorghum	L	Y	N	0.69	a-g	0.68	a-i	0.41	a-j	0.23	b-e	0.22	a-g	0.15	b-g
SU-2-LM	Walter Moss Seed Inc.	Sorghum/Sudan	L	N	N	0.55	n-s	0.52	p-v	0.27	r-x	0.25	b-e	0.18	fgh	0.15	b-g
Century BMR	Walter Moss Seed Inc.	Sorghum/Sudan	L	Y	N	0.60	g-p	0.59	i-s	0.33	j-u	0.24	b-e	0.23	a-g	0.18	a-g
38 Special BMR	Walter Moss Seed Inc.	Sorghum/Sudan	L	Y	N	0.67	a-i	0.67	a-j	0.41	a-k	0.20	cde	0.22	a-g	0.17	a-g
NC+ Nutri-Choice II	NC+ Hybrids, Inc	Forage Sorghum	ML	N	N	0.61	g-o	0.61	f-r	0.35	f-s	0.23	b-e	0.23	a-f	0.21	abc
NC+ Nutri-Ton II	NC+ Hybrids, Inc	Forage Sorghum	ML	N	N	0.62	e-n	0.62	d-o	0.36	d-q	0.22	b-e	0.22	a-g	0.21	abc
NC+ Nutri-Cane II	NC+ Hybrids, Inc	Forage Sorghum	M	N	N	0.65	b-l	0.64	c-m	0.38	c-o	0.24	b-e	0.22	a-g	0.17	a-g
NC+ BMR77F	NC+ Hybrids, Inc	Forage Sorghum	M	Y	N	0.75	a	0.75	a	0.48	a	0.21	cde	0.20	b-h	0.18	a-g
849F	Pioneer Hi-Bred Int., Inc	Forage Sorghum	M	N	N	0.65	c-m	0.62	d-o	0.36	d-p	0.20	cde	0.22	a-g	0.18	a-g
979	Pioneer Hi-Bred Int., Inc	Sorghum/Sudan	M	N	Y	0.58	j-q	0.57	l-t	0.31	m-v	0.26	b-e	0.22	a-g	0.15	b-g
81T91	Pioneer Hi-Bred Int., Inc	Forage Sorghum	ML	N	N	0.60	g-p	0.59	i-s	0.33	i-u	0.21	cde	0.20	b-h	0.18	a-g
Dairymaster BMR	Richardson Seeds, Ltd.	Forage Sorghum	ML	Y	N	0.70	a-e	0.70	a-e	0.43	a-e	0.22	b-e	0.22	a-g	0.15	b-g
Sweeter N Honey BMR	Richardson Seeds, Ltd.	Sorghum/Sudan	M	Y	N	0.64	c-m	0.65	b-l	0.39	c-m	0.27	b-e	0.22	a-g	0.17	a-g
Silo 700D	Richardson Seeds, Ltd.	Forage Sorghum	ML	N	N	0.65	c-m	0.64	c-m	0.38	c-o	0.34	abc	0.24	a-d	0.23	a
BMR 601D	Scott Seed Co.	Forage Sorghum	ML	Y	N	0.70	a-e	0.70	a-e	0.43	a-f	0.24	b-e	0.21	a-g	0.18	a-g
SS Silage	Scott Seed Co.	Forage Sorghum	ME	N	N	0.56	m-r	0.55	m-u	0.30	n-w	0.20	cde	0.21	a-g	0.16	b-g
Canex BMR208	Sharp Bros. Seed Co.	Forage Sorghum	ME	Y	N	0.68	a-g	0.69	a-h	0.42	a-i	0.21	cde	0.23	a-e	0.16	a-g

Variety Information [1]						Nutrient Compostion & Calculations [2]											
Hybrid	Company	Sorghum Type	Maturity	BMR	Male Sterile	NEL Mcal/lb		NEM Mcal/lb		NEG Mcal/lb		% Ca		% P		% Mg	
Canex BMR x403x	Sharp Bros. Seed Co.	Forage Sorghum	M	Y	Y	0.68	a-g	0.70	a-f	0.43	a-g	0.21	cde	0.20	b-h	0.15	b-g
Canex BMR x402x	Sharp Bros. Seed Co.	Forage Sorghum	M	Y	Y	0.74	ab	0.74	ab	0.47	ab	0.22	b-e	0.21	a-g	0.17	a-g
Canex BMR x404x	Sharp Bros. Seed Co.	Forage Sorghum	ME	Y	N	0.67	a-h	0.69	a-h	0.42	a-i	0.24	b-e	0.19	d-h	0.20	a-e
Canex BMR x405x	Sharp Bros. Seed Co.	Forage Sorghum	ME	Y	Y	0.60	g-p	0.61	e-q	0.35	f-s	0.21	cde	0.19	e-h	0.14	c-g
Canex BMR x406x	Sharp Bros. Seed Co.	Forage Sorghum	ME	Y	N	0.72	abc	0.72	abc	0.45	abc	0.22	b-e	0.22	a-g	0.17	a-g
Canex BMR x407x	Sharp Bros. Seed Co.	Forage Sorghum	ME	Y	Y	0.66	b-k	0.66	a-l	0.40	b-m	0.23	b-e	0.22	a-g	0.19	a-e
HIKANE II	Sorghum Partners, Inc.	Forage Sorghum	E	N	N	0.67	b-j	0.65	c-m	0.38	c-n	0.26	b-e	0.21	a-g	0.19	a-e
SS405	Sorghum Partners, Inc.	Forage Sorghum	L	N	N	0.50	q-t	0.48	uv	0.23	wx	0.22	b-e	0.20	a-g	0.15	b-g
SS506	Sorghum Partners, Inc.	Forage Sorghum	L	N	N	0.50	q-t	0.49	tuv	0.24	vwx	0.26	b-e	0.19	c-h	0.13	efg
NK300	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	0.55	n-s	0.53	n-v	0.28	p-x	0.29	a-e	0.15	h	0.19	a-f
X901	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	0.62	e-n	0.60	h-s	0.34	i-u	0.26	b-e	0.24	a-e	0.20	a-e
X905	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	0.61	f-n	0.59	h-s	0.34	i-u	0.24	b-e	0.20	b-h	0.17	a-g
X906	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	0.63	d-n	0.62	d-p	0.36	d-q	0.30	a-e	0.19	d-h	0.19	a-f
X907	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	0.61	f-n	0.59	i-s	0.33	i-u	0.33	abc	0.21	a-g	0.19	a-f
X910	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	0.59	h-p	0.58	k-s	0.32	l-v	0.32	a-d	0.18	gh	0.11	g
X911	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	0.62	e-n	0.62	d-p	0.36	d-q	0.33	abc	0.21	a-g	0.18	a-g
X912	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	0.60	g-p	0.58	j-s	0.32	k-u	0.25	b-e	0.20	b-h	0.14	d-g
X913	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	0.63	d-n	0.61	e-p	0.35	e-r	0.23	b-e	0.20	b-h	0.13	efg
X915	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	0.63	d-n	0.62	d-o	0.36	d-q	0.27	b-e	0.20	a-g	0.16	a-g
X916	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	0.63	d-n	0.62	d-o	0.36	d-q	0.30	a-e	0.23	a-e	0.22	ab
TRX76776	Triumph Seed Co., Inc.	Forage Sorghum	ML	Y	N	0.62	e-n	0.64	c-m	0.37	c-o	0.24	b-e	0.22	a-g	0.17	a-g
Super Sile 30	Triumph Seed Co., Inc.	Forage Sorghum	ML	N	N	0.61	f-n	0.59	h-s	0.33	i-u	0.29	a-e	0.22	a-g	0.18	a-g
2 Way F104	Warner Seeds, Inc.	Forage Sorghum	M	N	N	0.62	e-n	0.61	e-q	0.35	e-r	0.32	a-d	0.22	a-g	0.20	a-d
2 Way BMR	Warner Seeds, Inc.	Forage Sorghum	M	Y	N	0.67	b-j	0.67	a-k	0.40	a-l	0.17	e	0.23	a-e	0.16	b-g
Sweet Bee	Warner Seeds, Inc.	Forage Sorghum	M	N	N	0.65	c-m	0.63	c-m	0.37	c-o	0.28	b-e	0.21	a-g	0.18	a-g
Silmaker 6500	Frontier Seed Co.	Forage Sorghum	M	N	N	0.55	n-s	0.53	o-v	0.28	q-x	0.32	a-d	0.20	a-g	0.20	a-e
DeKalb FS25E	Monsanto	Forage Sorghum	L	N	N	0.61	e-n	0.60	g-r	0.34	h-t	0.29	a-e	0.21	a-g	0.18	a-g
Sucrosse 6-R BMR	Warner Seeds, Inc.	Sorghum/Sudan	M	Y	N	0.68	a-g	0.67	a-j	0.41	a-k	0.18	de	0.22	a-g	0.17	a-g
Sweet Bee Sterile II	Warner Seeds, Inc.	Forage Sorghum	ME	N	Y	0.57	l-r	0.55	m-u	0.30	o-w	0.24	b-e	0.22	a-g	0.19	a-f
Red Top Plus	Production Plus	Forage Sorghum	ML	Y	N	0.68	a-g	0.68	a-i	0.41	a-j	0.32	a-d	0.23	a-g	0.18	a-g
P84G62 (check)	Pioneer Hi-Bred Int., Inc	Grain Sorghum	ML	N	N	0.66	b-k	0.65	c-l	0.38	c-n	0.27	b-e	0.24	abc	0.16	b-g
Monsanto A571 (check)	Tx. Agri. Exp. Stat.	Grain Sorghum	M	N	N	0.58	i-q	0.58	k-s	0.32	l-v	0.23	b-e	0.21	a-g	0.17	a-g
LSD (P=.05)						0.07		0.07		0.07		0.11		0.04		0.06	
Standard Deviation						0.04		0.05		0.04		0.07		0.03		0.04	
CV						6.80		7.48		11.73		27.41		11.90		20.30	
Treatment Prob(F)						0.0001		0.0001		0.0001		0.0404		0.0065		0.0243	

[1] Variety information provided by seed companies. Male sterile entries were cross pollinated by other varieties.

[2] Means followed by the same letter do not significantly differ at (P=0.05).

Table. 2007 Comparison of sorghum hybrids for agronomic characteristics, yield and nutrient composition.

Variety Information [1)]						Nutrient Compostion & Calculations [2)]											
Hybrid	Company	Sorghum Type	Maturity	BMR	Male Sterile	% K		% S		% IVTD		Hay Crop Milk/ton		Relative Forage Quality		Relative Feed Value	
4 Ever Green	Walter Moss Seed Inc.	Forage Sorghum	PS	N	N	1.97	a	0.12	a-g	68.0	rs	1,988	t	88	t	84	qrs
Mega Green	Walter Moss Seed Inc.	Sorghum/Sudan	PS	N	N	1.65	b-f	0.11	a-g	71.3	n-s	2,182	q-t	103	m-t	92	o-s
4 Ever Green BMR	Walter Moss Seed Inc.	Forage Sorghum	PS	Y	N	1.70	a-d	0.10	a-g	76.7	f-m	2,494	k-r	116	e-t	93	o-s
Pacesetter BMR	Richardson Seeds, Ltd.	Forage Sorghum	PS	Y	N	1.84	ab	0.09	c-g	78.0	d-l	2,497	j-r	116	e-t	93	o-s
1990	Sorghum Partners, Inc.	Forage Sorghum	PS	N	N	1.48	c-i	0.09	d-g	68.3	rs	2,022	t	89	st	82	s
Sugargraze Ultra	Coffey Seed	Sorghum/Sudan	PS	N	N	1.53	b-h	0.09	d-g	70.7	p-s	2,201	p-t	103	n-t	91	p-s
811F	Pioneer Hi-Bred Int., Inc	Forage Sorghum	PS	N	N	1.75	abc	0.11	a-g	71.0	o-s	2,131	rst	98	p-t	83	rs
AR-B Sweet Choice BMR	AR-B Seeds Inc.	Forage Sorghum	M	Y	Y	1.45	c-j	0.10	a-g	80.3	a-i	2,856	b-k	140	d-k	135	b-i
GW8528Fbmr	Crosbyton Seed Co.	Forage Sorghum	M	Y	N	1.53	b-h	0.09	c-g	81.0	a-h	2,908	a-h	147	b-h	132	b-k
GW3072	Crosbyton Seed Co.	Forage Sorghum	ML	N	N	1.38	d-j	0.14	abc	74.7	k-p	2,524	h-q	122	e-s	125	c-m
DG 710F	DynaGro Seed	Forage Sorghum	M	N	N	1.37	d-j	0.12	a-g	76.0	h-o	2,590	e-o	137	d-m	143	b-f
DG 727F ST	DynaGro Seed	Forage Sorghum	M	Y	Y	1.39	d-j	0.10	b-g	80.0	a-j	2,807	c-m	137	d-n	125	c-m
Garst 318	Garst Seed Co.	Forage Sorghum	M	N	N	1.33	f-j	0.11	a-g	80.0	a-j	2,925	a-g	148	b-g	143	b-f
Garst 311	Garst Seed Co.	Forage Sorghum	ME	N	N	1.50	c-i	0.11	a-g	75.3	i-p	2,527	h-q	119	e-t	117	d-p
DeKalb FS5	Monsanto	Forage Sorghum	M	N	N	1.41	d-j	0.09	c-g	75.3	i-p	2,548	f-q	114	g-t	117	d-p
DeKalb DKS 59-09	Monsanto	Forage Sorghum	M	N	N	1.39	d-j	0.13	a-e	78.7	b-k	2,711	c-n	134	d-o	130	b-l
DeKalb SX71	Monsanto	Sorghum/Sudan	M	N	Y	1.46	c-j	0.09	d-g	83.3	abc	3,036	abc	175	ab	145	bcd
MMR 381/73	MMR Genetics	Forage Sorghum	ML	N	N	1.35	d-j	0.14	a	78.0	d-l	2,620	d-o	126	d-r	120	c-o
MMR 366/82	MMR Genetics	Sorghum/Sudan	L	Y	N	1.47	c-i	0.10	a-g	79.0	a-k	2,639	d-o	124	e-r	113	h-p
MMR 327(381/366)/38	MMR Genetics	Sorghum/Sudan	M	Y	N	1.65	b-f	0.11	a-g	78.7	b-k	2,590	e-o	123	e-r	111	h-q
Millennium BMR	Walter Moss Seed Inc.	Forage Sorghum	L	Y	N	1.56	b-g	0.09	d-g	81.3	a-g	2,894	a-i	144	b-i	137	b-h
SU-2-LM	Walter Moss Seed Inc.	Sorghum/Sudan	L	N	N	1.22	g-j	0.08	g	72.7	m-r	2,294	o-t	100	o-t	104	k-s
Century BMR	Walter Moss Seed Inc.	Sorghum/Sudan	L	Y	N	1.60	b-f	0.10	a-g	75.3	i-p	2,518	i-q	118	e-t	113	g-p
38 Special BMR	Walter Moss Seed Inc.	Sorghum/Sudan	L	Y	N	1.50	c-i	0.10	b-g	81.3	a-g	2,831	b-l	135	d-n	126	c-m
NC+ Nutri-Choice II	NC+ Hybrids, Inc	Forage Sorghum	ML	N	N	1.51	c-i	0.11	a-g	76.5	g-m	2,572	e-p	124	d-r	108	i-s
NC+ Nutri-Ton II	NC+ Hybrids, Inc	Forage Sorghum	ML	N	N	1.49	c-i	0.10	a-g	77.7	d-m	2,608	d-o	124	e-r	112	h-q
NC+ Nutri-Cane II	NC+ Hybrids, Inc	Forage Sorghum	M	N	N	1.18	ij	0.09	c-g	78.0	d-l	2,745	c-n	133	d-o	132	b-k
NC+ BMR77F	NC+ Hybrids, Inc	Forage Sorghum	M	Y	N	1.12	j	0.12	a-g	83.7	ab	3,235	a	180	a	174	a
849F	Pioneer Hi-Bred Int., Inc	Forage Sorghum	M	N	N	1.40	d-j	0.11	a-g	76.0	h-o	2,720	c-n	131	d-p	137	b-h
979	Pioneer Hi-Bred Int., Inc	Sorghum/Sudan	M	N	Y	1.64	b-f	0.12	a-g	73.3	l-q	2,428	m-s	119	e-t	106	j-s
81T91	Pioneer Hi-Bred Int., Inc	Forage Sorghum	ML	N	N	1.33	e-j	0.14	ab	75.7	i-o	2,529	h-q	125	d-r	111	h-q
Dairymaster BMR	Richardson Seeds, Ltd.	Forage Sorghum	ML	Y	N	1.48	c-i	0.10	a-g	81.7	a-f	2,981	a-d	140	d-k	144	b-e
Sweeter N Honey BMR	Richardson Seeds, Ltd.	Sorghum/Sudan	M	Y	N	1.37	d-j	0.11	a-g	80.0	a-j	2,730	c-n	131	d-p	115	f-p
Silo 700D	Richardson Seeds, Ltd.	Forage Sorghum	ML	N	N	1.40	d-j	0.13	a-e	78.3	c-l	2,729	c-n	135	d-n	129	b-m
BMR 601D	Scott Seed Co.	Forage Sorghum	ML	Y	N	1.46	c-j	0.10	a-g	82.3	a-e	2,942	a-e	158	a-d	147	bc
SS Silage	Scott Seed Co.	Forage Sorghum	ME	N	N	1.38	d-j	0.09	c-g	73.3	l-q	2,402	n-s	106	l-t	102	l-s
Canex BMR208	Sharp Bros. Seed Co.	Forage Sorghum	ME	Y	N	1.51	c-i	0.09	efg	81.0	a-h	2,919	a-g	138	d-l	128	c-m

Variety Information [1]						Nutrient Compostion & Calculations [2]											
Hybrid	Company	Sorghum Type	Maturity	BMR	Male Sterile	% K		% S		% IVTD		Hay Crop Milk/ton		Relative Forage Quality		Relative Feed Value	
Canex BMR x403x	Sharp Bros. Seed Co.	Forage Sorghum	M	Y	Y	1.33	e-j	0.11	a-g	81.3	a-g	2,934	a-f	143	c-j	129	b-m
Canex BMR x402x	Sharp Bros. Seed Co.	Forage Sorghum	M	Y	Y	1.20	hij	0.11	a-g	84.0	a	3,184	ab	173	abc	156	ab
Canex BMR x404x	Sharp Bros. Seed Co.	Forage Sorghum	ME	Y	N	1.45	c-j	0.11	a-g	81.3	a-g	2,883	a-j	143	c-j	122	c-n
Canex BMR x405x	Sharp Bros. Seed Co.	Forage Sorghum	ME	Y	Y	1.44	c-j	0.10	a-g	77.3	e-m	2,557	e-q	118	e-t	105	k-s
Canex BMR x406x	Sharp Bros. Seed Co.	Forage Sorghum	ME	Y	N	1.44	c-j	0.09	c-g	82.7	a-d	3,047	abc	149	a-f	141	b-g
Canex BMR x407x	Sharp Bros. Seed Co.	Forage Sorghum	ME	Y	Y	1.41	c-j	0.11	a-g	80.3	a-i	2,777	c-n	132	d-p	123	c-m
HIKANE II	Sorghum Partners, Inc.	Forage Sorghum	E	N	N	1.23	g-j	0.11	a-g	78.3	c-l	2,759	c-n	150	a-e	143	b-f
SS405	Sorghum Partners, Inc.	Forage Sorghum	L	N	N	1.49	c-i	0.10	b-g	67.7	s	2,109	st	94	q-t	94	n-s
SS506	Sorghum Partners, Inc.	Forage Sorghum	L	N	N	1.43	c-j	0.11	a-g	69.3	qrs	2,103	st	94	rst	93	o-s
NK300	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	1.49	c-i	0.09	d-g	72.7	m-r	2,301	o-t	109	j-t	102	l-s
X901	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	1.33	f-j	0.13	a-f	76.3	g-n	2,562	e-q	126	d-r	126	c-m
X905	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	1.40	d-j	0.09	efg	76.0	h-o	2,570	e-p	113	h-t	116	e-p
X906	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	1.34	e-j	0.09	d-g	77.3	e-m	2,615	d-o	127	d-r	118	d-p
X907	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	1.41	c-j	0.10	a-g	75.3	i-p	2,542	g-q	118	e-t	117	d-p
X910	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	1.37	d-j	0.08	fg	75.3	i-p	2,450	l-s	112	i-t	110	h-r
X911	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	1.49	c-i	0.10	a-g	76.7	f-m	2,601	d-o	122	e-s	117	d-p
X912	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	1.24	g-j	0.08	fg	75.0	j-p	2,526	h-q	112	i-t	119	c-p
X913	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	1.22	g-j	0.08	g	75.7	i-o	2,650	d-o	121	e-t	122	c-n
X915	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	1.31	f-j	0.09	c-g	77.0	f-m	2,650	d-o	119	e-t	118	d-p
X916	Sorghum Partners, Inc.	Forage Sorghum	M	N	N	1.39	d-j	0.11	a-g	76.7	f-m	2,646	d-o	123	e-r	119	c-p
TRX76776	Triumph Seed Co., Inc.	Forage Sorghum	ML	Y	N	1.68	a-e	0.11	a-g	79.7	a-k	2,643	d-o	122	e-s	104	k-s
Super Sile 30	Triumph Seed Co., Inc.	Forage Sorghum	ML	N	N	1.43	c-j	0.13	a-f	75.7	i-o	2,543	g-q	121	e-t	119	c-p
2 Way F104	Warner Seeds, Inc.	Forage Sorghum	M	N	N	1.37	d-j	0.13	a-e	76.7	f-m	2,610	d-o	128	d-r	122	c-n
2 Way BMR	Warner Seeds, Inc.	Forage Sorghum	M	Y	N	1.62	b-f	0.08	fg	80.3	a-i	2,819	b-l	128	d-q	124	c-m
Sweet Bee	Warner Seeds, Inc.	Forage Sorghum	M	N	N	1.24	g-j	0.09	efg	77.7	d-m	2,694	c-n	132	d-p	131	b-k
Silmaker 6500	Frontier Seed Co.	Forage Sorghum	M	N	N	1.42	c-j	0.13	a-d	73.3	l-q	2,288	o-t	107	k-t	101	m-s
DeKalb FS25E	Monsanto	Forage Sorghum	L	N	N	1.38	d-j	0.10	a-g	76.3	g-n	2,553	f-q	115	f-t	117	d-p
Sucrosse 6-R BMR	Warner Seeds, Inc.	Sorghum/Sudan	M	Y	N	1.40	d-j	0.13	a-f	81.0	a-h	2,864	b-k	140	d-k	134	b-j
Sweet Bee Sterile II	Warner Seeds, Inc.	Forage Sorghum	ME	N	Y	1.35	d-j	0.11	a-g	72.7	m-r	2,400	n-s	110	i-t	107	i-s
Red Top Plus	Production Plus	Forage Sorghum	ML	Y	N	1.40	d-j	0.10	a-g	80.3	a-i	2,849	b-k	150	a-e	128	c-m
P84G62 (check)	Pioneer Hi-Bred Int., Inc	Grain Sorghum	ML	N	N	1.39	d-j	0.13	a-e	78.7	b-k	2,761	c-n	139	d-l	143	b-f
Monsanto A571 (check)	Tx. Agri. Exp. Stat.	Grain Sorghum	M	N	N	1.45	c-j	0.14	ab	76.3	g-n	2,406	n-s	115	f-t	107	i-s
LSD (P=.05)						0.27		0.04		4.03		304.16		26.80		22.34	
Standard Deviation						0.17		0.02		2.49		188.14		16.58		13.82	
CV						11.59		20.39		3.23		7.18		13.14		11.60	
Treatment Prob(F)						0.0001		0.0081		0.0001		0.0001		0.0001		0.0001	

[1] Variety information provided by seed companies. Male sterile entries were cross pollinated by other varieties.

[2] Means followed by the same letter do not significantly differ at (P=0.05).