

2010 Texas Panhandle Forage Sorghum Silage Trial

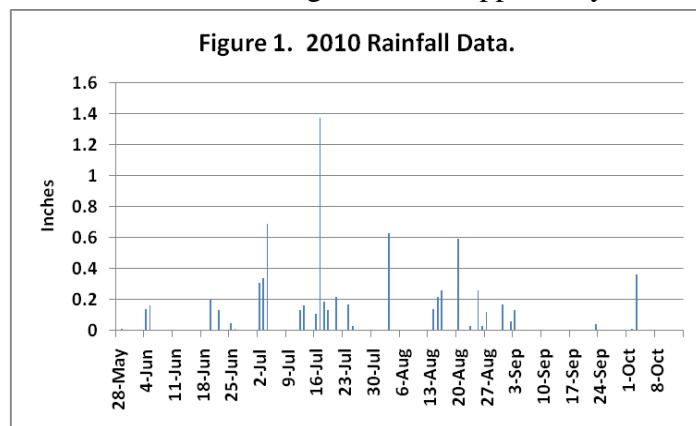
Brent Bean¹, Ted McCollum¹, Jake Becker², Jurg Blumenthal³,
Jake Robinson², Rex Brandon², Emalee Buttrey², Rex VanMeter², and Dennis Pietsch⁴

Introduction

This year's silage trial consisted of 56 entries that included 16 conventional and 32 BMR forage sorghums (including sorghum-sudangrass). Eight photoperiod sensitive (PS) sorghums were also entered in the trial. 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 trials, summaries of limited irrigated sorghum hay trials are 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 four 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 weekly and all plots were irrigated when the average of the three moisture blocks fell below 60. Approximately 12 inches of irrigation

water was applied during the season. PS entries were blocked separately and received an additional late season irrigation of 3.5 inches on Sep 7th. Rainfall totaled 7.3 inches during the growing season (May 28 – Oct 13) (Figure 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 season (Oct 13). Grain yield was collected on November 2nd and 3rd only from those entries where it was requested by the seed company.

¹ Extension Agronomist and Beef Cattle Specialist, respectively, Texas AgriLifeResearch & Extension Center, Amarillo, phone: 806-677-5600, Email: b-bean@tamu.edu and ft-mccollum@tamu.edu.

² Extension or Research Assistants or Associates, Texas AgriLife Research and Extension Center, Amarillo.

³ State Sorghum Cropping Specialist, Texas AgriLife Extension, College Station.

⁴ Director of Crop Testing, Texas AgriLife Research, 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 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, 2010
Planting Rate:	100,000 seed/acre
Seed Method:	John Deere Max-emerge Planter
Fertilizer:	Applied 212 lb/acre N and 80 lb/acre P ₂ O ₅ based on soil test results for a 30 ton/acre yield.
Herbicide:	One lb/acre atrazine applied three days after planting.
Irrigation:	Furrow irrigated based on moisture block readings. Approximately 12 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 1 st to October 13 th and are reported in Table 2.
Grain Harvest Date:	November 2 nd . 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
 - NEm:** Estimate of Net Energy for maintenance
 - NEg:** Estimate of Net Energy for gain
 - IVTD:** % In Vitro True Digestibility; positively related to energy availability
 - NDFD** The % of the NDF that is digestible in the rumen

- 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:
Kd, %/hr** A projection of potential milk yield per ton for forage dry matter. NDF digestion rate

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 ¹⁾	% Lodging @ Harvest	Tons/ac @ 65% Moist.	% Crude Protein	% ADF	% NDF	% Lignin	% Starch	% IVTD	% NDFD	Milk lbs/ton DM	Relative Forage Quality (RFQ)
NonBMR (16)	5.8	24.6	7.9	30.9	48.1	3.9	19.9	78.6	55.7	2,751	143.0
BMR (32)	17.8	23.1	8.1	29.6	46.8	3.2	16.9	81.5	60.7	2,917	154.6
PS NonBMR (5)	13.0	29.6	6.1	35.8	55.8	4.0	5.6	74.5	54.5	2,486	112.5
PS BMR (3)	6.1	26.3	5.7	34.6	54.6	3.3	5.4	77.4	58.4	2,626	116.6
Test Avg.	13.3	24.3	8.0	30.8	48.4	3.47	16.11	79.8	58.3	2,816	145.5

¹⁾ 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 24.3 ton/acre (Tables 1 and 2). As in previous years, average yield was higher with the nonBMR forage sorghums compared to the BMR forage sorghums. However, the gap between the two types appears to be narrowing with the BMRs yielded only 6.5% less than the nonBMRs. Lodging was higher with the BMR sorghums averaging 17.8% compared to 5.8% with the nonBMRs. BMR lodging ranged from 0 to 65% while lodging of the nonBMR sorghums ranged from 0 to 47% (Table 2).

Digestibility and overall forage quality was highest with BMR varieties as estimated by ADF, NDF, IVTD, NDFD, estimated milk produced per ton, and relative forage quality (Table 1). Starch content was higher with the NonBMR sorghums indicating higher grain content.

Highest yield was obtained with the five Photoperiod sensitive (PS) nonBMR varieties averaging 29.6 ton/acre. The PS BMR varieties averaged 26.3 ton/acre. Because of their longer growing season, the PS varieties received 3.5 inches of additional irrigation at the end of the season (Sep 4). Forage digestibility, as measured by % IVTD, was approximately 3 percentage points higher with the PS BMR varieties than the PS nonBMR varieties but less than the non PS sorghums.

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 (Table 3). 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 14 highest yielding were considered the top 25% varieties in the trial. Of these varieties, yield ranged from a low of 17.4 ton/acre with Sweet Choice BMR to a high of 28.2 ton/acre with GW8528F. Percent IVTD was very good with all varieties and ranged from 82.3% to 86.0%. No lodging was observed in 7 of the varieties. Three of the 14 varieties, BMR Gold X, 84G62, and DairyMaster, also ranked in the top 25% of the 2009 trial.

Many producers are primarily concerned with yield and the ability to not lodge. Figure 2 is a summary of varieties with yields of 25 ton/acre or greater. Of these varieties, 7 had lodging scores of less than 10%. These were; Silobuster, GW3072F GW8528F, SiGro H-44, Millennium, 350FS and FS-5.

Grain yield was collected only from those entries as requested by the seed companies (Table 4). Yield was obtained on November 2nd and 3rd. We were unable to compare grain yield of these forage sorghums to commonly grown grain sorghum varieties. However, in the 2009 trial, MMR 381/73 yielded 106% of the grain yield of the average of AsGrow 571 and Pioneer brand 84G62. These are typically two of the better grain yielding varieties in Texas AgriLife trials. As such, grain yield of the forage sorghums were compared to MMR 381/73. Four varieties 73366X, 105392X, Silo 700D and Great Scott BMR yielded at least 80% of the grain yield of MMR 381/73, or what would be considered the expected yield of good grain sorghum varieties.

Table 2. 2010 Comparison of sorghum hybrids for agronomic characteristics, yield and nutrient composition.

Variety Information ¹⁾						Lodging, Height, Moisture and Forage Yield ²⁾				
Hybrid	Company	Type	Maturity	BMR	Male Sterile	Harvest Date	% Lodged	Ht. Ft.	% Moisture	Ton/ac, 65% Moist.
GW3072F	Advanta U.S. dba Crosbyton	FS	M	N	N	7-Sep	8.3 efg	6.3 l-o	66.0 i-q	30.2 a-e
GW8528F	Advanta U.S. dba Crosbyton	FS	M	Y	N	31-Aug	5.0 fg	8.0 f-i	65.0 l-r	28.2 a-i
Sweet Choice BMR	AR-B Seeds, Inc	FS	M	Y	Y	31-Aug	0.0 g	7.8 ghi	75.2 a	17.4 no
AS781	AR-B Seeds, Inc	FS	ML	Y	N	20-Sep	23.3 def	6.0 m-p	65.6 j-q	24.9 c-n
Blackhawk 12	Blue River Hybrids	SS	M	Y	N	7-Sep	0.0 g	8.7 def	67.5 f-o	19.6 l-o
Exp 6810	Coffey Forage Seeds, Inc	FS	ML	Y	Y	7-Sep	0.0 g	7.7 hij	66.3 g-p	24.1 c-o
Centurian	Coffey Forage Seeds, Inc	FS	ML	Y	Y	14-Sep	15.0 efg	7.5 hij	69.1 c-m	21.6 i-o
DSS 73862	Drussel Seed & Supply, Inc.	FS	L	Y	N	20-Sep	65.0 a	6.0 m-p	57.7 t	27.2 b-k
HP 1010 BMR	Eastern Colorado Seeds, LLC	FS	ML	Y	Y	7-Sep	1.7 g	8.0 f-i	70.5 a-j	23.0 d-o
HP BMRDW	Eastern Colorado Seeds, LLC	FS	M	Y	N	20-Sep	53.3 ab	5.8 nop	58.6 t	24.2 c-o
HP 95BMR	Eastern Colorado Seeds, LLC	FS	ME	Y	N	31-Aug	8.3 efg	7.7 hij	65.5 j-r	24.8 c-n
MMR 381/73	MMR Genetics, Ltd	FS	ML	N	N	7-Sep	1.7 g	6.0 m-p	66.1 h-q	22.9 d-o
73366X	MMR Genetics, Ltd	FS	ML	N	N	31-Aug	1.7 g	6.5 lmn	65.1 k-r	24.1 c-o
105392X	MMR Genetics, Ltd	FS	L	Y	N	14-Sep	18.3 efg	6.7 klm	68.1 e-n	22.1 g-o
88366X	MMR Genetics, Ltd	FS	L	Y	N	7-Sep	1.7 g	6.7 klm	71.8 a-f	19.5 l-o
88392X	MMR Genetics, Ltd	FS	L	Y	N	7-Sep	23.3 def	7.3 ijk	73.1 a-e	22.4 f-o
110381X	MMR Genetics, Ltd	FS	L	N	N	28-Sep	1.7 g	7.0 jkl	61.0 q-t	35.2 a
849F	Pioneer Hi-Bred Int., Inc	FS	M	N	N	7-Sep	0.0 g	8.2 e-h	71.2 a-h	23.6 c-o
841F	Pioneer Hi-Bred Int., Inc	FS	M	N	N	7-Sep	1.7 g	5.7 op	70.3 a-k	16.8 o
Silobuster	Production Plus	FS	ML	N	N	20-Sep	46.7 ab	9.2 d	67.5 f-o	30.7 abc
Red Top Plus bmr	Production Plus	SS	ML	Y	Y	7-Sep	0.0 g	7.8 ghi	73.3 a-e	20.0 k-o
Bundle King BMR	Richardson Seeds, Ltd	FS	L	Y	Y	28-Sep	8.3 efg	8.7 def	70.6 a-j	23.9 c-o
Dairy Master BMR	Richardson Seeds, Ltd	FS	ML	Y	N	7-Sep	15.0 efg	8.7 def	70.5 a-j	21.8 h-o
Pacesetter BMR	Richardson Seeds, Ltd	FS	PS	Y	N	13-Oct	5.0 fg	11.5 b	73.4 a-d	26.7 b-l
Silo 700D	Richardson Seeds, Ltd	FS	L	N	N	7-Sep	0.0 g	7.3 ijk	74.2 abc	24.4 c-n
Sweeter 'N Honey BMR	Richardson Seeds, Ltd	SS	M	Y	N	31-Aug	41.7 bcd	8.5 d-g	71.4 a-g	22.9 d-o
X38400	Richardson Seeds, Ltd	SS	M	Y	N	7-Sep	1.7 g	8.7 def	70.1 a-l	18.9 mno
X70400	Richardson Seeds, Ltd	FS	PS	Y	N	13-Oct	11.7 efg	10.5 c	73.5 a-d	24.7 c-n
GS9	Scott Seed Co.	FS	ML	Y	N	20-Sep	45.0 bc	9.2 d	68.4 d-n	27.2 b-k
BMR Gold	Scott Seed Co.	FS	M	Y	N	7-Sep	0.0 g	7.8 ghi	67.2 f-o	24.1 c-o
BMR Gold X	Scott Seed Co.	FS	M	Y	Y	7-Sep	3.3 g	7.7 hij	68.5 d-n	20.0 k-o

Table 2. 2010 Comparison of sorghum hybrids for agronomic characteristics, yield and nutrient composition.

Variety Information ¹⁾						Lodging, Height, Moisture and Forage Yield ²⁾				
Hybrid	Company	Type	Maturity	BMR	Male Sterile	Harvest Date	% Lodged	Ht. Ft.	% Moisture	Ton/ac, 65% Moist.
Premium Stock LS	Scott Seed Co.	SS	PS	N	N	13-Oct	5.0 fg	11.7 ab	70.0 b-m	29.8 a-f
BMR Gold II	Scott Seed Co.	SS	M	Y	N	7-Sep	11.7 efg	9.0 d	68.3 d-n	23.4 c-o
Great Scott BMR	Scott Seed Co.	FS	ML	Y	N	20-Sep	65.0 a	6.5 lmn	63.8 n-s	29.5 a-g
Canex BMR208	Sharp Bros. Seed Co.	FS	ME	Y	N	31-Aug	1.7 g	7.7 hij	69.1 c-m	23.0 d-o
Canex BMR403	Sharp Bros. Seed Co.	FS	M	Y	Y	31-Aug	1.7 g	8.2 e-h	69.7 b-m	22.8 e-o
Canex	Sharp Bros. Seed Co.	FS	ME	N	Y	31-Aug	0.0 g	7.5 hij	73.2 a-e	21.9 h-o
Si-Gro H-44	Syngenta Seeds Inc	FS	L	N	N	7-Sep	0.0 g	6.5 lmn	67.8 f-n	26.2 b-m
340BMR	Syngenta Seeds Inc	FS	M	Y	N	20-Sep	18.3 efg	5.5 p	59.3 st	22.7 e-o
350FS	Syngenta Seeds Inc	FS	ML	N	N	14-Sep	11.7 efg	10.5 c	70.5 a-j	25.4 b-m
Graze-n-Bale+	Syngenta Seeds Inc	SS	PS	N	N	13-Oct	0.0 g	11.5 b	74.5 ab	29.2 a-h
SuperSile 30	Triumph Seed Co., Inc	FS	ML	N	N	7-Sep	8.3 efg	7.8 ghi	70.5 a-j	24.9 c-n
4Ever Green	Walter Moss Seed Co.	FS	PS	N	N	13-Oct	26.7 cde	12.3 a	74.1 abc	26.1 b-m
4Ever Green BMR	Walter Moss Seed Co.	FS	PS	Y	N	13-Oct	1.7 g	11.2 bc	73.7 abc	27.6 b-j
Mega Green	Walter Moss Seed Co.	SS	PS	N	N	13-Oct	23.3 def	12.3 a	73.8 abc	30.3 a-d
Millennium BMR	Walter Moss Seed Co.	FS	ML	Y	N	7-Sep	16.7 efg	8.8 de	67.3 f-o	25.7 b-m
F-18 BMR	Walter Moss Seed Co.	FS	L	Y	Y	20-Sep	10.0 efg	8.8 de	66.1 h-q	23.7 c-o
Integra 31F20	Wilbur-Ellis Co.	SS	ME	Y	N	14-Sep	5.0 fg	6.7 klm	61.2 p-t	20.3 j-o
Integra F10175	Wilbur-Ellis Co.	FS	L	Y	N	20-Sep	60.0 ab	6.2 m-p	64.9 m-r	26.6 b-l
Integra F10165	Wilbur-Ellis Co.	FS	ML	Y	Y	7-Sep	0.0 g	8.2 e-h	69.5 b-m	23.6 c-o
Check 1(Mega Green)	Texas AgriLife Research	SS	PS	N	N	13-Oct	10.0 efg	11.7 ab	73.1 a-e	32.8 ab
Check 2 (A571)	Texas AgriLife Research	GS	ML	N	N	7-Sep	0.0 g	4.7 q	62.6 o-t	21.2 i-o
Check 3 (84G62)	Texas AgriLife Research	GS	ML	N	N	7-Sep	0.0 g	4.2 q	61.3 p-t	19.4 l-o
FS-5	Forage First	FS	M	N	N	31-Aug	0.0 g	8.2 e-h	71.3 a-h	25.3 c-m
5909	Forage First	FS	M	N	N	7-Sep	11.7 efg	6.5 lmn	70.9 a-i	21.4 i-o
BMR 108 Leafy	Forage First	FS	L	Y	N	20-Sep	48.3 ab	5.8 nop	60.4 rst	19.8 k-o
Mean							13.3	8.0	68.4	24.3
CV							90.59	5.88	4.68	19.11

¹⁾ Variety information provided by seed companies. M. sterile entries were pollinated by other varieties. FS=Forage Sorghum, SS=Sorghum-Sudangrass, GS=grain sorghum.

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

Table 2. 2010 Comparison of sorghum hybrids for agronomic characteristics, yield and nutrient composition.

Variety Information ¹⁾						Nutrient Composition & Calculations ²⁾				
Hybrid	Company	Type	Maturity	BMR	Male Sterile	% Crude Protein	% ADF	% NDF	% Lignin	% Starch
GW3072F	Advanta U.S. dba Crosbyton	FS	M	N	N	7.6 e-p	32.2 b-m	50.1 b-n	4.17 a-g	19.60 c-k
GW8528F	Advanta U.S. dba Crosbyton	FS	M	Y	N	8.9 a-g	27.1 l-s	43.0 l-t	3.23 f-m	19.10 c-l
Sweet Choice BMR	AR-B Seeds, Inc	FS	M	Y	Y	9.3 a-e	29.4 g-s	46.4 f-s	2.73 k-q	10.43 m-p
AS781	AR-B Seeds, Inc	FS	ML	Y	N	8.7 a-i	27.8 k-s	45.1 h-t	3.23 f-m	20.77 b-i
Blackhawk 12	Blue River Hybrids	SS	M	Y	N	7.2 h-s	33.0 a-k	51.5 a-i	3.47 f-l	10.13 nop
Exp 6810	Coffey Forage Seeds, Inc	FS	ML	Y	Y	8.4 a-j	24.6 s	38.2 t	2.23 m-q	18.37 c-l
Centurian	Coffey Forage Seeds, Inc	FS	ML	Y	Y	8.2 a-j	30.2 e-r	47.2 d-r	2.83 j-p	17.50 d-n
DSS 73862	Drussel Seed & Supply, Inc.	FS	L	Y	N	8.4 a-j	31.2 d-p	50.3 b-n	3.80 b-j	17.83 d-m
HP 1010 BMR	Eastern Colorado Seeds, LLC	FS	ML	Y	Y	8.3 a-j	29.3 g-s	44.3 i-t	2.57 l-q	11.57 l-p
HP BMRDW	Eastern Colorado Seeds, LLC	FS	M	Y	N	8.6 a-i	28.6 i-s	46.6 e-r	3.27 f-l	21.07 b-i
HP 95BMR	Eastern Colorado Seeds, LLC	FS	ME	Y	N	8.8 a-i	32.8 a-k	50.8 a-k	4.00 b-i	15.70 f-n
MMR 381/73	MMR Genetics, Ltd	FS	ML	N	N	7.5 f-q	36.6 abc	56.6 ab	5.10 a	15.67 f-n
73366X	MMR Genetics, Ltd	FS	ML	N	N	8.2 a-j	27.9 k-s	42.9 m-t	3.63 c-k	27.43 ab
105392X	MMR Genetics, Ltd	FS	L	Y	N	7.8 c-n	31.1 d-p	50.6 a-l	3.03 i-o	15.93 f-n
88366X	MMR Genetics, Ltd	FS	L	Y	N	8.5 a-i	26.7 n-s	42.2 o-t	3.20 g-n	21.03 b-i
88392X	MMR Genetics, Ltd	FS	L	Y	N	7.8 d-o	30.0 f-r	47.4 d-r	3.33 f-l	18.80 c-l
110381X	MMR Genetics, Ltd	FS	L	N	N	7.1 i-s	33.0 a-k	51.8 a-i	4.57 a-d	19.70 c-j
849F	Pioneer Hi-Bred Int., Inc	FS	M	N	N	7.9 c-m	30.9 d-q	47.8 d-r	4.17 a-g	18.17 c-l
841F	Pioneer Hi-Bred Int., Inc	FS	M	N	N	9.5 abc	28.8 h-s	46.1 f-s	3.60 c-k	22.87 a-f
Silobuster	Production Plus	FS	ML	N	N	5.7 rst	34.5 a-g	53.4 a-f	4.77 ab	18.27 c-l
Red Top Plus bmr	Production Plus	SS	ML	Y	Y	8.3 a-j	28.6 i-s	42.8 n-t	1.77 q	12.03 k-p
Bundle King BMR	Richardson Seeds, Ltd	FS	L	Y	Y	5.9 q-t	31.5 b-o	51.4 a-j	3.37 f-l	12.47 j-p
Dairy Master BMR	Richardson Seeds, Ltd	FS	ML	Y	N	7.8 c-n	29.3 g-s	45.2 h-t	2.93 j-o	16.17 f-n
Pacesetter BMR	Richardson Seeds, Ltd	FS	PS	Y	N	5.4 t	35.0 a-f	54.8 a-d	3.70 c-k	5.13 p
Silo 700D	Richardson Seeds, Ltd	FS	L	N	N	8.2 a-j	31.3 d-p	49.0 b-q	3.73 c-k	18.03 c-l
Sweeter 'N Honey BMR	Richardson Seeds, Ltd	SS	M	Y	N	7.2 h-s	32.3 b-l	51.8 a-i	4.23 a-f	18.97 c-l
X38400	Richardson Seeds, Ltd	SS	M	Y	N	8.0 a-k	28.0 j-s	45.0 h-t	3.53 e-l	21.70 b-h
X70400	Richardson Seeds, Ltd	FS	PS	Y	N	6.4 k-t	34.3 a-g	54.2 a-e	3.30 f-l	5.37 p
GS9	Scott Seed Co.	FS	ML	Y	N	5.7 st	32.3 b-l	50.6 b-m	4.07 b-h	14.23 h-n
BMR Gold	Scott Seed Co.	FS	M	Y	N	8.4 a-j	26.9 m-s	40.5 rst	2.20 n-q	15.10 g-n
BMR Gold X	Scott Seed Co.	FS	M	Y	Y	9.1 a-f	25.7 qrs	38.8 st	2.10 opq	18.70 c-l

Table 2. 2010 Comparison of sorghum hybrids for agronomic characteristics, yield and nutrient composition.

Variety Information ¹⁾						Nutrient Composition & Calculations ²⁾				
Hybrid	Company	Type	Maturity	BMR	Male Sterile	% Crude Protein	% ADF	% NDF	% Lignin	% Starch
Premium Stock LS	Scott Seed Co.	SS	PS	N	N	6.1 o-t	34.0 a-h	52.9 a-g	3.50 f-l	5.63 p
BMR Gold II	Scott Seed Co.	SS	M	Y	N	6.8 j-t	36.0 a-d	55.9 abc	4.23 a-f	11.63 l-p
Great Scott BMR	Scott Seed Co.	FS	ML	Y	N	9.6 ab	25.1 rs	41.8 p-t	3.07 h-o	23.77 a-e
Canex BMR208	Sharp Bros. Seed Co.	FS	ME	Y	N	8.1 a-j	28.2 i-s	45.4 g-t	3.43 f-l	20.77 b-i
Canex BMR403	Sharp Bros. Seed Co.	FS	M	Y	Y	8.0 a-k	28.6 i-s	46.4 f-s	2.87 j-p	17.87 c-m
Canex	Sharp Bros. Seed Co.	FS	ME	N	Y	7.4 g-r	26.1 p-s	40.6 rst	2.17 opq	17.97 c-m
Si-Gro H-44	Syngenta Seeds Inc	FS	L	N	N	8.7 a-i	28.5 i-s	44.8 h-t	3.80 b-j	24.27 a-d
340BMR	Syngenta Seeds Inc	FS	M	Y	N	8.5 a-i	31.5 c-o	50.4 b-n	3.70 c-k	18.20 c-l
350FS	Syngenta Seeds Inc	FS	ML	N	N	6.3 l-t	32.2 b-l	50.8 a-k	3.63 c-k	11.87 l-p
Graze-n-Bale+	Syngenta Seeds Inc	SS	PS	N	N	5.8 q-t	36.8 ab	56.5 ab	4.07 b-h	5.10 p
SuperSile 30	Triumph Seed Co., Inc	FS	ML	N	N	7.5 f-q	34.5 a-g	52.3 a-h	4.20 a-g	14.20 h-n
4Ever Green	Walter Moss Seed Co.	FS	PS	N	N	6.1 p-t	37.8 a	58.3 a	4.60 abc	5.30 p
4Ever Green BMR	Walter Moss Seed Co.	FS	PS	Y	N	5.2 t	34.5 a-g	54.8 a-d	3.00 i-o	5.77 p
Mega Green	Walter Moss Seed Co.	SS	PS	N	N	6.2 n-t	35.4 a-e	55.6 abc	4.07 b-h	5.70 p
Millennium BMR	Walter Moss Seed Co.	FS	ML	Y	N	8.8 a-h	26.5 o-s	41.7 q-t	2.90 j-o	21.93 b-g
F-18 BMR	Walter Moss Seed Co.	FS	L	Y	Y	6.4 k-t	33.2 a-j	53.0 a-g	3.53 e-l	13.83 i-o
Integra 31F20	Wilbur-Ellis Co.	SS	ME	Y	N	9.7 a	30.7 e-q	48.7 c-q	3.83 b-j	17.57 d-n
Integra F10175	Wilbur-Ellis Co.	FS	L	Y	N	8.0 a-k	33.3 a-i	52.3 a-h	3.53 e-l	15.80 f-n
Integra F10165	Wilbur-Ellis Co.	FS	ML	Y	Y	8.5 a-i	27.9 k-s	43.6 k-t	1.87 pq	13.83 i-o
Check 1(Mega Green)	Texas AgriLife Research	SS	PS	N	N	6.3 m-t	35.1 a-f	55.8 abc	3.83 b-j	6.37 op
Check 2 (A571)	Texas AgriLife Research	GS	ML	N	N	9.4 a-d	27.3 l-s	43.7 j-t	3.57 d-l	25.43 abc
Check 3 (84G62)	Texas AgriLife Research	GS	ML	N	N	9.2 a-e	26.7 n-s	41.6 q-t	3.40 f-l	29.83 a
FS-5	Forage First	FS	M	N	N	8.0 b-l	32.0 b-n	49.6 b-o	4.53 a-e	18.27 c-l
5909	Forage First	FS	M	N	N	8.3 a-j	31.8 b-n	48.7 c-q	3.83 b-j	16.80 d-n
BMR 108 Leafy	Forage First	FS	L	Y	N	8.0 a-k	30.9 d-q	49.4 b-p	3.50 f-l	16.40 e-n
Mean						7.7	30.8	48.4	3.47	16.11
CV						13.45	10.57	9.84	18.21	29.15

¹⁾ Variety information provided by seed companies. M. sterile entries were pollinated by other varieties. FS=Forage Sorghum, SS=Sorghum-Sudangrass, GS=grain sorghum.

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

Table 2. 2010 Comparison of sorghum hybrids for agronomic characteristics, yield and nutrient composition.

Variety Information ¹⁾						Nutrient Composition & Calculations ²⁾				
Hybrid	Company	Type	Maturity	BMR	Male Sterile	% C FAT	% TDN	48 hr IVTD	48 hr NDFD	NEL Mcal/lb
GW3072F	Advanta U.S. dba Crosbyton	FS	M	N	N	1.83 d-k	63.7 m-q	76.7 n-q	54.0 r-w	0.63 k-p
GW8528F	Advanta U.S. dba Crosbyton	FS	M	Y	N	2.13 a-f	70.0 a-i	82.3 a-h	59.3 e-o	0.71 a-g
Sweet Choice BMR	AR-B Seeds, Inc	FS	M	Y	Y	2.20 a-e	71.0 a-f	82.7 a-h	63.0 a-f	0.72 a-f
AS781	AR-B Seeds, Inc	FS	ML	Y	N	2.20 a-e	70.0 a-i	82.3 a-h	61.0 c-l	0.71 a-h
Blackhawk 12	Blue River Hybrids	SS	M	Y	N	1.73 f-k	64.3 m-q	78.3 i-p	57.7 i-s	0.63 k-p
Exp 6810	Coffey Forage Seeds, Inc	FS	ML	Y	Y	2.17 a-e	73.3 a	85.7 ab	62.3 a-h	0.77 a
Centurian	Coffey Forage Seeds, Inc	FS	ML	Y	Y	2.03 b-i	69.0 b-k	82.0 b-i	62.0 b-i	0.69 c-l
DSS 73862	Drussel Seed & Supply, Inc.	FS	L	Y	N	2.23 a-d	66.0 i-p	79.7 f-o	59.3 e-o	0.65 f-p
HP 1010 BMR	Eastern Colorado Seeds, LLC	FS	ML	Y	Y	2.43 ab	72.7 abc	84.7 a-d	65.3 abc	0.74 abc
HP BMRDW	Eastern Colorado Seeds, LLC	FS	M	Y	N	2.23 a-d	68.7 c-l	81.7 c-j	60.3 d-m	0.69 b-k
HP 95BMR	Eastern Colorado Seeds, LLC	FS	ME	Y	N	2.23 a-d	66.7 g-o	79.7 f-o	60.3 d-m	0.65 e-p
MMR 381/73	MMR Genetics, Ltd	FS	ML	N	N	2.20 a-e	59.0 r	73.7 qr	53.7 s-w	0.55 qr
73366X	MMR Genetics, Ltd	FS	ML	N	N	2.20 a-e	67.0 f-n	81.0 d-l	55.7 n-v	0.69 b-k
105392X	MMR Genetics, Ltd	FS	L	Y	N	1.80 e-k	67.7 d-m	80.0 e-o	60.3 d-m	0.66 d-o
88366X	MMR Genetics, Ltd	FS	L	Y	N	2.20 a-e	70.7 a-g	83.3 a-f	60.3 d-m	0.73 a-d
88392X	MMR Genetics, Ltd	FS	L	Y	N	2.07 b-h	67.3 e-n	81.3 d-k	60.7 d-m	0.67 c-n
110381X	MMR Genetics, Ltd	FS	L	N	N	2.23 a-d	64.7 l-q	76.3 opq	54.7 p-w	0.63 k-p
849F	Pioneer Hi-Bred Int., Inc	FS	M	N	N	2.17 a-e	65.7 j-p	77.3 l-q	53.0 t-w	0.65 e-p
841F	Pioneer Hi-Bred Int., Inc	FS	M	N	N	2.17 a-e	67.7 d-m	80.7 e-m	57.3 j-t	0.68 c-m
Silobuster	Production Plus	FS	ML	N	N	1.53 k	61.3 qr	73.7 qr	51.0 w	0.58 pqr
Red Top Plus bmr	Production Plus	SS	ML	Y	Y	2.07 b-h	71.3 a-e	84.7 a-d	63.7 a-e	0.73 a-d
Bundle King BMR	Richardson Seeds, Ltd	FS	L	Y	Y	1.73 f-k	65.7 j-p	78.0 j-p	57.0 k-u	0.64 g-p
Dairy Master BMR	Richardson Seeds, Ltd	FS	ML	Y	N	2.10 a-g	69.7 a-j	82.3 a-h	60.7 d-m	0.70 a-i
Pacesetter BMR	Richardson Seeds, Ltd	FS	PS	Y	N	1.63 ijk	65.0 k-q	77.7 k-p	59.3 e-o	0.61 m-r
Silo 700D	Richardson Seeds, Ltd	FS	L	N	N	1.83 d-k	66.0 i-p	79.0 h-o	57.0 k-u	0.65 e-p
Sweeter 'N Honey BMR	Richardson Seeds, Ltd	SS	M	Y	N	2.20 a-e	65.7 j-p	79.0 h-o	59.7 d-n	0.64 h-p
X38400	Richardson Seeds, Ltd	SS	M	Y	N	2.43 ab	69.0 b-k	81.3 d-k	59.0 f-p	0.70 a-j
X70400	Richardson Seeds, Ltd	FS	PS	Y	N	1.83 d-k	65.0 k-q	77.7 k-p	58.3 g-r	0.62 l-q
GS9	Scott Seed Co.	FS	ML	Y	N	1.87 d-k	63.3 n-q	76.3 opq	52.7 uvw	0.62 k-p
BMR Gold	Scott Seed Co.	FS	M	Y	N	2.17 a-e	71.7 a-d	86.0 a	65.7 ab	0.74 abc
BMR Gold X	Scott Seed Co.	FS	M	Y	Y	2.17 a-e	73.0 ab	85.3 abc	62.7 a-g	0.76 ab

Table 2. 2010 Comparison of sorghum hybrids for agronomic characteristics, yield and nutrient composition.

Variety Information ¹⁾						Nutrient Composition & Calculations ²⁾				
Hybrid	Company	Type	Maturity	BMR	Male Sterile	% C FAT	% TDN	48 hr IVTD	48 hr NDFD	NEL Mcal/lb
Premium Stock LS	Scott Seed Co.	SS	PS	N	N	1.73 f-k	63.7 m-q	77.0 m-q	56.3 m-u	0.61 m-r
BMR Gold II	Scott Seed Co.	SS	M	Y	N	1.90 d-k	63.3 n-q	77.0 m-q	58.7 f-q	0.59 o-r
Great Scott BMR	Scott Seed Co.	FS	ML	Y	N	2.23 a-d	70.3 a-h	83.0 a-g	59.3 e-o	0.73 a-d
Canex BMR208	Sharp Bros. Seed Co.	FS	ME	Y	N	2.10 a-g	68.7 c-l	81.3 d-k	59.0 f-p	0.69 b-k
Canex BMR403	Sharp Bros. Seed Co.	FS	M	Y	Y	1.83 d-k	69.7 a-j	81.3 d-k	59.7 d-n	0.70 a-j
Canex	Sharp Bros. Seed Co.	FS	ME	N	Y	1.80 e-k	71.7 a-d	83.7 a-e	60.0 d-n	0.73 abc
Si-Gro H-44	Syngenta Seeds Inc	FS	L	N	N	2.50 a	67.0 f-n	79.7 f-o	54.7 p-w	0.68 c-m
340BMR	Syngenta Seeds Inc	FS	M	Y	N	2.20 a-e	66.3 h-p	80.3 e-n	61.3 b-k	0.65 f-p
350FS	Syngenta Seeds Inc	FS	ML	N	N	1.70 g-k	65.0 k-q	76.7 n-q	54.3 q-w	0.63 j-p
Graze-n-Bale+	Syngenta Seeds Inc	SS	PS	N	N	1.67 h-k	62.3 pqr	74.7 pqr	55.0 o-w	0.58 pqr
SuperSile 30	Triumph Seed Co., Inc	FS	ML	N	N	1.93 c-k	65.0 k-q	79.0 h-o	59.0 f-p	0.63 j-p
4Ever Green	Walter Moss Seed Co.	FS	PS	N	N	1.73 f-k	59.0 r	71.7 r	51.7 vw	0.54 r
4Ever Green BMR	Walter Moss Seed Co.	FS	PS	Y	N	1.60 jk	64.3 m-q	77.0 m-q	57.7 i-s	0.61 n-r
Mega Green	Walter Moss Seed Co.	SS	PS	N	N	1.73 f-k	62.3 pqr	74.7 pqr	54.7 p-w	0.58 pqr
Millennium BMR	Walter Moss Seed Co.	FS	ML	Y	N	2.33 abc	70.3 a-h	83.3 a-f	60.7 d-m	0.72 a-e
F-18 BMR	Walter Moss Seed Co.	FS	L	Y	Y	1.63 ijk	66.0 i-p	78.0 j-p	59.0 f-p	0.63 j-p
Integra 31F20	Wilbur-Ellis Co.	SS	ME	Y	N	2.17 a-e	67.3 e-n	82.3 a-h	64.0 a-d	0.67 c-n
Integra F10175	Wilbur-Ellis Co.	FS	L	Y	N	1.97 c-j	65.3 k-q	80.0 e-o	61.7 b-j	0.63 i-p
Integra F10165	Wilbur-Ellis Co.	FS	ML	Y	Y	1.80 e-k	71.0 a-f	85.3 abc	66.7 a	0.73 a-d
Check 1(Mega Green)	Texas AgriLife Research	SS	PS	N	N	1.87 d-k	62.7 o-r	74.7 pqr	54.7 p-w	0.59 o-r
Check 2 (A571)	Texas AgriLife Research	GS	ML	N	N	2.50 a	67.3 e-n	81.0 d-l	56.7 l-u	0.68 c-m
Check 3 (84G62)	Texas AgriLife Research	GS	ML	N	N	2.40 ab	67.3 e-n	82.3 a-h	58.0 h-s	0.70 a-j
FS-5	Forage First	FS	M	N	N	2.13 a-f	65.7 j-p	77.7 k-p	54.0 r-w	0.64 g-p
5909	Forage First	FS	M	N	N	2.13 a-f	65.7 j-p	79.3 g-o	58.3 g-r	0.65 e-p
BMR 108 Leafy	Forage First	FS	L	Y	N	1.87 d-k	66.7 g-o	79.3 g-o	58.3 g-r	0.66 d-o
Mean						2.03	66.9	79.8	58.6	0.66
CV						12.9	3.99	3.02	4.77	6.63

¹⁾ Variety information provided by seed companies. M. sterile entries were pollinated by other varieties. FS=Forage Sorghum, SS=Sorghum-Sudangrass, GS=grain sorghum.

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

Table 2. 2010 Comparison of sorghum hybrids for agronomic characteristics, yield and nutrient composition.

Variety Information ¹⁾						Nutrient Composition & Calculations ²⁾					
Hybrid	Company	Type	Maturity	BMR	Male Sterile	NEM Mcal/lb	NEG Mcal/lb	% Ca	% P	% Mg	% K
GW3072F	Advanta U.S. dba Crosbyton	FS	M	N	N	0.62 n-t	0.35 o-s	0.30 a-i	0.21 a-h	0.21 abc	1.42 c-o
GW8528F	Advanta U.S. dba Crosbyton	FS	M	Y	N	0.71 a-h	0.44 a-i	0.21 g-l	0.22 a-g	0.18 b-g	1.30 g-p
Sweet Choice BMR	AR-B Seeds, Inc	FS	M	Y	Y	0.73 a-f	0.46 a-f	0.26 b-l	0.21 a-i	0.21 a-d	1.28 i-p
AS781	AR-B Seeds, Inc	FS	ML	Y	N	0.71 a-i	0.44 a-j	0.26 b-l	0.23 a-f	0.17 b-h	1.31 g-p
Blackhawk 12	Blue River Hybrids	SS	M	Y	N	0.63 l-t	0.36 m-s	0.35 ab	0.20 a-i	0.16 b-h	1.48 a-l
Exp 6810	Coffey Forage Seeds, Inc	FS	ML	Y	Y	0.77 a	0.49 a	0.21 h-l	0.23 a-f	0.16 b-h	1.11 p
Centurian	Coffey Forage Seeds, Inc	FS	ML	Y	Y	0.69 b-m	0.42 b-m	0.25 c-l	0.23 a-e	0.21 a-d	1.43 c-o
DSS 73862	Drussel Seed & Supply, Inc.	FS	L	Y	N	0.65 h-s	0.38 i-r	0.30 a-h	0.24 ab	0.17 b-h	1.76 a
HP 1010 BMR	Eastern Colorado Seeds, LLC	FS	ML	Y	Y	0.75 abc	0.48 abc	0.25 c-l	0.20 c-i	0.15 b-h	1.22 k-p
HP BMRDW	Eastern Colorado Seeds, LLC	FS	M	Y	N	0.69 b-m	0.43 a-l	0.26 b-l	0.22 a-g	0.20 a-e	1.67 a-d
HP 95BMR	Eastern Colorado Seeds, LLC	FS	ME	Y	N	0.66 g-r	0.39 f-q	0.28 a-j	0.21 a-i	0.17 b-h	1.36 e-p
MMR 381/73	MMR Genetics, Ltd	FS	ML	N	N	0.54 uv	0.28 t	0.30 a-i	0.19 d-i	0.17 b-h	1.49 a-l
73366X	MMR Genetics, Ltd	FS	ML	N	N	0.67 e-q	0.41 d-p	0.21 g-l	0.19 d-i	0.14 d-h	1.15 nop
105392X	MMR Genetics, Ltd	FS	L	Y	N	0.67 e-q	0.40 e-p	0.28 a-k	0.21 a-h	0.21 a-d	1.50 a-k
88366X	MMR Genetics, Ltd	FS	L	Y	N	0.73 a-f	0.45 a-g	0.24 d-l	0.21 a-i	0.15 b-h	1.29 h-p
88392X	MMR Genetics, Ltd	FS	L	Y	N	0.67 d-p	0.41 d-p	0.25 c-l	0.20 c-i	0.13 e-h	1.44 b-n
110381X	MMR Genetics, Ltd	FS	L	N	N	0.63 l-t	0.37 k-s	0.26 b-l	0.21 a-h	0.21 a-d	1.52 a-j
849F	Pioneer Hi-Bred Int., Inc	FS	M	N	N	0.65 h-s	0.38 i-r	0.30 a-h	0.19 d-i	0.12 fgh	1.36 e-p
841F	Pioneer Hi-Bred Int., Inc	FS	M	N	N	0.68 d-o	0.41 d-o	0.24 d-l	0.24 abc	0.22 ab	1.38 d-p
Silobuster	Production Plus	FS	ML	N	N	0.57 tuv	0.31 st	0.18 kl	0.22 a-g	0.19 a-f	1.41 d-o
Red Top Plus bmr	Production Plus	SS	ML	Y	Y	0.73 a-e	0.46 a-f	0.22 f-l	0.23 a-f	0.17 b-h	1.36 e-p
Bundle King BMR	Richardson Seeds, Ltd	FS	L	Y	Y	0.64 h-s	0.38 i-r	0.18 l	0.19 e-i	0.17 b-h	1.39 d-p
Dairy Master BMR	Richardson Seeds, Ltd	FS	ML	Y	N	0.71 a-i	0.44 a-j	0.25 c-l	0.22 a-g	0.14 e-h	1.53 a-j
Pacesetter BMR	Richardson Seeds, Ltd	FS	PS	Y	N	0.62 m-t	0.36 m-s	0.32 a-e	0.17 hi	0.16 b-h	1.50 a-k
Silo 700D	Richardson Seeds, Ltd	FS	L	N	N	0.65 h-s	0.39 h-r	0.27 a-l	0.24 a	0.25 a	1.33 f-p
Sweeter 'N Honey BMR	Richardson Seeds, Ltd	SS	M	Y	N	0.64 h-s	0.38 j-s	0.20 i-l	0.18 ghi	0.18 b-h	1.41 d-o
X38400	Richardson Seeds, Ltd	SS	M	Y	N	0.70 a-k	0.43 a-k	0.25 b-l	0.23 a-d	0.16 b-h	1.40 d-p
X70400	Richardson Seeds, Ltd	FS	PS	Y	N	0.62 m-t	0.36 l-s	0.36 a	0.18 ghi	0.13 e-h	1.59 a-g
GS9	Scott Seed Co.	FS	ML	Y	N	0.61 o-t	0.35 o-s	0.25 c-l	0.19 d-i	0.15 b-h	1.33 f-p
BMR Gold	Scott Seed Co.	FS	M	Y	N	0.74 a-d	0.47 a-d	0.27 a-l	0.21 a-i	0.15 b-h	1.21 k-p
BMR Gold X	Scott Seed Co.	FS	M	Y	Y	0.76 ab	0.49 ab	0.27 a-l	0.22 a-g	0.17 b-h	1.26 i-p

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Hybrid	Company	Type	Maturity	BMR	Male Sterile	NEM Mcal/lb	NEG Mcal/lb	% Ca	% P	% Mg	% K
Premium Stock LS	Scott Seed Co.	SS	PS	N	N	0.61 p-u	0.35 o-s	0.33 a-d	0.17 hi	0.11 gh	1.50 a-k
BMR Gold II	Scott Seed Co.	SS	M	Y	N	0.60 q-v	0.34 p-t	0.27 a-l	0.20 a-i	0.16 b-h	1.53 a-j
Great Scott BMR	Scott Seed Co.	FS	ML	Y	N	0.72 a-g	0.45 a-g	0.23 e-l	0.23 a-e	0.22 ab	1.19 l-p
Canex BMR208	Sharp Bros. Seed Co.	FS	ME	Y	N	0.70 b-l	0.42 b-m	0.28 a-k	0.22 a-g	0.20 a-e	1.45 b-m
Canex BMR403	Sharp Bros. Seed Co.	FS	M	Y	Y	0.70 a-j	0.43 a-k	0.20 jkl	0.23 a-f	0.18 a-f	1.38 d-p
Canex	Sharp Bros. Seed Co.	FS	ME	N	Y	0.74 a-e	0.46 a-e	0.24 e-l	0.22 a-g	0.17 b-h	1.24 j-p
Si-Gro H-44	Syngenta Seeds Inc	FS	L	N	N	0.67 d-p	0.41 d-p	0.34 abc	0.22 a-g	0.17 b-h	1.27 i-p
340BMR	Syngenta Seeds Inc	FS	M	Y	N	0.66 g-r	0.39 g-r	0.28 a-k	0.21 a-h	0.19 a-e	1.73 ab
350FS	Syngenta Seeds Inc	FS	ML	N	N	0.63 k-t	0.37 k-s	0.23 e-l	0.19 e-i	0.15 c-h	1.14 op
Graze-n-Bale+	Syngenta Seeds Inc	SS	PS	N	N	0.58 s-v	0.33 rst	0.27 b-l	0.18 ghi	0.15 b-h	1.43 c-o
SuperSile 30	Triumph Seed Co., Inc	FS	ML	N	N	0.63 j-t	0.37 k-s	0.26 b-l	0.19 d-i	0.17 b-h	1.25 j-p
4Ever Green	Walter Moss Seed Co.	FS	PS	N	N	0.53 v	0.28 t	0.26 b-l	0.18 ghi	0.13 e-h	1.58 a-h
4Ever Green BMR	Walter Moss Seed Co.	FS	PS	Y	N	0.61 o-t	0.35 n-s	0.31 a-f	0.18 ghi	0.12 fgh	1.55 a-i
Mega Green	Walter Moss Seed Co.	SS	PS	N	N	0.58 s-v	0.33 rst	0.31 a-f	0.17 i	0.16 b-h	1.52 a-j
Millennium BMR	Walter Moss Seed Co.	FS	ML	Y	N	0.73 a-g	0.45 a-h	0.23 e-l	0.20 a-i	0.11 h	1.38 d-p
F-18 BMR	Walter Moss Seed Co.	FS	L	Y	Y	0.64 i-t	0.37 j-s	0.27 a-l	0.20 b-i	0.16 b-h	1.59 a-g
Integra 31F20	Wilbur-Ellis Co.	SS	ME	Y	N	0.67 d-p	0.41 d-o	0.20 jkl	0.19 d-i	0.16 b-h	1.63 a-e
Integra F10175	Wilbur-Ellis Co.	FS	L	Y	N	0.64 i-t	0.38 j-s	0.30 a-g	0.21 a-i	0.21 a-d	1.72 abc
Integra F10165	Wilbur-Ellis Co.	FS	ML	Y	Y	0.73 a-f	0.46 a-f	0.27 a-l	0.21 a-i	0.14 d-h	1.27 i-p
Check 1(Mega Green)	Texas AgriLife Research	SS	PS	N	N	0.59 r-v	0.33 q-t	0.30 a-h	0.19 f-i	0.13 e-h	1.40 d-p
Check 2 (A571)	Texas AgriLife Research	GS	ML	N	N	0.68 d-o	0.41 c-o	0.25 c-l	0.19 e-i	0.12 fgh	1.14 op
Check 3 (84G62)	Texas AgriLife Research	GS	ML	N	N	0.69 c-n	0.42 c-n	0.20 jkl	0.20 c-i	0.15 b-h	1.16 m-p
FS-5	Forage First	FS	M	N	N	0.65 h-s	0.38 i-r	0.30 a-g	0.20 c-i	0.15 b-h	1.28 i-p
5909	Forage First	FS	M	N	N	0.65 h-s	0.38 i-r	0.28 a-j	0.19 f-i	0.13 e-h	1.45 b-m
BMR 108 Leafy	Forage First	FS	L	Y	N	0.66 f-r	0.40 f-q	0.28 a-k	0.21 a-i	0.17 b-h	1.62 a-f
Mean						0.66	0.40	0.26	0.21	0.17	1.40
CV						6.72	10.06	22.1	12.33	25.18	12.94

¹⁾ Variety information provided by seed companies. M. sterile entries were pollinated by other varieties. FS=Forage Sorghum, SS=Sorghum-Sudangrass, GS=grain sorghum.

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

Table 2. 2010 Comparison of sorghum hybrids for agronomic characteristics, yield and nutrient composition.

Variety Information ¹⁾						Nutrient Composition & Calculations ²⁾				
Hybrid	Company	Type	Maturity	BMR	Male Sterile	% S	Milk lbs/Tons	Rel. Forage Quality	Rel. Feed Value	kd, %/hr
GW3072F	Advanta U.S. dba Crosbyton	FS	M	N	N	0.12 a-h	2,638 m-q	126.7 j-n	120 e-n	2.59 k-r
GW8528F	Advanta U.S. dba Crosbyton	FS	M	Y	N	0.10 e-l	3,049 a-h	171.7 b-g	147 a-e	2.97 b-i
Sweet Choice BMR	AR-B Seeds, Inc	FS	M	Y	Y	0.11 b-k	3,046 a-h	167.3 b-h	133 b-k	3.06 b-g
AS781	AR-B Seeds, Inc	FS	ML	Y	N	0.11 b-k	2,980 b-j	150.3 d-k	139 b-h	3.09 b-g
Blackhawk 12	Blue River Hybrids	SS	M	Y	N	0.09 g-l	2,628 m-r	124.7 j-n	114 g-n	2.70 h-q
Exp 6810	Coffey Forage Seeds, Inc	FS	ML	Y	Y	0.09 h-l	3,323 a	213.0 a	170 a	2.99 b-h
Centurian	Coffey Forage Seeds, Inc	FS	ML	Y	Y	0.12 a-h	2,908 c-n	156.0 c-j	131 b-l	3.00 b-h
DSS 73862	Drussel Seed & Supply, Inc.	FS	L	Y	N	0.13 a-f	2,704 i-q	134.7 h-n	120 e-n	3.00 b-h
HP 1010 BMR	Eastern Colorado Seeds, LLC	FS	ML	Y	Y	0.09 g-l	3,195 abc	186.0 a-d	140 a-h	3.27 b
HP BMRDW	Eastern Colorado Seeds, LLC	FS	M	Y	N	0.10 c-l	2,916 c-n	145.0 e-m	134 b-j	3.00 b-h
HP 95BMR	Eastern Colorado Seeds, LLC	FS	ME	Y	N	0.13 a-e	2,760 f-q	141.0 e-m	117 e-n	3.15 bcd
MMR 381/73	MMR Genetics, Ltd	FS	ML	N	N	0.14 abc	2,274 s	109.3 mn	101 mn	2.67 i-r
73366X	MMR Genetics, Ltd	FS	ML	N	N	0.11 b-k	2,876 c-n	158.7 c-j	146 a-f	2.79 f-o
105392X	MMR Genetics, Ltd	FS	L	Y	N	0.10 e-l	2,819 e-p	138.7 e-n	120 d-n	2.86 d-k
88366X	MMR Genetics, Ltd	FS	L	Y	N	0.11 a-j	3,116 a-e	185.7 a-d	150 a-d	3.12 b-e
88392X	MMR Genetics, Ltd	FS	L	Y	N	0.11 b-k	2,850 d-o	150.3 d-k	130 b-m	3.00 b-h
110381X	MMR Genetics, Ltd	FS	L	N	N	0.11 b-k	2,691 i-q	128.3 i-n	114 g-n	2.72 h-q
849F	Pioneer Hi-Bred Int., Inc	FS	M	N	N	0.09 f-l	2,759 f-q	143.0 e-m	130 b-m	2.58 k-r
841F	Pioneer Hi-Bred Int., Inc	FS	M	N	N	0.11 a-j	2,875 c-n	155.3 c-j	135 b-i	2.87 d-k
Silobuster	Production Plus	FS	ML	N	N	0.08 jkl	2,465 qrs	116.3 k-n	111 h-n	2.42 qr
Red Top Plus bmr	Production Plus	SS	ML	Y	Y	0.09 f-l	3,113 a-e	190.3 abc	146 a-f	2.85 d-l
Bundle King BMR	Richardson Seeds, Ltd	FS	L	Y	Y	0.07 l	2,759 f-q	123.0 j-n	117 f-n	2.62 j-r
Dairy Master BMR	Richardson Seeds, Ltd	FS	ML	Y	N	0.09 g-l	3,005 a-i	156.0 c-j	137 b-h	2.96 b-i
Pacesetter BMR	Richardson Seeds, Ltd	FS	PS	Y	N	0.07 l	2,641 l-q	115.7 k-n	105 j-n	2.87 d-k
Silo 700D	Richardson Seeds, Ltd	FS	L	N	N	0.11 b-k	2,739 h-q	135.3 g-n	123 d-n	2.80 e-o
Sweeter 'N Honey BMR	Richardson Seeds, Ltd	SS	M	Y	N	0.12 a-g	2,711 i-q	129.0 i-n	116 f-n	3.16 bcd
X38400	Richardson Seeds, Ltd	SS	M	Y	N	0.11 b-k	2,973 b-k	144.0 e-m	140 a-h	2.99 b-i
X70400	Richardson Seeds, Ltd	FS	PS	Y	N	0.08 i-l	2,632 m-r	122.0 j-n	107 i-n	2.68 h-q
GS9	Scott Seed Co.	FS	ML	Y	N	0.07 l	2,645 k-q	113.3 lmn	117 e-n	2.49 o-r
BMR Gold	Scott Seed Co.	FS	M	Y	N	0.09 g-l	3,160 a-d	201.7 ab	157 ab	3.24 bc
BMR Gold X	Scott Seed Co.	FS	M	Y	Y	0.10 d-l	3,296 ab	213.7 a	170 a	2.95 b-i

Table 2. 2010 Comparison of sorghum hybrids for agronomic characteristics, yield and nutrient composition.

Variety Information ¹⁾						Nutrient Composition & Calculations ²⁾				
Hybrid	Company	Type	Maturity	BMR	Male Sterile	% S	Milk lbs/Tons	Rel. Forage Quality	Rel. Feed Value	kd, %/hr
Premium Stock LS	Scott Seed Co.	SS	PS	N	N	0.08 jkl	2,588 n-s	116.7 k-n	110 h-n	2.57 k-r
BMR Gold II	Scott Seed Co.	SS	M	Y	N	0.12 a-g	2,525 o-s	118.3 k-n	102 lmn	2.92 c-j
Great Scott BMR	Scott Seed Co.	FS	ML	Y	N	0.11 a-j	3,083 a-f	172.7 b-f	156 ab	2.97 b-i
Canex BMR208	Sharp Bros. Seed Co.	FS	ME	Y	N	0.10 c-l	2,941 c-m	144.3 e-m	137 b-h	2.98 b-i
Canex BMR403	Sharp Bros. Seed Co.	FS	M	Y	Y	0.08 i-l	2,968 b-l	145.7 e-m	135 b-j	2.82 e-n
Canex	Sharp Bros. Seed Co.	FS	ME	N	Y	0.08 i-l	3,164 a-d	184.0 a-d	159 ab	2.72 h-q
Si-Gro H-44	Syngenta Seeds Inc	FS	L	N	N	0.13 a-f	2,875 c-n	155.7 c-j	139 b-h	2.69 h-q
340BMR	Syngenta Seeds Inc	FS	M	Y	N	0.14 ab	2,745 g-q	138.3 f-n	119 e-n	3.14 bcd
350FS	Syngenta Seeds Inc	FS	ML	N	N	0.07 l	2,707 i-q	122.0 j-n	118 e-n	2.51 n-r
Graze-n-Bale+	Syngenta Seeds Inc	SS	PS	N	N	0.07 l	2,503 p-s	112.3 lmn	99 n	2.54 l-r
SuperSile 30	Triumph Seed Co., Inc	FS	ML	N	N	0.12 a-i	2,652 j-q	128.3 i-n	112 h-n	3.10 b-g
4Ever Green	Walter Moss Seed Co.	FS	PS	N	N	0.08 i-l	2,306 rs	103.3 n	96 n	2.35 r
4Ever Green BMR	Walter Moss Seed Co.	FS	PS	Y	N	0.08 jkl	2,604 n-r	112.0 lmn	105 i-n	2.53 m-r
Mega Green	Walter Moss Seed Co.	SS	PS	N	N	0.08 kl	2,504 p-s	114.0 k-n	103 k-n	2.53 m-r
Millennium BMR	Walter Moss Seed Co.	FS	ML	Y	N	0.10 d-l	3,116 a-e	187.0 a-d	156 ab	2.98 b-i
F-18 BMR	Walter Moss Seed Co.	FS	L	Y	Y	0.08 jkl	2,711 i-q	126.0 j-n	112 h-n	2.78 g-p
Integra 31F20	Wilbur-Ellis Co.	SS	ME	Y	N	0.15 a	2,810 e-p	146.3 e-l	125 c-n	3.60 a
Integra F10175	Wilbur-Ellis Co.	FS	L	Y	N	0.09 g-l	2,646 k-q	130.3 i-n	113 h-n	3.11 b-f
Integra F10165	Wilbur-Ellis Co.	FS	ML	Y	Y	0.10 d-l	3,070 a-g	165.0 b-i	144 a-g	3.15 bcd
Check 1(Mega Green)	Texas AgriLife Research	SS	PS	N	N	0.08 kl	2,527 o-s	116.3 k-n	103 k-n	2.47 pqr
Check 2 (A571)	Texas AgriLife Research	GS	ML	N	N	0.13 a-d	2,892 c-n	173.0 b-f	154 abc	2.85 d-m
Check 3 (84G62)	Texas AgriLife Research	GS	ML	N	N	0.13 a-e	2,936 c-m	175.3 b-e	156 ab	2.97 b-i
FS-5	Forage First	FS	M	N	N	0.11 b-k	2,743 g-q	140.7 e-m	123 d-n	2.79 f-o
5909	Forage First	FS	M	N	N	0.09 h-l	2,727 h-q	135.7 g-n	124 c-n	2.95 b-i
BMR 108 Leafy	Forage First	FS	L	Y	N	0.09 f-l	2,782 f-q	137.3 f-n	124 c-n	2.81 e-o
Mean						0.10	2,816	145.5	127.9	2.86
CV						21.32	7.22	15.66	14.57	6.97

¹⁾ Variety information provided by seed companies. M. sterile entries were pollinated by other varieties. FS=Forage Sorghum, SS=Sorghum-Sudangrass, GS=grain sorghum.

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

Table 3. Top 25% of varieties in the 2010 trial based on % IVTD, standability, and yield.¹⁾

Hybrid	Company	Type	BMR	Male Sterile	% Lodging	Ton/ac, 65% Moist.	% Crude Protein	48 hr IVTD	Rel. Forage Quality
BMR Gold	Scott Seed Co.	FS	Y	N	0.0	24.1	8.4	86.0	202
Exp 6810	Coffey Forage Seeds	FS	Y	Y	0.0	24.1	8.4	85.7	213
Integra F10165	Wilbur-Ellis Co.	FS	Y	Y	0.0	23.6	8.5	85.3	165
BMR Gold X	Scott Seed Co.	FS	Y	Y	3.3	20.0	9.1	85.3	214
HP 1010 BMR	E.Colorado Seeds	FS	Y	Y	1.7	23.0	8.3	84.7	186
Red Top Plus BMR	Production Plus	SS	Y	Y	0.0	20.0	8.3	84.7	190
Canex	Sharp Bros. Seed Co.	FS	N	Y	0.0	21.9	7.4	83.7	184
Millennium BMR	Walter Moss Seed Co.	FS	Y	N	16.7	25.7	8.8	83.3	187
88366X	MMR Genetics, Ltd	FS	Y	N	1.7	19.5	8.5	83.3	186
Sweet Choice BMR	AR-B Seeds, Inc	FS	Y	Y	0.0	17.4	9.3	82.7	167
Integra 31F20	Wilbur-Ellis Co.	SS	Y	N	5.0	20.3	9.7	82.3	146
Dairy Master BMR	Richardson Seeds	FS	Y	N	15.0	21.8	7.8	82.3	156
GW8528F	Advanta	FS	Y	N	5.0	28.2	8.9	82.3	172
84G62	Texas AgriLife Research	GS	N	N	0.0	19.4	9.2	82.3	175

¹⁾ 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 14 varieties with the highest yield were then selected.

Figure 2. Lodging of those varieties yielding 25 ton/acre or higher.

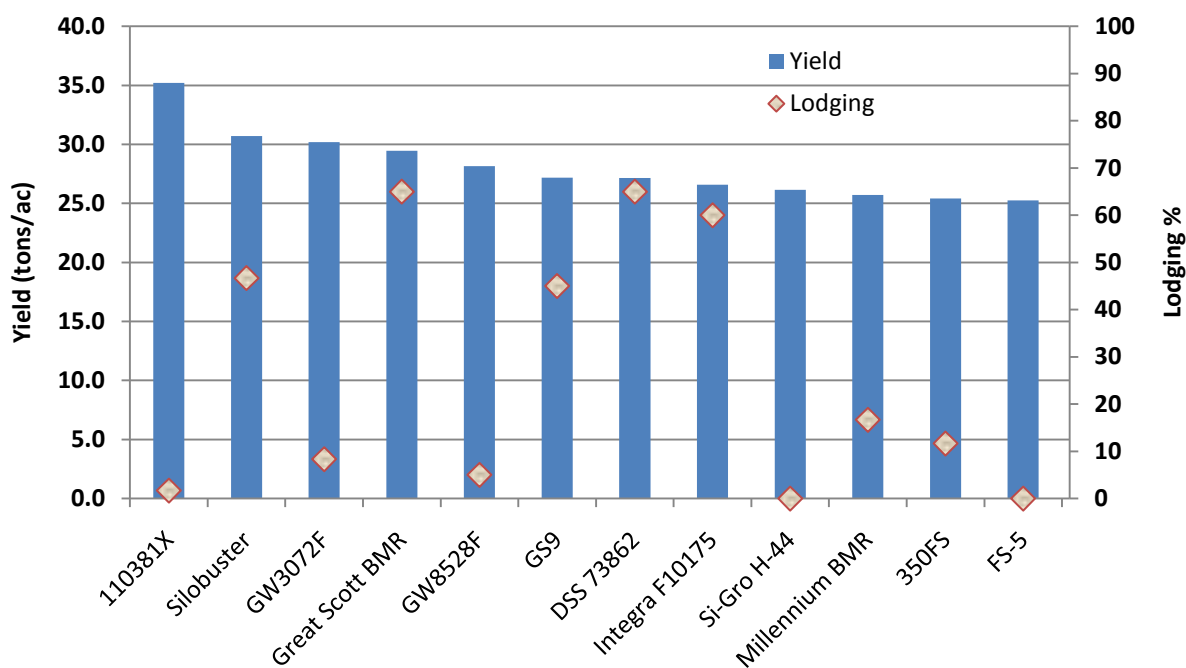


Table 4. Grain yield of selected forage sorghum varieties in comparison to standard grain sorghum varieties.

Hybrid	Company	Type	Maturity	BMR	Male Sterile	Grain Yield lb/ac	Yield as a % of Grain Sorghum Varieties*
GW3072F	Advanta	FS	M	N	N	4,334	69.2
GW8528F	Advanta	FS	M	Y	N	1,914	30.6
Exp 6810	Coffey Forage Seeds, Inc	FS	ML	Y	Y	1,144	18.3
Centurian	Coffey Forage Seeds, Inc	FS	ML	Y	N	3,672	58.6
DSS 73862	Drussel Seed & Supply, Inc.	FS	L	Y	N	3,321	53.0
HP BMRDW	E.Colorado Seeds, LLC	FS	M	Y	N	4,785	76.4
HP 95BMR	E.Colorado Seeds, LLC	FS	ME	Y	N	1,614	25.8
MMR 381/73	MMR Genetics, Ltd	FS	ML	N	N	6,261	100.0
73366X	MMR Genetics, Ltd	FS	ML	N	N	5,652	90.3
105392X	MMR Genetics, Ltd	FS	L	Y	N	5,749	91.8
88366X	MMR Genetics, Ltd	FS	L	Y	N	3,160	50.5
88392X	MMR Genetics, Ltd	FS	L	Y	N	2,497	39.9
110381X	MMR Genetics, Ltd	FS	L	N	N	3,858	61.6
Bundle King BMR	Richardson Seeds, Ltd	FS	L	Y	Y	2,341	37.4
Dairy Master BMR	Richardson Seeds, Ltd	FS	ML	Y	N	1,126	18.0
Silo 700D	Richardson Seeds, Ltd	FS	L	N	N	5,532	88.4
Sweeter 'N Honey BMR	Richardson Seeds, Ltd	SS	M	Y	N	1,297	20.7
X38400	Richardson Seeds, Ltd	SS	M	Y	N	571	9.1
GS9	Scott Seed Co.	FS	ML	Y	N	4,457	71.2
BMR Gold	Scott Seed Co.	FS	M	Y	N	1,458	23.3
Great Scott BMR	Scott Seed Co.	FS	ML	Y	N	6,394	102.1
Canex BMR208	Sharp Bros. Seed Co.	FS	ME	Y	N	2,014	32.2

* Yield as a percent of MMR 381/73. In last year's trial where a direct comparison was made with A571 and 84G62 grain sorghum varieties, MMR 381/73 yielded 106 percent of these two standard varieties.