

## 2009 Texas Panhandle Forage Sorghum Silage Trial

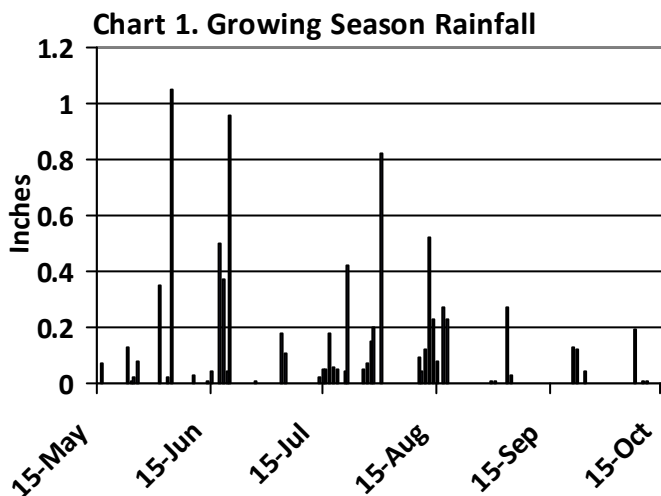
Brent Bean<sup>1</sup>, Ted McCollum<sup>1</sup>, Bob Villarreal<sup>2</sup>, Jurg Blumenthal<sup>3</sup>,  
Jake Robinson<sup>2</sup>, Rex Brandon<sup>2</sup>, Emalee Buttrey<sup>2</sup>, Rex VanMeter<sup>2</sup>, and Dennis Pietsch<sup>4</sup>

### Introduction

This year's silage trial of 49 sorghum hybrids included 17 conventional and 19 brown midrib (BMR) forage sorghum varieties. In addition, 7 BMR sorghum/sudangrasses, 4 photoperiod sensitive (PS) sorghums, and 2 grain sorghum varieties were included. The trial was located at the Texas AgriLife Research Station approximately 8 miles west of Amarillo. Silage trial summaries from previous years are posted at the Amarillo AgriLife website at <http://amarillo.tamu.edu/programs>. In addition to the silage trial, a summary of a limited irrigated sorghum hay trial is posted at the same website.

### Methods and Materials

Seed companies on a per fee basis submitted all varieties that are included in the trial. Several male sterile varieties were included. With the exception of the photoperiod sensitive (PS)



varieties, all entries were capable of producing grain due to cross-pollination that occurred in the field with other varieties. Seed companies will provide pollinator seed for male sterile varieties upon request. Entries 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 in six randomly selected plots. Each of these

plots had three gypsum blocks placed in the soil at depths of 1, 2, and 3 feet. Gypsum blocks were read every two to three days and all plots were irrigated when the average of the three moisture blocks fell below 60. Approximately 17 inches of irrigation water was applied during the season along with a pre-irrigation of 5.3 inches. Rainfall totaled 8.5 inches during the growing season (May 28 – Oct 14) (Chart 1). Each variety was harvested for forage yield when grain reached the soft dough stage. PS varieties were harvested on the last harvest date of the

<sup>1</sup> Extension Agronomist and Beef Cattle Specialist, respectively, Texas AgriLifeResearch & Extension Center, Amarillo, phone: 806-677-5600, Email: [b-bean@tamu.edu](mailto:b-bean@tamu.edu) and [ft-mccollum@tamu.edu](mailto:ft-mccollum@tamu.edu) .

<sup>2</sup> Extension or Research Assistants or Associates, Texas AgriLife Research and Extension Center, Amarillo.

<sup>3</sup> State Sorghum Cropping Specialist, Texas AgriLife Extension, College Station.

<sup>4</sup> Director of Crop Testing, Texas AgriLife Research, College Station, Phone: 979-845-8505, Email: [croptesting@tamu.edu](mailto:croptesting@tamu.edu).

season (Oct 14). Grain yield was collected on November 2<sup>nd</sup> only from those entries where it was requested by the seed company.

Other cultural practices and study information are listed below:

Trial Location:	Bush farm located one mile north of Bushland, TX
Cooperator:	Texas AgriLife Research
Previous Crop:	Fallow
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 28, 2009
Planting Rate:	100,000 seed/acre
Seed Method:	John Deere Max-emerge Planter
Fertilizer:	Applied 220 lb/acre N and 40 lb/acre P <sub>2</sub> O <sub>5</sub> based on soil test results for a 27 ton/acre yield.
Herbicide:	One lb/acre atrazine applied three days after planting.
Irrigation:	Furrow irrigated based on moisture block readings. Approximately 17 inches applied during the growing season.
Silage Harvest Date:	Plots were checked weekly and harvested when grain was in the soft dough stage. Harvest dates ranged from September 2 <sup>nd</sup> to October 14 <sup>th</sup> and are reported in Table 2.
Grain Harvest Date:	November 2 <sup>nd</sup> . Only from those entries where it was requested by the specific seed company.

#### Data Collected:

- Plant height (ft) at silage harvest
- Lodging at silage harvest. Percent of fallen or significantly leaning plants per plot.
- Forage (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. Samples were thrashed and yield reported in lb/acre. *Grain yield was not corrected for moisture.*
- Key Nutrient Analysis Definitions

**Crude Protein:** 6.25 times % 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

**NEI:** Estimate of Net Energy for lactation

**NE<sub>m</sub>:** Estimate of Net Energy for maintenance

**NE<sub>g</sub>:** Estimate of Net Energy for gain

<b>IVTD:</b>	% In Vitro True Digestibility; positively related to energy availability
<b>RFV:</b>	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.
<b>RFQ:</b>	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.
<b>Milk lbs/ton:</b>	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 comparison of each specific variety's agronomy characteristics, yield, and nutrient composition.

**Table 1. Summary of key characteristics by sorghum type.**

Sorghum Type <sup>1)</sup>	% 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 (17)	17.5	64.1	22.5	6.6	35.1	55.3	61.8	4.6	75.9	2,454	117
F. Sorghum BMR (19)	9.7	70.3	18.8	7.9	30.6	48.5	68.4	3.2	82.2	2,864	147
F. Sorghum NonBMR PS (1)	66.7	71.0	16.4	7.9	38.0	58.7	62.7	3.8	77.0	2,413	118
F. Sorghum BMR PS (2)	28.3	68.4	15.4	6.3	37.8	58.4	63.2	3.4	77.5	2,459	113
Sorghum/Sudan NonBMR PS (1)	78.3	67.6	14.3	6.9	38.2	58.7	64.0	4.0	77.7	2,493	118
Sorghum/Sudan BMR (7)	21.2	70.3	16.4	8.6	33.1	52.7	65.4	4.1	79.2	2,647	133
Grain Sorghum (2)	0.0	67.9	19.0	8.6	28.3	44.7	67.5	3.7	81.7	2,874	148
<b>Test Avg.</b>	17.0	67.9	19.5	7.5	33.0	52.1	65.7	3.9	79.7	2,658	132

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

Forage yield test average was 19.5 ton/acre (Table 1). As in previous years, average yield was higher with the nonBMR forage sorghums compared to the BMR forage sorghums. Lodging, however, was higher with the nonBMR varieties, averaging 17.5% compared to 9.7% with the BMRs. Similar results were observed in 2008. These results strongly suggest the BMR varieties will not lodge more than nonBMRs when harvested in a timely manner. Digestibility and overall

forage quality was highest with BMR varieties as estimated by ADF, NDF, TDN, IVTD, estimated milk produced per ton, and relative forage quality.

Photoperiod sensitive (PS) varieties did not yield as well as expected and as observed in the past. Generally, PS varieties yield higher than any other class of sorghums. Lodging was also much higher than expected with the PS varieties. The PS varieties were grown in a separate land block adjacent to the rest of the trial. Keeping the PS varieties in a separate block allowed more irrigation to be applied to the PS varieties at the end of the season if needed. Cultural practices for the land planted to PS varieties were exactly the same as those used for the area planted to the other varieties. However, all of the varieties planted in the PS block were relatively low yielding and most had significant lodging. Soil tests conducted during the season indicated a high level of N in the soil in the PS block. This may have contributed to the increased lodging observed, but does not explain the reduction in yield.

Grain yield was collected only from those entries as requested by the seed companies (Table 4). Yield was obtained on November 2<sup>nd</sup>, well after a killing frost on October 2<sup>nd</sup>. Grain yield of all forage sorghum entries were compared to the average of two grain sorghum varieties, A571 and 84G62 that are typically two of the better grain yielding varieties in Texas AgriLife trials. Five of the forage sorghum varieties GW3072F, Ton-A-Milk, MMR381/73, Silo 700D, and NK 300 yielded at least 80% of the average of the two grain sorghum varieties. It is important to note that grain yield was harvested by hand and included those entries with severe lodging.

Varieties can be ranked in various ways depending on the selection criteria. For this study, it was decided to place an emphasis on digestibility (energy), lodging and yield. A list of the top 25% of the varieties was developed by first selecting only the varieties that were statistically highest in % IVTD. Second, all varieties that lodged more than 20% were eliminated. From the remaining varieties, the 13 highest yielding were considered the top 25% varieties in the trial (Table 3). Of these varieties, IVTD was at least 81%, lodging was no more than 10%, and yield ranged from 18.4 to 21.9 ton/acre. The list included 9 BMR and 4 nonBMR varieties.

Many producers are primarily only concerned with yield and the ability to not lodge. Chart 2 is a summary of those varieties with the highest yield. The highest yielding variety was GW3072F at 26.2 ton/acre. The lowest yielding variety that was not significantly different from GW3072F was DairyMaster at 19.1 tons/acre. Five of the six highest yielding varieties had lodging of at least 25% (Chart 3). If these varieties are grown, producers should try to minimize lodging by reducing seeding rate, avoiding over application of N, and be prepared to harvest the crop as soon as it reaches the proper stage for silage.

**Table 2. 2009 Comparison of sorghum hybrids for agronomic characteristics, yield and nutrient composition.**

Variety Information <sup>1)</sup>						Lodging, Height, Moisture and Forage Yield <sup>2)</sup>				
Hybrid Name	Hybrid Company	Sorghum Type	Maturity	BMR	Male Sterile	Harv. Date	% Lodging	Height Ft	% Moisture	Tons/ac @ 65% Moist.
AR-B AS4530	AR-B Seeds, Inc.	SS	ML	Y	N	30-Sep	6.7 def	5.9 hij	61.0 pqr	18.4 c-k
AR-B AS7810	AR-B Seeds, Inc.	FS	ML	Y	N	14-Oct	3.3 def	5.5 ij	63.2 m-q	21.9 a-h
AR-B Sweet Choice BMR	AR-B Seeds, Inc.	FS	M	Y	Y	30-Sep	21.7 c-f	7.0 d-g	68.4 c-m	16.6 f-k
AR-B Sweet King BMR	AR-B Seeds, Inc.	SS	ME	Y	N	2-Sep	33.3 b-f	7.6 cde	73.6 a-e	11.7 k
Hawk 12	Blue River Hybrids	SS	M	Y	N	9-Sep	16.7 c-f	7.4 cde	68.8 b-m	16.5 f-k
Black Hawk 12	Blue River Hybrids	SS	M	Y	N	9-Sep	8.3 c-f	8.1 c	70.9 a-i	16.1 g-k
Exp 6810X	Coffey Forage Seeds Inc.	FS	ML	Y	Y	9-Sep	5.7 def	7.0 d-g	74.3 abc	18.3 c-k
GW8528Fbmr	Crosbyton Seed Co.	FS	M	Y	N	9-Sep	31.7 b-f	7.0 d-g	67.9 d-n	18.4 c-k
GWX3172F	Crosbyton Seed Co.	FS	ML	N	N	30-Sep	1.7 ef	5.4 ij	63.5 l-q	22.3 a-h
GW3072F	Crosbyton Seed Co.	FS	ML	N	N	14-Oct	34.0 b-f	5.9 hij	56.8 r	26.2 a
FS 120199	Drussel Seed & Supply Inc.	FS	M	Y	N	9-Sep	25.0 c-f	6.9 d-g	73.5 a-e	17.5 f-k
HP120BMRDW	Eastern Colorado Seeds, LLC	FS	ML	Y	N	14-Oct	0.0 f	5.5 ij	67.9 d-n	19.7 a-j
HP1010BMRMS	Eastern Colorado Seeds, LLC	FS	L	Y	Y	9-Sep	5.7 def	6.9 d-g	76.4 a	16.9 f-k
HP95BMR	Eastern Colorado Seeds, LLC	FS	M	Y	N	2-Sep	11.7 c-f	7.3 c-f	69.7 b-k	14.4 ijk
Ton-A-Milk	Golden Acres Genetics	FS	ME	N	N	14-Oct	26.7 b-f	5.7 ij	57.0 r	25.1 abc
MMR 381/73	MMR Genetics Ltd	FS	ML	N	N	16-Sep	0.7 ef	5.1 j	69.3 b-l	21.2 a-j
MMR 392/88	MMR Genetics Ltd	FS	ML	Y	N	9-Sep	0.0 f	6.3 ghi	73.7 a-e	18.6 b-k
849F	Pioneer Hi-Bred Int., Inc.	FS	M	N	N	9-Sep	1.7 ef	7.5 cde	69.8 b-k	20.5 a-j
Bundle King BMR	Richardson Seeds, Ltd	FS	L	Y	Y	14-Oct	21.7 c-f	9.5 b	63.7 l-q	21.5 a-i
Dairy Master BMR	Richardson Seeds, Ltd	FS	ML	Y	N	9-Sep	6.7 def	7.3 c-f	72.8 a-f	19.1 a-j
Pacesetter BMR	Richardson Seeds, Ltd	FS	PS	Y	N	14-Oct	28.3 b-f	7.5 cde	70.0 b-j	15.3 h-k
Silo 700D	Richardson Seeds, Ltd	FS	ML	N	N	14-Oct	5.0 def	6.3 f-i	62.7 m-q	23.3 a-g
Sweeter 'N Honey BMR	Richardson Seeds, Ltd	SS	M	Y	N	9-Sep	30.0 b-f	6.7 e-h	71.9 a-f	18.9 b-k
X38400	Richardson Seeds, Ltd	SS	M	Y	N	9-Sep	25.0 c-f	6.8 d-g	72.1 a-f	17.8 e-k
BMR Gold	Scott Seed Co.	FS	M	Y	N	9-Sep	3.3 def	6.8 e-h	72.7 a-f	18.8 b-k
BMR Gold X	Scott Seed Co.	FS	M	Y	Y	9-Sep	10.0 c-f	7.1 c-g	73.6 a-e	21.5 a-i
Premium Stock LS	Scott Seed Co.	SS	PS	N	N	14-Oct	78.3 a	7.3 c-g	67.7 e-n	14.2 jk
GS9	Scott Seed Co.	FS	M	N	N	14-Oct	43.3 b-e	9.5 b	65.7 h-p	25.0 a-d
BMR Gold II	Scott Seed Co.	SS	M	Y	N	9-Sep	28.3 b-f	7.7 cde	74.0 a-d	15.5 h-k
Canex BMR208	Sharp Brothers Seed	FS	ME	Y	N	2-Sep	9.0 c-f	7.3 c-f	71.6 a-h	17.2 f-k
Canex BMRX402	Sharp Brothers Seed	FS	M	Y	Y	9-Sep	4.0 def	7.0 d-g	70.1 b-i	19.2 a-j

**Table 2. 2009 Comparison of sorghum hybrids for agronomic characteristics, yield and nutrient composition.**

Variety Information <sup>1)</sup>						Lodging, Height, Moisture and Forage Yield <sup>2)</sup>				
Hybrid Name	Hybrid Company	Sorghum Type	Maturity	BMR	Male Sterile	Harv. Date	% Lodging	Height Ft	% Moisture	Tons/ac @ 65% Moist.
Canex BMRX403	Sharp Brothers Seed	FS	M	Y	Y	9-Sep	3.3 def	6.9 d-g	71.9 a-g	17.9 d-k
NK 300	Sorghum Partners Inc.	FS	ME	N	N	14-Oct	6.7 def	5.7 ij	58.4 qr	25.2 abc
HIKANE II	Sorghum Partners Inc.	FS	M	N	N	16-Sep	9.0 c-f	7.7 cde	68.7 b-m	20.8 a-j
SS405	Sorghum Partners Inc.	FS	L	N	N	14-Oct	15.0 c-f	10.3 a	61.3 o-r	20.8 a-j
SS506	Sorghum Partners Inc.	FS	L	N	N	14-Oct	50.0 bc	10.9 a	64.1 j-p	18.9 b-k
1990	Sorghum Partners Inc.	FS	PS	N	N	14-Oct	66.7 ab	7.8 cd	71.0 a-i	16.4 f-k
X915	Sorghum Partners Inc.	FS	ML	N	N	14-Oct	15.0 c-f	9.5 b	66.8 f-p	23.6 a-f
340BMR	Syngenta Seeds	FS	M	Y	N	14-Oct	7.3 c-f	5.7 ij	63.9 k-q	21.6 a-h
318	Syngenta Seeds	FS	ML	N	N	2-Sep	3.3 def	7.7 cde	70.8 a-i	17.3 f-k
Si-Gro H-44	Syngenta Seeds	FS	M	N	N	14-Oct	26.7 b-f	5.6 ij	57.4 r	25.7 ab
Super Sile 30	Triumph Seed Co., Inc.	FS	na	N	N	14-Oct	6.7 def	7.4 cde	62.2 n-q	21.5 a-i
Greentreat 128	Forage First	FS	PS	Y	N	14-Oct	28.3 b-f	7.3 c-f	66.9 f-o	16.4 g-k
FS-5	Forage First	FS	M	N	N	16-Sep	6.7 def	7.2 c-g	71.8 a-h	20.3 a-j
BMR 108	Forage First	FS	L	Y	N	14-Oct	1.7 ef	5.6 ij	65.4 i-p	20.4 a-j
Ensile Master	Gayland Ward	FS	M	N	N	14-Oct	45.0 bcd	9.5 b	62.9 m-q	24.8 a-e
400 BMR	Gayland Ward	FS	M	Y	Y	9-Sep	13.3 c-f	7.1 c-g	74.8 ab	17.4 f-k
A571	Asgrow	GS	ML	N	N	9-Sep	0.0 f	4.3 k	65.7 g-p	19.6 a-j
84G62	Pioneer Hi-Bred Int., Inc.	GS	ML	N	N	9-Sep	0.0 f	3.8 k	70.1 b-i	18.5 c-k
<b>Mean</b>							17.0	7.0	67.9	19.5
<b>CV</b>							85.27	5.13	3.02	12.36
<b>Treatment Prob(F)</b>							0.0001	0.0001	0.0001	0.0001

<sup>1)</sup> Variety information provided by seed companies. Male sterile entries were cross pollinated by other varieties. FS=Forage Sorghum, SS=Sorghum-Sudangrass, GS=grain sorghum.

<sup>2)</sup> Means followed by the same letter do not significantly differ using LSD (P=0.05).

**Table 2. 2009 Comparison of sorghum hybrids for agronomic characteristics, yield and nutrient composition.**

Variety Information <sup>1)</sup>						Nutrient Composition & Calculations <sup>2)</sup>						
Hybrid Name	Hybrid Company	Sorghum Type	Maturity	BMR	Male Sterile	Crude Protein	% ADF	% NDF	% Lignin	Starch	% TDN	
AR-B AS4530	AR-B Seeds, Inc.	SS	ML	Y	N	9.1 a-f	33.7 b-n	53.3 b-j	3.8 d-k	10.3 e-n	66.0 a-l	
AR-B AS7810	AR-B Seeds, Inc.	FS	ML	Y	N	6.8 f-q	36.1 a-k	55.9 a-h	3.7 d-m	8.1 i-n	64.3 c-m	
AR-B Sweet Choice BMR	AR-B Seeds, Inc.	FS	M	Y	Y	7.6 a-n	30.3 g-p	46.7 g-m	3.3 f-m	12.0 c-n	68.7 a-i	
AR-B Sweet King BMR	AR-B Seeds, Inc.	SS	ME	Y	N	9.4 abc	32.2 c-o	50.7 c-j	3.7 d-m	14.1 c-m	65.7 b-l	
Hawk 12	Blue River Hybrids	SS	M	Y	N	8.1 a-l	33.5 b-n	53.0 b-j	4.5 a-g	13.5 c-n	63.7 e-n	
Black Hawk 12	Blue River Hybrids	SS	M	Y	N	8.7 a-j	34.7 b-m	56.4 a-h	4.6 a-g	10.0 e-n	63.7 e-n	
Exp 6810X	Coffey Forage Seeds Inc.	FS	ML	Y	Y	7.8 a-m	29.5 j-p	47.0 e-m	2.5 klm	11.2 d-n	71.0 abc	
GW8528Fbmr	Crosbyton Seed Co.	FS	M	Y	N	8.2 a-k	27.2 nop	44.1 i-m	3.3 f-m	21.9 bc	69.3 a-g	
GWX3172F	Crosbyton Seed Co.	FS	ML	N	N	7.5 a-o	33.9 b-n	53.5 b-i	4.3 a-j	12.7 c-n	63.3 f-o	
GW3072F	Crosbyton Seed Co.	FS	ML	N	N	6.4 i-q	37.0 a-h	58.7 abc	4.9 a-e	12.7 c-n	58.0 m-p	
FS 120199	Drussel Seed & Supply Inc.	FS	M	Y	N	9.0 a-g	29.7 i-p	46.7 g-m	3.1 g-m	16.8 b-j	69.7 a-f	
HP120BMRDW	Eastern Colorado Seeds, LLC	FS	ML	Y	N	6.5 i-q	35.8 a-k	56.0 a-h	4.3 a-j	9.1 f-n	62.3 h-o	
HP1010BMRMS	Eastern Colorado Seeds, LLC	FS	L	Y	Y	8.6 a-j	32.2 c-o	51.3 c-j	2.8 j-m	9.0 f-n	70.3 a-e	
HP95BMR	Eastern Colorado Seeds, LLC	FS	M	Y	N	9.4 a-d	29.7 i-p	47.6 d-m	3.7 d-m	17.7 b-i	68.0 a-j	
Ton-A-Milk	Golden Acres Genetics	FS	ME	N	N	6.0 k-q	36.3 a-j	58.6 abc	5.4 abc	15.2 c-k	57.3 nop	
MMR 381/73	MMR Genetics Ltd	FS	ML	N	N	9.7 ab	24.0 p	38.3 m	3.2 f-m	32.2 a	70.3 a-e	
MMR 392/88	MMR Genetics Ltd	FS	ML	Y	N	7.0 d-p	30.1 h-p	47.7 d-m	3.1 g-m	18.0 b-i	69.3 a-g	
849F	Pioneer Hi-Bred Int., Inc.	FS	M	N	N	8.2 a-k	31.2 d-o	49.5 c-l	4.3 a-j	18.8 b-h	66.3 a-k	
Bundle King BMR	Richardson Seeds, Ltd	FS	L	Y	Y	5.6 m-q	36.7 a-i	57.0 a-h	3.7 d-m	7.9 i-n	63.3 f-o	
Dairy Master BMR	Richardson Seeds, Ltd	FS	ML	Y	N	7.2 c-o	30.8 e-p	48.7 c-l	3.3 f-m	16.6 b-j	68.3 a-i	
Pacesetter BMR	Richardson Seeds, Ltd	FS	PS	Y	N	5.8 l-q	37.7 a-e	58.5 abc	3.1 g-m	3.7 n	63.3 f-o	
Silo 700D	Richardson Seeds, Ltd	FS	ML	N	N	6.4 i-q	37.4 a-f	58.4 abc	4.9 a-e	11.0 e-n	60.3 k-p	
Sweeter 'N Honey BMR	Richardson Seeds, Ltd	SS	M	Y	N	8.0 a-m	28.6 m-p	46.7 g-m	3.4 e-m	21.6 bcd	69.0 a-h	
X38400	Richardson Seeds, Ltd	SS	M	Y	N	8.0 a-m	31.0 d-o	50.0 c-k	3.9 c-k	17.0 b-j	67.0 a-k	
BMR Gold	Scott Seed Co.	FS	M	Y	N	9.8 a	25.5 op	39.5 lm	2.2 lm	18.8 b-h	72.3 ab	
BMR Gold X	Scott Seed Co.	FS	M	Y	Y	8.2 a-l	25.6 op	40.3 klm	2.2 m	19.0 b-g	72.7 a	
Premium Stock LS	Scott Seed Co.	SS	PS	N	N	6.9 e-p	38.2 abc	58.7 abc	4.0 a-k	4.8 lmn	64.0 d-n	
GS9	Scott Seed Co.	FS	M	N	N	4.7 pq	37.2 a-g	57.9 a-d	4.7 a-f	8.7 g-n	61.3 j-p	
BMR Gold II	Scott Seed Co.	SS	M	Y	N	8.7 a-j	37.9 a-d	58.7 abc	4.6 a-g	6.6 j-n	62.7 g-o	
Canex BMR208	Sharp Brothers Seed	FS	ME	Y	N	7.3 c-o	29.3 k-p	47.0 f-m	3.4 e-m	19.2 b-f	69.3 a-g	
Canex BMRX402	Sharp Brothers Seed	FS	M	Y	Y	8.3 a-k	27.9 m-p	44.4 i-m	2.9 h-m	19.5 b-e	70.7 a-d	

**Table 2. 2009 Comparison of sorghum hybrids for agronomic characteristics, yield and nutrient composition.**

Variety Information <sup>1)</sup>						Nutrient Composition & Calculations <sup>2)</sup>						
Hybrid Name	Hybrid Company	Sorghum Type	Maturity	BMR	Male Sterile	Crude Protein	% ADF	% NDF	% Lignin	Starch	% TDN	
Canex BMRX403	Sharp Brothers Seed	FS	M	Y	Y	9.2 a-e	28.7 l-p	46.6 h-m	2.9 i-m	14.6 c-l	71.3 ab	
NK 300	Sorghum Partners Inc.	FS	ME	N	N	6.6 h-q	35.6 a-l	57.3 a-f	5.1 a-d	13.5 c-n	59.3 l-p	
HIKANE II	Sorghum Partners Inc.	FS	M	N	N	8.0 a-l	28.3 m-p	43.1 j-m	3.5 e-m	19.2 b-f	69.3 a-g	
SS405	Sorghum Partners Inc.	FS	L	N	N	4.6 q	41.8 a	65.6 a	5.5 ab	5.5 k-n	56.0 p	
SS506	Sorghum Partners Inc.	FS	L	N	N	6.6 g-q	40.1 ab	63.0 ab	4.4 a-i	4.8 lmn	59.3 l-p	
1990	Sorghum Partners Inc.	FS	PS	N	N	7.9 a-m	38.0 a-d	58.7 abc	3.8 d-l	4.1 mn	62.7 g-o	
X915	Sorghum Partners Inc.	FS	ML	N	N	5.2 n-q	35.9 a-k	57.1 a-g	4.5 a-h	10.7 e-n	62.0 i-p	
340BMR	Syngenta Seeds	FS	M	Y	N	7.3 b-o	33.2 b-n	53.0 b-j	3.5 e-m	13.6 c-n	65.7 b-l	
318	Syngenta Seeds	FS	ML	N	N	8.5 a-j	31.4 c-o	49.1 c-l	4.0 a-k	16.8 b-j	66.3 a-k	
Si-Gro H-44	Syngenta Seeds	FS	M	N	N	6.4 j-q	37.0 a-h	57.9 a-d	5.1 a-d	13.5 c-n	57.3 nop	
Super Sile 30	Triumph Seed Co., Inc.	FS	na	N	N	5.3 n-q	40.0 ab	62.8 ab	5.5 a	8.6 h-n	56.7 op	
Greentreat 128	Forage First	FS	PS	Y	N	6.7 f-q	37.8 a-e	58.4 abc	3.6 d-m	4.4 lmn	63.0 f-o	
FS-5	Forage First	FS	M	N	N	7.6 a-n	32.3 c-o	51.1 c-j	3.9 c-k	12.3 c-n	65.7 b-l	
BMR 108	Forage First	FS	L	Y	N	7.3 c-o	33.2 b-n	53.5 b-j	3.8 c-k	13.5 c-n	64.3 c-m	
Ensile Master	Gayland Ward	FS	M	N	N	5.1 opq	37.3 a-f	57.4 a-e	4.7 a-f	9.9 e-n	61.3 j-p	
400 BMR	Gayland Ward	FS	M	Y	Y	9.0 a-h	30.5 f-p	48.6 c-l	3.3 f-m	9.7 e-n	68.3 a-i	
A571	Asgrow	GS	ML	N	N	8.8 a-i	29.2 k-p	45.3 i-m	4.0 b-k	26.4 ab	66.3 a-k	
84G62	Pioneer Hi-Bred Int., Inc.	GS	ML	N	N	8.4 a-j	27.5 nop	44.2 i-m	3.5 e-m	26.6 ab	68.7 a-i	
<b>Mean</b>						7.5	33.0	52.1	3.9	13.6	65.2	
<b>CV</b>						10.6	7.06	6.68	13.51	25.59	3.52	
<b>Treatment Prob(F)</b>						0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	

<sup>1)</sup> Variety information provided by seed companies. Male sterile entries were cross pollinated by other varieties. FS=Forage Sorghum, SS=Sorghum-Sudangrass, GS=grain sorghum.

<sup>2)</sup> Means followed by the same letter do not significantly differ using LSD (P=0.05).



**Table 2. 2009 Comparison of sorghum hybrids for agronomic characteristics, yield and nutrient composition.**

Variety Information <sup>1)</sup>						Nutrient Composition & Calculations <sup>2)</sup>					
Hybrid Name	Hybrid Company	Sorghum Type	Maturity	BMR	Male Sterile	48 hr IVTD	NEL Mcal/lb	NEM Mcal/lb	NEG Mcal/lb	% C	% P
AR-B AS4530	AR-B Seeds, Inc.	SS	ML	Y	N	80.7 a-j	0.64 b-m	0.65 a-l	0.38 a-k	0.25 abc	0.21 a-g
AR-B AS7810	AR-B Seeds, Inc.	FS	ML	Y	N	80.3 a-j	0.60 d-p	0.61 d-o	0.36 c-n	0.25 abc	0.20 a-g
AR-B Sweet Choice BMR	AR-B Seeds, Inc.	FS	M	Y	Y	82.0 a-h	0.69 a-h	0.69 a-i	0.42 a-i	0.26 abc	0.17 a-g
AR-B Sweet King BMR	AR-B Seeds, Inc.	SS	ME	Y	N	80.0 b-k	0.64 b-l	0.64 b-l	0.38 b-k	0.29 abc	0.24 ab
Hawk 12	Blue River Hybrids	SS	M	Y	N	76.3 g-n	0.61 c-o	0.61 e-o	0.35 d-o	0.30 abc	0.22 a-f
Black Hawk 12	Blue River Hybrids	SS	M	Y	N	77.0 e-n	0.59 e-p	0.61 e-o	0.35 d-o	0.29 abc	0.21 a-g
Exp 6810X	Coffey Forage Seeds Inc.	FS	ML	Y	Y	83.7 a-d	0.71 a-d	0.72 a-e	0.45 a-d	0.19 c	0.22 a-f
GW8528Fbmr	Crosbyton Seed Co.	FS	M	Y	N	81.7 a-i	0.71 a-d	0.71 a-f	0.44 a-f	0.30 abc	0.23 a-e
GWX3172F	Crosbyton Seed Co.	FS	ML	N	N	76.7 f-n	0.61 c-o	0.61 e-o	0.34 e-o	0.29 abc	0.20 a-g
GW3072F	Crosbyton Seed Co.	FS	ML	N	N	73.3 l-o	0.53 m-q	0.52 m-p	0.27 m-p	0.32 abc	0.17 c-g
FS 120199	Drussel Seed & Supply Inc.	FS	M	Y	N	84.0 abc	0.70 a-e	0.71 a-f	0.44 a-f	0.25 abc	0.23 a-e
HP120BMRDW	Eastern Colorado Seeds, LLC	FS	ML	Y	N	79.3 b-l	0.58 g-p	0.59 h-o	0.33 h-o	0.26 abc	0.19 a-g
HP1010BMRMS	Eastern Colorado Seeds, LLC	FS	L	Y	Y	84.0 abc	0.68 a-j	0.70 a-h	0.43 a-g	0.28 abc	0.23 a-d
HP95BMR	Eastern Colorado Seeds, LLC	FS	M	Y	N	82.3 a-g	0.68 a-i	0.69 a-i	0.41 a-i	0.22 abc	0.21 a-g
Ton-A-Milk	Golden Acres Genetics	FS	ME	N	N	72.3 mno	0.52 n-q	0.51 nop	0.25 nop	0.25 abc	0.16 d-g
MMR 381/73	MMR Genetics Ltd	FS	ML	N	N	83.3 a-e	0.74 ab	0.73 abc	0.46 abc	0.27 abc	0.23 a-e
MMR 392/88	MMR Genetics Ltd	FS	ML	Y	N	82.0 a-h	0.69 a-h	0.70 a-h	0.43 a-h	0.29 abc	0.22 a-f
849F	Pioneer Hi-Bred Int., Inc.	FS	M	N	N	79.0 c-l	0.65 a-k	0.66 a-k	0.39 a-k	0.24 abc	0.23 a-e
Bundle King BMR	Richardson Seeds, Ltd	FS	L	Y	Y	77.3 d-n	0.59 f-p	0.60 f-o	0.34 f-o	0.28 abc	0.18 a-g
Dairy Master BMR	Richardson Seeds, Ltd	FS	ML	Y	N	82.0 a-h	0.68 a-j	0.68 a-j	0.41 a-i	0.25 abc	0.21 a-g
Pacesetter BMR	Richardson Seeds, Ltd	FS	PS	Y	N	77.7 c-n	0.58 i-p	0.59 f-o	0.34 f-o	0.38 a	0.21 a-g
Silo 700D	Richardson Seeds, Ltd	FS	ML	N	N	75.3 i-o	0.55 k-q	0.55 k-p	0.30 j-p	0.30 abc	0.18 a-g
Sweeter 'N Honey BMR	Richardson Seeds, Ltd	SS	M	Y	N	82.3 a-g	0.69 a-g	0.70 a-h	0.43 a-h	0.21 bc	0.22 a-g
X38400	Richardson Seeds, Ltd	SS	M	Y	N	81.0 a-i	0.66 a-k	0.67 a-k	0.40 a-j	0.28 abc	0.22 a-f
BMR Gold	Scott Seed Co.	FS	M	Y	N	85.7 ab	0.75 a	0.76 ab	0.48 ab	0.25 abc	0.21 a-g
BMR Gold X	Scott Seed Co.	FS	M	Y	Y	86.7 a	0.76 a	0.77 a	0.49 a	0.22 abc	0.23 a-d
Premium Stock LS	Scott Seed Co.	SS	PS	N	N	77.7 c-n	0.58 h-p	0.60 f-o	0.34 f-o	0.33 abc	0.18 a-g
GS9	Scott Seed Co.	FS	M	N	N	75.7 h-n	0.56 k-p	0.56 j-p	0.31 j-p	0.21 bc	0.17 c-g
BMR Gold II	Scott Seed Co.	SS	M	Y	N	77.0 e-n	0.58 i-p	0.59 f-o	0.33 g-o	0.36 ab	0.19 a-g
Canex BMR208	Sharp Brothers Seed	FS	ME	Y	N	81.7 a-i	0.70 a-f	0.70 a-h	0.43 a-g	0.25 abc	0.22 a-g
Canex BMRX402	Sharp Brothers Seed	FS	M	Y	Y	83.0 a-f	0.72 abc	0.72 a-e	0.45 a-e	0.20 bc	0.24 abc

**Table 2. 2009 Comparison of sorghum hybrids for agronomic characteristics, yield and nutrient composition.**

Variety Information <sup>1)</sup>						Nutrient Composition & Calculations <sup>2)</sup>					
Hybrid Name	Hybrid Company	Sorghum Type	Maturity	BMR	Male Sterile	48 hr IVTD	NEL Mcal/lb	NEM Mcal/lb	NEG Mcal/lb	% C	% P
Canex BMRX403	Sharp Brothers Seed	FS	M	Y	Y	83.3 a-e	0.72 abc	0.73 a-d	0.45 abc	0.19 c	0.22 a-f
NK 300	Sorghum Partners Inc.	FS	ME	N	N	74.3 j-o	0.55 k-q	0.54 l-p	0.29 k-p	0.25 abc	0.17 b-g
HIKANE II	Sorghum Partners Inc.	FS	M	N	N	82.7 a-g	0.71 a-d	0.71 a-g	0.44 a-f	0.26 abc	0.21 a-g
SS405	Sorghum Partners Inc.	FS	L	N	N	69.7 o	0.46 q	0.47 p	0.22 p	0.19 c	0.15 fg
SS506	Sorghum Partners Inc.	FS	L	N	N	73.7 k-o	0.51 opq	0.52 m-p	0.27 l-p	0.24 abc	0.17 c-g
1990	Sorghum Partners Inc.	FS	PS	N	N	77.0 e-n	0.57 i-p	0.59 g-o	0.33 h-o	0.31 abc	0.20 a-g
X915	Sorghum Partners Inc.	FS	ML	N	N	75.3 i-o	0.58 i-p	0.58 i-o	0.32 i-o	0.23 abc	0.19 a-g
340BMR	Syngenta Seeds	FS	M	Y	N	81.0 a-i	0.63 b-n	0.63 c-m	0.37 c-l	0.22 abc	0.18 a-g
318	Syngenta Seeds	FS	ML	N	N	80.3 a-j	0.66 a-k	0.65 a-l	0.39 a-k	0.25 abc	0.24 a
Si-Gro H-44	Syngenta Seeds	FS	M	N	N	73.3 l-o	0.53 l-q	0.51 nop	0.26 m-p	0.24 abc	0.15 g
Super Sile 30	Triumph Seed Co., Inc.	FS	na	N	N	71.3 no	0.49 pq	0.50 op	0.24 op	0.25 abc	0.16 efg
Greentreat 128	Forage First	FS	PS	Y	N	77.3 d-n	0.58 i-p	0.59 g-o	0.33 g-o	0.34 abc	0.20 a-g
FS-5	Forage First	FS	M	N	N	78.7 c-m	0.64 b-l	0.65 b-l	0.38 b-k	0.24 abc	0.22 a-g
BMR 108	Forage First	FS	L	Y	N	81.0 a-i	0.62 c-o	0.62 c-n	0.36 c-m	0.22 abc	0.18 a-g
Ensile Master	Gayland Ward	FS	M	N	N	75.3 i-o	0.57 j-p	0.57 j-p	0.31 j-p	0.22 abc	0.17 b-g
400 BMR	Gayland Ward	FS	M	Y	Y	81.7 a-i	0.68 a-i	0.69 a-i	0.42 a-i	0.31 abc	0.19 a-g
A571	Asgrow	GS	ML	N	N	81.0 a-i	0.67 a-j	0.66 a-k	0.40 a-j	0.23 abc	0.19 a-g
84G62	Pioneer Hi-Bred Int., Inc.	GS	ML	N	N	82.3 a-g	0.70 a-e	0.70 a-h	0.43 a-h	0.19 bc	0.22 a-g
<b>Mean</b>						79.2	0.63	0.63	0.37	0.26	0.20
<b>CV</b>						2.73	6.03	6.17	9.44	21.91	11.72
<b>Treatment Prob(F)</b>						0.0001	0.0001	0.0001	0.0001	0.0048	0.0001

<sup>1)</sup> Variety information provided by seed companies. Male sterile entries were cross pollinated by other varieties. FS=Forage Sorghum, SS=Sorghum-Sudangrass, GS=grain sorghum.

<sup>2)</sup> Means followed by the same letter do not significantly differ using LSD (P=0.05).

**Table 2. 2009 Comparison of sorghum hybrids for agronomic characteristics, yield and nutrient composition.**

Variety Information <sup>1)</sup>						Nutrient Composition & Calculations <sup>2)</sup>					
Hybrid Name	Hybrid Company	Sorghum Type	Maturity	BMR	Male Sterile	% Mg	% K	% S	Milk lbs/Tons	Rel. Forage Quality	Rel. Feed Value
AR-B AS4530	AR-B Seeds, Inc.	SS	ML	Y	N	0.20 a-h	1.7 abc	0.16 abc	2,650 c-n	136 c-m	110 e-n
AR-B AS7810	AR-B Seeds, Inc.	FS	ML	Y	N	0.16 d-h	1.4 a-e	0.14 a-f	2,515 e-p	118 e-n	102 g-n
AR-B Sweet Choice BMR	AR-B Seeds, Inc.	FS	M	Y	Y	0.22 a-h	1.0 e	0.10 c-f	2,917 a-j	151 c-h	130 c-j
AR-B Sweet King BMR	AR-B Seeds, Inc.	SS	ME	Y	N	0.27 ab	1.6 a-e	0.15 a-e	2,652 c-n	136 c-m	117 d-m
Hawk 12	Blue River Hybrids	SS	M	Y	N	0.23 a-f	1.4 b-e	0.12 a-f	2,564 d-o	127 c-n	110 e-n
Black Hawk 12	Blue River Hybrids	SS	M	Y	N	0.25 a-d	1.5 a-e	0.15 a-e	2,516 e-p	128 c-n	102 g-n
Exp 6810X	Coffey Forage Seeds Inc.	FS	ML	Y	Y	0.20 a-h	1.3 b-e	0.09 ef	3,028 a-e	166 bcd	133 c-g
GW8528Fbmr	Crosbyton Seed Co.	FS	M	Y	N	0.20 a-h	1.3 b-e	0.12 a-f	3,004 a-g	147 c-j	143 b-e
GWX3172F	Crosbyton Seed Co.	FS	ML	N	N	0.23 a-f	1.2 b-e	0.13 a-f	2,574 d-o	124 d-n	110 e-n
GW3072F	Crosbyton Seed Co.	FS	ML	N	N	0.18 b-h	1.2 cde	0.14 a-f	2,197 m-p	100 j-n	96 j-n
FS 120199	Drussel Seed & Supply Inc.	FS	M	Y	N	0.22 a-h	1.5 a-e	0.12 a-f	2,926 a-j	150 c-i	131 c-i
HP120BMRDW	Eastern Colorado Seeds, LLC	FS	ML	Y	N	0.14 gh	1.5 a-e	0.14 a-f	2,435 h-p	112 f-n	103 f-n
HP1010BMRMS	Eastern Colorado Seeds, LLC	FS	L	Y	Y	0.23 a-f	1.5 a-e	0.12 a-f	2,878 a-j	148 c-i	116 d-m
HP95BMR	Eastern Colorado Seeds, LLC	FS	M	Y	N	0.21 a-h	1.5 a-e	0.15 a-e	2,834 a-k	146 c-k	128 c-k
Ton-A-Milk	Golden Acres Genetics	FS	ME	N	N	0.19 a-h	1.4 b-e	0.15 a-e	2,182 nop	96 lmn	98 h-n
MMR 381/73	MMR Genetics Ltd	FS	ML	N	N	0.18 b-h	1.1 cde	0.12 a-f	3,162 abc	198 ab	172 a
MMR 392/88	MMR Genetics Ltd	FS	ML	Y	N	0.20 a-h	1.4 b-e	0.10 c-f	2,922 a-j	138 c-l	128 c-l
849F	Pioneer Hi-Bred Int., Inc.	FS	M	N	N	0.23 a-g	1.4 a-e	0.13 a-f	2,762 b-l	137 c-m	122 d-l
Bundle King BMR	Richardson Seeds, Ltd	FS	L	Y	Y	0.24 a-e	1.4 b-e	0.11 a-f	2,503 f-p	110 f-n	98 h-n
Dairy Master BMR	Richardson Seeds, Ltd	FS	ML	Y	N	0.21 a-h	1.4 b-e	0.09 def	2,859 a-j	136 c-m	124 d-l
Pacesetter BMR	Richardson Seeds, Ltd	FS	PS	Y	N	0.22 a-h	1.9 a	0.13 a-f	2,469 h-p	111 f-n	95 k-n
Silo 700D	Richardson Seeds, Ltd	FS	ML	N	N	0.19 a-h	1.5 a-e	0.13 a-f	2,322 k-p	107 g-n	96 j-n
Sweeter 'N Honey BMR	Richardson Seeds, Ltd	SS	M	Y	N	0.21 a-h	1.3 b-e	0.11 a-f	2,928 a-i	143 c-l	133 c-g
X38400	Richardson Seeds, Ltd	SS	M	Y	N	0.23 a-g	1.5 a-e	0.14 a-f	2,771 a-l	136 c-m	122 d-l
BMR Gold	Scott Seed Co.	FS	M	Y	N	0.22 a-h	1.1 de	0.12 a-f	3,252 ab	198 ab	165 ab
BMR Gold X	Scott Seed Co.	FS	M	Y	Y	0.21 a-h	1.3 b-e	0.11 a-f	3,286 a	210 a	159 abc
Premium Stock LS	Scott Seed Co.	SS	PS	N	N	0.25 a-d	1.4 a-e	0.13 a-f	2,493 g-p	118 d-n	94 lmn
GS9	Scott Seed Co.	FS	M	N	N	0.21 a-h	1.1 de	0.08 f	2,404 j-p	100 j-n	96 j-n
BMR Gold II	Scott Seed Co.	SS	M	Y	N	0.25 a-d	1.4 a-e	0.17 ab	2,448 h-p	123 d-n	94 k-n
Canex BMR208	Sharp Brothers Seed	FS	ME	Y	N	0.21 a-h	1.4 a-e	0.10 c-f	2,954 a-h	140 c-l	132 c-h
Canex BMRX402	Sharp Brothers Seed	FS	M	Y	Y	0.23 a-f	1.3 b-e	0.09 def	3,055 a-d	164 b-e	141 b-e

**Table 2. 2009 Comparison of sorghum hybrids for agronomic characteristics, yield and nutrient composition.**

Variety Information <sup>1)</sup>						Nutrient Composition & Calculations <sup>2)</sup>					
Hybrid Name	Hybrid Company	Sorghum Type	Maturity	BMR	Male Sterile	% Mg	% K	% S	Milk lbs/Tons	Rel. Forage Quality	Rel. Feed Value
Canex BMRX403	Sharp Brothers Seed	FS	M	Y	Y	0.25 a-d	1.3 b-e	0.10 b-f	3,035 a-e	158 c-f	133 c-g
NK 300	Sorghum Partners Inc.	FS	ME	N	N	0.17 d-h	1.3 b-e	0.14 a-f	2,287 l-p	105 g-n	100 g-n
HIKANE II	Sorghum Partners Inc.	FS	M	N	N	0.25 a-d	1.2 cde	0.11 a-f	3,025 a-f	173 bc	146 bcd
SS405	Sorghum Partners Inc.	FS	L	N	N	0.18 b-h	1.1 de	0.13 a-f	2,022 p	83 n	80 n
SS506	Sorghum Partners Inc.	FS	L	N	N	0.23 a-f	1.3 b-e	0.14 a-f	2,216 m-p	103 h-n	85 mn
1990	Sorghum Partners Inc.	FS	PS	N	N	0.26 abc	1.7 ab	0.17 a	2,413 i-p	118 e-n	94 lmn
X915	Sorghum Partners Inc.	FS	ML	N	N	0.22 a-h	1.2 cde	0.11 a-f	2,454 h-p	105 g-n	100 g-n
340BMR	Syngenta Seeds	FS	M	Y	N	0.14 gh	1.6 a-d	0.15 a-e	2,612 d-o	124 d-n	111 d-n
318	Syngenta Seeds	FS	ML	N	N	0.28 a	1.3 b-e	0.12 a-f	2,718 c-m	135 c-m	123 d-l
Si-Gro H-44	Syngenta Seeds	FS	M	N	N	0.15 e-h	1.2 b-e	0.13 a-f	2,183 nop	98 k-n	97 i-n
Super Sile 30	Triumph Seed Co., Inc.	FS	na	N	N	0.14 fgh	1.5 a-e	0.16 a-e	2,097 op	89 mn	85 mn
Greentreat 128	Forage First	FS	PS	Y	N	0.23 a-f	1.7 ab	0.16 a-d	2,449 h-p	115 f-n	95 k-n
FS-5	Forage First	FS	M	N	N	0.25 a-d	1.3 b-e	0.10 b-f	2,707 c-m	131 c-n	117 d-m
BMR 108	Forage First	FS	L	Y	N	0.13 h	1.6 a-e	0.16 a-d	2,568 d-o	122 d-n	110 e-n
Ensile Master	Gayland Ward	FS	M	N	N	0.21 a-h	1.3 b-e	0.11 a-f	2,403 j-p	102 i-n	97 i-n
400 BMR	Gayland Ward	FS	M	Y	Y	0.23 a-g	1.1 e	0.11 a-f	2,841 a-k	145 c-k	125 d-l
A571	Asgrow	GS	ML	N	N	0.14 fgh	1.3 b-e	0.14 a-f	2,806 a-l	151 c-g	137 b-f
84G62	Pioneer Hi-Bred Int., Inc.	GS	ML	N	N	0.17 c-h	1.5 a-e	0.13 a-f	2,941 a-h	144 c-l	143 b-e
<b>Mean</b>						0.21	1.4	0.13	2,658	132	116
<b>CV</b>						14.85	13.03	18.03	6.59	12.24	9.93
<b>Treatment Prob(F)</b>						0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

<sup>1)</sup> Variety information provided by seed companies. Male sterile entries were cross pollinated by other varieties. FS=Forage Sorghum, SS=Sorghum-Sudangrass, GS=grain sorghum.

<sup>2)</sup> Means followed by the same letter do not significantly differ using LSD (P=0.05).

**Table 3. Top 25% of varieties in the 2009 trial based on % IVTD, standability, and yield.<sup>1)</sup>**

Hybrid Name	Hybrid Company	Sorghum Type	BMR	Male Sterile	Harv. Date	% Lodging	Tons/ac @ 65% Moist.	Crude Protein	48 hr IVTD	Rel. Forage Quality
AR-B AS7810	AR-B Seeds, Inc.	FS	Y	N	14-Oct	3.3	21.9	6.8	80.3	118
340BMR	Syngenta Seeds	FS	Y	N	14-Oct	7.3	21.6	7.3	81.0	124
BMR Gold X	Scott Seed Co.	FS	Y	Y	9-Sep	10.0	21.5	8.2	86.7	210
MMR 381/73	MMR Genetics Ltd	FS	N	N	16-Sep	0.7	21.2	9.7	83.3	198
HIKANE II	Sorghum Partners Inc.	FS	N	N	16-Sep	9.0	20.8	8.0	82.7	173
BMR 108	Forage First	FS	Y	N	14-Oct	1.7	20.4	7.3	81.0	122
A571	Asgrow	GS	N	N	9-Sep	0.0	19.6	8.8	81.0	151
Canex BMRX402	Sharp Brothers Seed	FS	Y	Y	9-Sep	4.0	19.2	8.3	83.0	164
Dairy Master BMR	Richardson Seeds, Ltd	FS	Y	N	9-Sep	6.7	19.1	7.2	82.0	136
BMR Gold	Scott Seed Co.	FS	Y	N	9-Sep	3.3	18.8	9.8	85.7	198
MMR 392/88	MMR Genetics Ltd	FS	Y	N	9-Sep	0.0	18.6	7.0	82.0	138
84G62	Pioneer Hi-Bred Int., Inc.	GS	N	N	9-Sep	0.0	18.5	8.4	82.3	144
AR-B AS4530	AR-B Seeds, Inc.	SS	Y	N	30-Sep	6.7	18.4	9.1	80.7	136

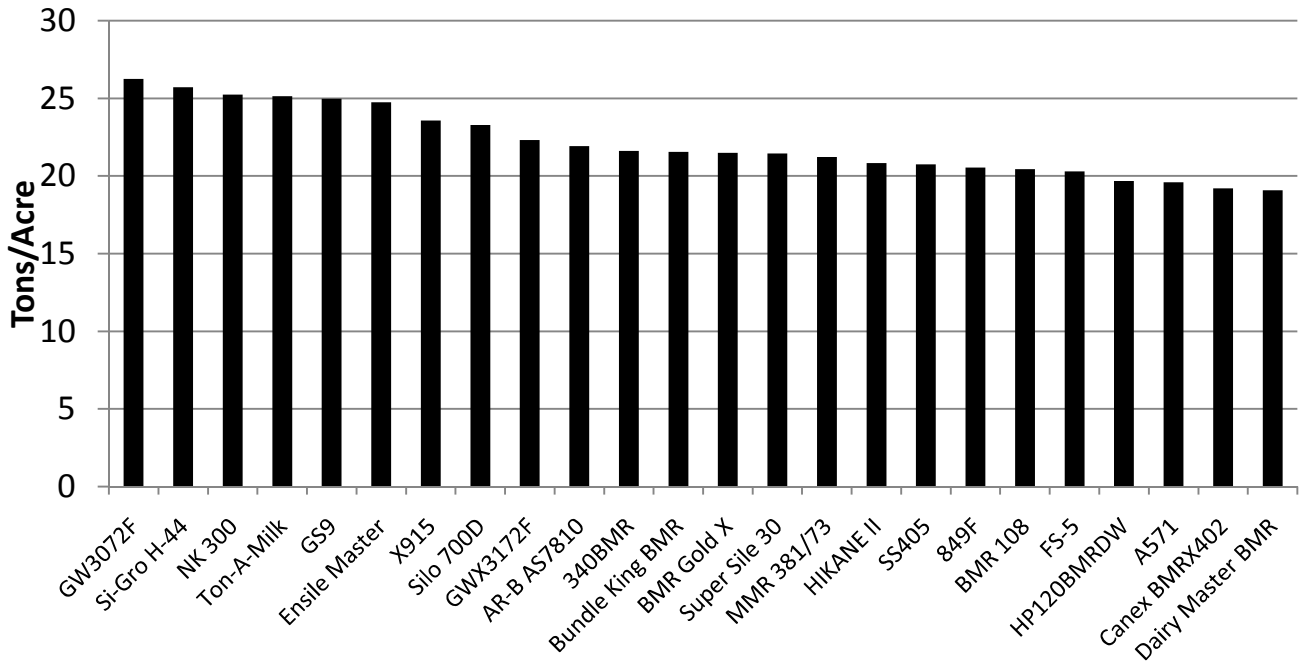
<sup>1)</sup> The top 25% list was derived by taking those varieties with the highest % IVTD (did not differ statistically (P=0.05) and eliminating those varieties that lodged more than 20%. The remaining 13 varieties with the highest yield were then selected.

**Table 4. Grain yield of selected forage sorghum varieties in comparison to standard grain sorghum varieties.**

Hybrid Name	Company Name	% Lodged	Height (ft)	Silage Yld (65% Moist.) Tons/ac	Grain Yield (lbs/ac) <sup>1)</sup>	% Grain Yield of A571 and 84G62
GW8528Fbmr	Crosbyton Seed Co.	31.7	7.0	18.4	3,613 d-g	48.3
GWX3172F	Crosbyton Seed Co.	1.7	5.4	22.3	4,640 b-e	62.0
GW3072F	Crosbyton Seed Co.	34.0	5.9	26.2	6,581 abc	87.9
HP120BMRDW	Eastern Colorado Seeds, LLC	0.0	5.5	19.7	5,227 b-e	69.8
HP95BMR	Eastern Colorado Seeds, LLC	11.7	7.3	14.4	3,731 d-g	49.8
Ton-A-Milk	Golden Acres Genetics	26.7	5.7	25.1	6,033 a-d	80.6
MMR 381/73	MMR Genetics Ltd	0.7	5.1	21.2	7,928 a	105.9
MMR 392/88	MMR Genetics Ltd	0.0	6.3	18.6	4,935 b-e	65.9
Bundle King BMR	Richardson Seeds, Ltd	21.7	9.5	21.5	1,859 fg	24.8
Dairy Master BMR	Richardson Seeds, Ltd	6.7	7.3	19.1	3,406 d-g	45.5
Silo 700D	Richardson Seeds, Ltd	5.0	6.3	23.3	7,229 ab	96.5
Sweeter 'N Honey BMR	Richardson Seeds, Ltd	30.0	6.7	18.9	2,648 efg	35.4
X38400	Richardson Seeds, Ltd	25.0	6.8	17.8	3,455 d-g	46.1
BMR Gold	Scott Seed Co.	3.3	6.8	18.8	3,854 d-g	51.5
GS9	Scott Seed Co.	43.3	9.5	25.0	4,563 c-f	60.9
Canex BMR208	Sharp Brothers Seed	9.0	7.3	17.2	4,686 b-e	62.6
Canex BMRX402	Sharp Brothers Seed	4.0	7.0	19.2	5,106 b-e	68.2
Canex BMRX403	Sharp Brothers Seed	3.3	6.9	17.9	3,060 efg	40.9
NK 300	Sorghum Partners Inc.	6.7	5.7	25.2	6,858 abc	91.6
HIKANE II	Sorghum Partners Inc.	9.0	7.7	20.8	3,580 d-g	47.8
SS405	Sorghum Partners Inc.	15.0	10.3	20.8	2,843 efg	38.0
SS506	Sorghum Partners Inc.	50.0	10.9	18.9	1,311 g	17.5
X915	Sorghum Partners Inc.	15.0	9.5	23.6	2,515 efg	33.6
Ensile Master	Gayland Ward	45.0	9.5	24.8	2,569 efg	34.3
A571 (Check 1)	Asgrow	0.0	4.3	19.6	7,155 ab	
84G62 (Check 2)	Pioneer Hi-Bred, Inc.	0.0	3.8	18.5	7,872 a	

<sup>1)</sup> Means followed by the same letter do not significantly differ using LSD (P=0.05).

**Chart 2. Top yielding forage sorghum varieties in 2009.**



**Chart 3. Percent lodging of top yielding forage sorghum varieties.**

