



The Agriculture Program

The Texas A&M University System

2004 Texas Panhandle Forage Sorghum Silage Trial

Brent Bean¹, Ted McCollum¹, Kim McCuiston², Ed Hutcherson²,
Jake Robinson², Rex VanMeter², and Dennis Pietsch³

Texas Cooperative Extension and Texas Agricultural Experiment Station

Introduction

In choosing a sorghum hybrid for silage production it is critical to know the agronomic and nutritional characteristics of specific hybrids. This trial, as well as those conducted in previous years, attempts to provide a summary of those characteristics that should be considered when choosing a hybrid for hay or silage production. The study forage sorghum and sorghum-sudangrass hybrids with and without the brown midrib (BMR) and photoperiod sensitive (PS) traits. Corn silage has long served the region well, producing consistent, high quality silage. As part of this study a popular corn silage hybrid was planted adjacent to the sorghum trial for comparison. The corn was irrigated and fertilized identically to the sorghum.

Methods and Materials

The trial was made up of 97 hybrids provided by seed companies. Several male sterile hybrids were included. These were all 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. Irrigation scheduling was determined by monitoring gypsum blocks placed in the soil at depths of 1, 2, and 3 feet. Moisture blocks were read every two to three days and plots were irrigated when the average of the three moisture blocks fell below 60. A total of 12.2 inches of water was applied during the season along with a pre-irrigation of 6.5 inches. Rainfall totaled 9.5 inches during the growing season (May 21 – September 18). Additional rainfall of 5.6 inches from September 19 to October 9 likely helped the forage (silage) yield of the late maturing sorghums as well as the grain yield of all hybrids. 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 (Oct 13). 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.

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.

Planting Date: May 24, 2004.
 Planting Rate: 120,000 seed/acre.
 Seed Method: John Deere Max-emerge Planter.
 Fertilizer: 150 lbs/acre N and 40 lbs P205.
 Herbicide: One lb/acre atrazine applied immediately after planting.
 Irrigation: Furrow irrigated based on moisture block readings. A total of 12.2 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 9 to October 13 and are reported in Table 2.
 Grain Harvest Date: Over a three week period in 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.
- 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.
 - IVTD/ac:** %IVTD * forage yield (lbs DM/ac).

Corn Silage Trial (Methods and Materials)

A popular corn hybrid, NC+ 7117, was planted adjacent to the sorghum silage trial for comparison. The corn was planted on May 25 in a 200-ft strip on four 30-inch rows at 26,000 seed/acre. Atrazine was applied immediately after planting at 1.0 lb/acre for weed control. The corn was fertilized and irrigated exactly the same as the forage sorghum trial. This differed from previous years' where corn was fully irrigated based on moisture block readings. Three samples were collected for yield and nutrient composition determination when the kernel milkline had advanced 1/2 to 2/3 of the way down the kernel.

Results and Discussion

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

Overall weather conditions were excellent throughout most of the summer. Average forage yield was up compared to 2003, but less than what was achieved in 2001 and 2002. Stand counts collected 30 days after emergence showed an average of 29,450 plants/acre, considerably less than the 120,000 seed/acre planted (data not shown). Low plant population likely contributed to the forage yields being less than observed in other years. The photoperiod sensitive hybrids were particularly vulnerable to low plant populations because of their lack of tillering ability.

BMR forage sorghum hybrids yielded 14.3% less than non-BMR forage sorghums (Table 1). This was consistent with what we have observed in previous years. PS non-BMR hybrids had the highest forage yields, but when the BMR trait was added to the PS hybrids yield was reduced in both the forage sorghums and sorghum-sudangrasses. Lodging was generally not a problem with only a couple of BMR forage sorghums and sorghum-sudangrass hybrids having significant lodging scores at harvest (Table 2).

Table 1. Summary of key characteristics by sorghum type and corn.

Sorghum Type ¹⁾	Plant ht. (ft)	% Lodging @ Harvest	% Moist. @ Harvest	Tons/Ac @ 65% Moist.	IWUE ²⁾ , Ton/ac-in	Grain Yield, lb/Ac	% Crude Protein	% ADF	% NDF	TDN	% Lignin	% IVTD	IVTD lbs/ac
F. Sorghum Non-BMR (34)	6.4	2.6	65.0	22.3	1.8	5,950	7.7	25.8	44.8	62.1	4.3	76.2	11,873
F. Sorghum BMR (20)	7.0	7.3	66.1	19.3	1.6	4,114	7.9	25.8	44.8	65.1	3.4	79.1	10,699
F. Sorghum Non-BMR, PS (4)	9.6	4.2	74.4	25.8	2.1	0	6.3	37.7	63.5	53.1	5.3	69.8	12,612
F. Sorghum BMR, PS (4)	9.6	2.1	76.1	21.5	1.8	0	5.7	35.0	60.5	60.3	4.1	76.9	11,586
Sorg/Sudan Non-BMR (6)	8.5	3.6	67.7	21.9	1.8	840	6.8	32.4	53.7	56.5	5.2	72.1	11,052
Sorg/Sudan BMR (13)	7.3	6.0	66.8	19.1	1.6	1,705	7.9	29.3	50.3	60.0	4.8	75.1	10,034
Sorg/Sudan Non-BMR, PS (7)	9.9	0.0	73.6	24.1	2.0	13	5.7	36.7	60.6	52.4	5.2	68.8	11,625
Sorg/Sudan BMR, PS (3)	9.6	1.1	75.0	21.2	1.7	176	6.2	34.9	59.9	58.1	3.8	75.1	11,152
Sudangrass (2)	8.7	1.7	63.3	22.9	1.9	584	7.8	28.9	48.0	59.7	4.8	73.3	11,747
Grain Sorghum (3)	4.0	0.0	60.5	18.3	1.5	7,838	8.3	26.9	45.6	62.7	4.8	76.3	9,791
Test Avg.	8.0	2.9	68.5	21.7	1.8	2,155	7.0	31.3	53.1	59.1	4.5	74.3	11,267
Corn (1)			64.8	19.2	1.6		7.8	26.0	46.9	67.0	3.1	77.7	10,434

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

²⁾ IWUE = Irrigation water use efficiency. Tons of forage produced (65% moisture) per inch of in-season irrigation water.

BMR and non-BMR forage sorghum yield per acre-inch of irrigation water applied in-season (IWUE), was similar to what was observed in 2001 and 2002. However, in contrast to previous years, corn IWUE was considerably better at 1.6 tons/ac-inch of water. This year the corn was irrigated exactly like the forage sorghum. In previous years corn was fully irrigated and produced a higher overall yield, but produced less tonnage per inch of in-season irrigation water. This was also a good year for corn with overall cooler than normal temperatures and timely rainfall received.

As seen in previous trials, hybrids containing the BMR mutation, on average had higher digestibilities compared to hybrids of the same type without the BMR trait. As also seen in previous trials, the range of digestibilities within the BMR types or the non-BMR types resulted in overlap among the types. The improved digestibility of the BMRs reflects the lower lignin content of the forages. It is important to note that individual hybrids, both with and without the BMR mutation, had digestibilities similar to corn. The photoperiod sensitive varieties have a lower digestibility compared to other hybrids, possibly as a result of higher lignin content. However, the relative difference between BMR and non-BMR hybrids is greatest for the photoperiod sensitive varieties.

Table 2. 2004 Comparison of sorghum hybrids for agronomic characteristics, yield, and nutrient composition.

Variety Information ¹⁾						Agronomic Information at Forage Harvest ²⁾							Grain Yield, lb/Ac	
HYBRID	COMPANY	Sorghum Type	Maturity	BMR	Male Sterile	Harvest Date	Height, ft	% Lodging	% Moisture	Ton/Ac @ 65% Moist.				
Maxi Gain	Coffey Forage Seeds, Inc.	Sorghum/Sudan	PS	N	N	13-Oct	10.0 abc	0.0 h	72.8 a-k	24.5 a-d			0 l	
Sugar Graze Ultra	Coffey Forage Seeds, Inc.	Sorghum/Sudan	PS	N	N	13-Oct	9.8 abc	0.0 h	74.4 a-g	25.0 abc			0 l	
Sugar Graze 2000	Coffey Forage Seeds, Inc.	Sorghum/Sudan	L	N	N	13-Oct	9.8 abc	0.0 h	71.3 a-o	21.7 a-d	338.4		GHI	
Sugar Graze 3000	Coffey Forage Seeds, Inc.	Sorghum/Sudan	L	N	N	30-Sep	8.4 d	5.0 fgh	66.4 f-w	21.4 a-d	1296		z-l	
GW 7816 G BMR	Crosbyton Seed Company	Sorghum/Sudan	M	Y	Y	17-Sep	7.4 e-o	0.0 h	63.4 o-y	20.3 a-d	1720		x-l	
GW 8528 F BMR	Crosbyton Seed Company	F. Sorghum	M	Y	N	17-Sep	6.9 k-s	0.0 h	61.5 r-y	19.1 a-d	5827		c-o	
GW 3072 F	Crosbyton Seed Company	F. Sorghum	L	N	N	17-Sep	5.6 w-A	0.0 h	61.4 r-y	25.1 abc	7552		a-f	
DSS Dividend BMR	Drussel Seed & Supply, Inc.	F. Sorghum	ML	Y	N	17-Sep	6.7 i-u	36.7 a	70.3 a-r	17.6 cd	2521		u-H	
DSS Bonus-R BMR	Drussel Seed & Supply, Inc.	Sorghum/Sudan	PS	Y	N	13-Oct	9.3 abc	0.0 h	72.7 a-l	19.3 a-d	527.6		E-l	
Silmaker 5500	Frontier Hybrids	F. Sorghum	M	N	N	30-Sep	4.8 AB	0.0 h	57.4 wxy	19.5 a-d	7599		a-f	
Silmaker 5700	Frontier Hybrids	F. Sorghum	ML	N	N	17-Sep	4.1 CD	0.0 h	57.5 wxy	19.8 a-d	7988		a-d	
Silmaker 6000	Frontier Hybrids	F. Sorghum	M	N	N	9-Sep	5.7 u-z	0.0 h	66.3 f-w	20.3 a-d	7429		a-f	
Silmaker 6500	Frontier Hybrids	F. Sorghum	M	N	N	30-Sep	4.7 BC	0.0 h	59.4 v-y	18.9 bcd	8140		abc	
Silmaker 7000	Frontier Hybrids	F. Sorghum	ML	N	N	30-Sep	8.1 d-g	1.7 h	69.5 a-u	24.1 a-d	5381		e-q	
Nutri Plus BMR	Frontier Hybrids	Sorghum/Sudan	ML	Y	N	9-Sep	7.0 i-s	10.0 e-h	70.7 a-q	17.2 cd	1894		w-l	
Garst 325	Garst Seed Company	F. Sorghum	L	N	N	30-Sep	4.9 y-B	0.0 h	65.9 g-w	25.2 abc	6289		a-k	
Garst 320	Garst Seed Company	F. Sorghum	M	N	N	9-Sep	4.9 zAB	0.4 h	63.6 m-y	20.9 a-d	6152		a-l	
Garst 753 BMR	Garst Seed Company	Sorghum/Sudan	PS	Y	N	13-Oct	9.9 abc	1.7 h	76.4 abc	21.0 a-d	0 l			
Garst N322x	Garst Seed Company	F. Sorghum	ML	N	N	30-Sep	6.0 s-x	1.7 h	71.4 a-o	20.3 a-d	7352		a-g	
Garst R332x	Garst Seed Company	F. Sorghum	ML	N	N	13-Oct	7.1 g-r	0.0 h	69.8 a-t	22.7 a-d	7057		a-g	
Garst Ex 2211	Garst Seed Company	F. Sorghum	M	N	N	9-Sep	6.0 s-x	0.0 h	65.9 g-w	23.7 a-d	1764		x-l	
Garst Ex Chpr X	Garst Seed Company	F. Sorghum	M	N	N	17-Sep	6.2 r-x	6.7 e-h	60.5 u-y	20.0 a-d	5766		c-o	
Garst Graze-N-Bale+	Garst Seed Company	Sorghum/Sudan	PS	N	N	13-Oct	9.7 abc	0.0 h	73.8 a-i	27.5 ab	0 l			
Garst EX 32007	Garst Seed Company	Sorghum/Sudan	PS	Y	N	13-Oct	9.6 abc	1.7 h	75.7 a-e	23.3 a-d	0 l			
4-S	Kelly Green Seeds	Sorghum/Sudan	ME	N	N	9-Sep	7.6 d-l	0.0 h	63.8 k-y	21.9 a-d	561.5		E-l	
4-S BMR	Kelly Green Seeds	Sorghum/Sudan	ME	Y	N	9-Sep	7.4 e-o	0.0 h	60.9 t-y	21.8 a-d	1542		y-l	
MMR 366/70 BMR	MMR Genetcs LLC	F. Sorghum	PS	Y	N	13-Oct	9.3 abc	1.7 h	75.8 a-d	24.6 abc	0 l			
MMR 366/67 BMR	MMR Genetcs LLC	Sorghum/Sudan	M	Y	N	30-Sep	7.4 e-o	0.0 h	67.0 d-v	18.7 bcd	1831		w-l	
Dekalb FS-5	Monsanto	F. Sorghum	M	N	N	17-Sep	7.3 e-q	0.0 h	61.5 r-y	24.6 abc	4515		h-v	
Dekalb FS-25E	Monsanto	F. Sorghum	L	N	N	30-Sep	7.7 d-k	5.0 fgh	70.1 a-s	21.8 a-d	6919		a-h	
Dekalb DKS 59-09	Monsanto	F. Sorghum	M	N	N	9-Sep	5.5 x-B	0.0 h	72.6 a-m	18.0 bcd	7097		a-g	
4 Ever Green	Walter Moss Seed Company	F. Sorghum	PS	N	N	13-Oct	10.1 ab	6.7 e-h	78.0 a	24.7 abc	0 l			
Mega Green	Walter Moss Seed Company	Sorghum/Sudan	PS	N	N	13-Oct	10.1 ab	0.0 h	74.1 a-h	21.5 a-d	0 l			
4 Ever Green BMR	Walter Moss Seed Company	F. Sorghum	PS	Y	N	13-Oct	9.6 abc	3.3 gh	77.3 ab	19.0 a-d	0 l			
Century BMR	Walter Moss Seed Company	Sorghum/Sudan	M	Y	N	30-Sep	8.0 d-h	0.0 h	64.8 i-x	21.3 a-d	2871		r-F	
Millennium BMR	Walter Moss Seed Company	F. Sorghum	L	Y	N	30-Sep	8.2 def	3.3 gh	70.1 a-s	18.2 bcd	3903		k-y	
Su-2-LM	Walter Moss Seed Company	Sorghum/Sudan	L	N	N	13-Oct	9.8 abc	1.7 h	71.0 a-p	22.4 a-d	482.8		F-l	

Table 2. 2004 Comparison of sorghum hybrids for agronomic characteristics, yield, and nutrient composition.

Variety Information ¹⁾						Agronomic Information at Forage Harvest ²⁾							Grain Yield, lb/Ac	
HYBRID	COMPANY	Sorghum Type	Maturity	BMR	Male Sterile	Harvest Date	Height, ft	% Lodging	% Moisture	Ton/Ac @ 65% Moist.				
NC+ Nutri-Choice II	NC+ Hybrids	F. Sorghum	ML	N	N	30-Sep	6.0 s-x	0.0 h	64.3 j-x	23.9 a-d			7610	a-e
NC+ Nutri-Cane II	NC+ Hybrids	F. Sorghum	M	N	Y	17-Sep	7.0 h-r	0.0 h	64.9 i-x	24.1 a-d			5505	d-p
NC+ 800HS	NC+ Hybrids	Sorghum/Sudan	PS	N	Y	13-Oct	10.1 ab	0.0 h	72.5 a-n	22.7 a-d			93.27	HI
NC+ Nutri-Ton II	NC+ Hybrids	F. Sorghum	ML	N	N	30-Sep	6.5 n-w	0.0 h	67.9 c-v	20.9 a-d			5110	f-t
811F	Pioneer Hi-Bred Int., Inc.	F. Sorghum	PS	N	N	13-Oct	9.2 bc	0.0 h	73.0 a-j	24.3 a-d			0	l
84B52	Pioneer Hi-Bred Int., Inc.	F. Sorghum	M	Y	N	30-Sep	6.8 k-t	35.0 a	65.3 h-x	19.2 a-d			4902	g-u
979	Pioneer Hi-Bred Int., Inc.	Sorghum/Sudan	ML	N	Y	9-Sep	6.9 k-s	1.7 h	64.8 i-x	22.6 a-d			1174	A-l
Nutri Plus BMR	Production Plus	Sorghum/Sudan	ML	Y	N	9-Sep	7.2 f-q	16.7 de	69.9 a-t	16.6 cd			1709	x-l
Nutri Plus DS	Production Plus	Sorghum/Sudan	ML	Y	N	9-Sep	7.5 d-n	1.7 h	65.3 h-x	19.1 a-d			991.2	C-l
Dry Stalk BMR	Production Plus	Sorghum/Sudan	M	Y	N	17-Sep	7.4 e-o	15.0 def	63.7 l-y	16.9 cd			946.3	D-l
RedTop Plus BMR	Production Plus	F. Sorghum	ML	Y	N	17-Sep	6.5 o-w	1.7 h	69.8 a-t	18.9 a-d			3481	n-C
Silo Plus BMR	Production Plus	F. Sorghum	ML	Y	N	30-Sep	6.6 m-v	21.7 cd	64.1 j-y	17.6 cd			3785	l-z
Pacesetter BMR	Richardson Seeds, LTD.	F. Sorghum	PS	Y	N	13-Oct	9.9 abc	1.7 h	76.0 a-d	23.2 a-d			0	l
Sweeter 'N Honey BMR	Richardson Seeds, LTD.	F. Sorghum	M	Y	N	17-Sep	7.1 g-r	0.0 h	62.1 p-y	19.9 a-d			2516	u-H
Dairy Master BMR	Richardson Seeds, LTD.	F. Sorghum	ML	Y	N	17-Sep	6.8 k-t	0.0 h	59.5 v-y	23.5 a-d			3585	m-A
Bundle King BMR	Richardson Seeds, LTD.	F. Sorghum	L	Y	Y	13-Oct	8.3 de	3.3 gh	70.1 a-s	16.9 cd			2793	s-G
SILO 600D	Richardson Seeds, LTD.	F. Sorghum	M	N	N	9-Sep	5.7 v-z	0.0 h	64.4 j-x	19.2 a-d			6782	a-i
SILO 700D	Richardson Seeds, LTD.	F. Sorghum	ML	N	N	30-Sep	5.8 t-x	0.0 h	61.1 s-y	25.6 abc			8394	ab
Canex BMR 208	Sharp Brothers Seed Company	F. Sorghum	ME	Y	N	17-Sep	6.5 n-w	1.7 h	61.9 q-y	20.9 a-d			4399	i-v
Canex BMR 248	Sharp Brothers Seed Company	F. Sorghum	ME	Y	N	30-Sep	7.2 g-r	3.3 gh	64.6 j-x	19.6 a-d			4293	i-w
Canex BMR 328	Sharp Brothers Seed Company	F. Sorghum	ME	Y	N	17-Sep	6.6 m-v	0.0 h	65.9 g-w	18.3 bcd			5831	c-o
Silex BMR 501	Sharp Brothers Seed Company	F. Sorghum	ML	Y	Y	13-Oct	7.9 d-j	1.7 h	67.6 c-v	21.4 a-d			3533	m-B
Canex BMR 310	Sharp Brothers Seed Company	F. Sorghum	ME	Y	N	30-Sep	6.5 n-w	0.0 h	63.4 o-y	15.0 d			4124	j-x
Grazex BMR 727	Sharp Brothers Seed Company	Sorghum/Sudan	ME	Y	N	17-Sep	7.1 g-r	0.0 h	61.3 r-y	19.4 a-d			1588	y-l
Grazex BMR 782	Sharp Brothers Seed Company	Sorghum/Sudan	ME	Y	N	17-Sep	7.4 e-o	0.0 h	60.8 t-y	20.4 a-d			2072	v-l
Canex BMR 317	Sharp Brothers Seed Company	F. Sorghum	ME	Y	Y	30-Sep	6.3 q-x	0.0 h	63.2 o-y	21.4 a-d			5987	a-m
Grazex BMR 771	Sharp Brothers Seed Company	Sorghum/Sudan	ME	Y	Y	17-Sep	6.9 k-s	10.0 e-h	63.5 n-y	20.7 a-d			1616	y-l
FAME	Seed Resource	F. Sorghum	ME	N	N	17-Sep	6.3 q-x	13.3 d-g	60.3 v-y	21.3 a-d			5898	c-n
BMR 106	Seed Resource	F. Sorghum	ME	Y	N	17-Sep	7.0 i-s	0.0 h	66.7 e-v	19.8 a-d			5586	d-p
Sug-R-Cane	Seed Resource	F. Sorghum	M	N	Y	30-Sep	6.8 k-t	5.0 fgh	65.4 g-x	20.4 a-d			5902	b-n
BMR 100	Seed Resource	F. Sorghum	M	Y	N	17-Sep	6.8 k-t	30.0 ab	68.1 c-v	19.5 a-d			5412	e-q
FS 515 HQ	Seed Resource	F. Sorghum	L	N	N	30-Sep	5.8 t-x	0.0 h	59.9 v-y	23.8 a-d			7630	a-e
FS 555	Seed Resource	F. Sorghum	L	N	N	30-Sep	7.6 d-m	35.0 a	67.5 c-v	22.2 a-d			5304	e-r
NK 300	Sorghum Partners, Inc.	F. Sorghum	M	N	N	9-Sep	5.5 x-B	0.0 h	67.2 d-v	21.2 a-d			6500	a-j
HIKANE II	Sorghum Partners, Inc.	F. Sorghum	M	N	N	9-Sep	7.0 j-s	0.0 h	65.9 g-w	24.3 a-d			5244	e-s
SS 405	Sorghum Partners, Inc.	F. Sorghum	L	N	N	30-Sep	9.1 c	1.7 h	64.0 j-y	23.3 a-d			2631	t-G
SS 506	Sorghum Partners, Inc.	F. Sorghum	L	N	N	13-Oct	10.2 a	0.0 h	70.7 a-q	20.3 a-d			1788	x-l

Table 2. 2004 Comparison of sorghum hybrids for agronomic characteristics, yield, and nutrient composition.

Variety Information ¹⁾						Agronomic Information at Forage Harvest ²⁾							Grain Yield, lb/Ac
HYBRID	COMPANY	Sorghum Type	Maturity	BMR	Male Sterile	Harvest Date	Height, ft	% Lodging	% Moisture	Ton/Ac @ 65% Moist.			
1990	Sorghum Partners, Inc.	F. Sorghum	PS	N	N	13-Oct	9.8 abc	6.7 e-h	71.3 a-o	28.4 a	0 l		
Sordan 79	Sorghum Partners, Inc.	Sorghum/Sudan	M	N	N	17-Sep	8.2 de	13.3 d-g	63.2 o-y	21.5 a-d	1189 A-l		
Sordan Headless	Sorghum Partners, Inc.	Sorghum/Sudan	PS	N	N	13-Oct	10.0 abc	0.0 h	72.7 a-l	25.7 abc	0 l		
Trudan 8	Sorghum Partners, Inc.	Sudangrass	M	N	N	9-Sep	7.5 d-n	3.3 gh	55.1 y	22.9 a-d	1076 B-l		
Trudan Headless	Sorghum Partners, Inc.	Sudangrass	PS	N	N	13-Oct	9.8 abc	0.0 h	71.5 a-o	22.9 a-d	92.1 HI		
2-Way	Warner Seeds, Inc.	F. Sorghum	ML	N	N	30-Sep	8.0 d-i	13.3 d-g	66.5 f-w	24.4 a-d	4861 g-u		
2-Way SRS	Warner Seeds, Inc.	F. Sorghum	ML	N	N	30-Sep	7.3 e-p	3.3 gh	65.7 g-w	24.0 a-d	5621 d-p		
2-Way BMR	Warner Seeds, Inc.	F. Sorghum	M	Y	N	17-Sep	7.2 f-r	1.7 h	67.2 d-v	17.5 cd	3192 p-D		
Nutrigreen BMR	Warner Seeds, Inc.	F. Sorghum	PS	Y	N	13-Oct	9.5 abc	1.7 h	75.4 a-f	19.3 a-d	0 l		
2-Way F-104	Warner Seeds, Inc.	F. Sorghum	ML	N	N	30-Sep	5.8 u-y	0.0 h	64.0 j-y	23.0 a-d	7196 a-g		
2-Way F-103	Warner Seeds, Inc.	F. Sorghum	ML	N	N	30-Sep	5.8 u-y	0.0 h	67.2 d-v	21.1 a-d	5934 a-n		
Sweet Bee Sterile II	Warner Seeds, Inc.	F. Sorghum	M	N	N	17-Sep	6.4 p-x	0.0 h	65.1 h-x	23.9 a-d	4024 j-y		
Sweet Bee	Warner Seeds, Inc.	F. Sorghum	M	N	N	9-Sep	7.2 f-r	1.7 h	68.4 b-v	24.8 abc	3375 o-D		
2-Way 199 PS	Warner Seeds, Inc.	F. Sorghum	PS	N	N	13-Oct	9.5 abc	3.3 gh	75.1 a-f	25.8 abc	0 l		
Sucrosse 6-R BMR	Warner Seeds, Inc.	F. Sorghum	M	Y	N	17-Sep	6.9 k-s	1.7 h	64.0 j-y	20.7 a-d	3006 q-E		
Sucrosse 5-R BMR	Warner Seeds, Inc.	Sorghum/Sudan	ME	Y	N	9-Sep	7.6 d-l	0.0 h	63.1 o-y	18.0 bcd	1060 B-l		
Sucrosse 9-R PS	Warner Seeds, Inc.	Sorghum/Sudan	PS	N	N	13-Oct	9.7 abc	0.0 h	75.1 a-f	22.2 a-d	0 l		
Sweet King	AR-B Seeds	Sorghum/Sudan	ML	Y	N	17-Sep	7.0 j-s	25.0 bc	66.6 f-v	17.6 cd	2332 v-l		
Sweet Choice	AR-B Seeds	F. Sorghum	ML	Y	Y	30-Sep	6.6 m-v	3.3 gh	67.5 c-v	21.1 a-d	3603 m-A		
Check 1(A571)	Texas Agri. Exp. Station	Grain Sorghum	M	N	N	30-Sep	4.1 CD	0.0 h	62.9 o-y	17.7 cd	7631 a-e		
Check 2(NC+ 7R83)	Texas Agri. Exp. Station	Grain Sorghum	M	N	N	17-Sep	4.1 CD	0.0 h	56.4 xy	20.4 a-d	7474 a-f		
Check 3(84G62)	Texas Agri. Exp. Station	Grain Sorghum	ML	N	N	30-Sep	3.7 D	0.0 h	62.0 p-y	16.9 cd	8408 a		
LSD (P=.05)							0.542	6.144	4.963	5.189	1361.646		
Standard Deviation							0.335	3.801	3.07	3.21	842.257		
CV							4.55	99.85	4.59	15.07	23.99		

¹⁾ Variety information provided by seed companies. Male sterile entries were cross pollinated my other entries.

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

Table 2. 2004 Comparison of sorghum hybrids for agronomic characteristics, yield, and nutrient composition.

Variety Information ¹⁾													
HYBRID	COMPANY	Sorghum Type	Maturity	BMR	Male Sterile	% Crude Protein		% ADF		% NDF		TDN	
Maxi Gain	Coffey Forage Seeds, Inc.	Sorghum/Sudan	PS	N	N	6.07	c-k	35.4	a-l	58.4	a-k	54	g-o
Sugar Graze Ultra	Coffey Forage Seeds, Inc.	Sorghum/Sudan	PS	N	N	5.9	d-k	35.6	a-k	59.2	a-j	54.33	f-o
Sugar Graze 2000	Coffey Forage Seeds, Inc.	Sorghum/Sudan	L	N	N	5.93	d-k	36.7	a-g	58.0	a-k	53.67	h-o
Sugar Graze 3000	Coffey Forage Seeds, Inc.	Sorghum/Sudan	L	N	N	5.6	f-k	34.8	a-n	57.9	a-l	53.33	i-o
GW 7816 G BMR	Crosbyton Seed Company	Sorghum/Sudan	M	Y	Y	7.4	a-k	33.5	a-q	54.5	a-m	54.33	f-o
GW 8528 F BMR	Crosbyton Seed Company	F. Sorghum	M	Y	N	8.57	a-g	23.3	k-s	41.3	j-n	66.33	a-j
GW 3072 F	Crosbyton Seed Company	F. Sorghum	L	N	N	8.53	a-g	23.7	j-s	41.5	h-n	62	a-o
DSS Dividend BMR	Drussel Seed & Supply, Inc.	F. Sorghum	ML	Y	N	8.9	a-e	28.6	a-s	47.3	a-n	62.33	a-o
DSS Bonus-R BMR	Drussel Seed & Supply, Inc.	Sorghum/Sudan	PS	Y	N	5.47	f-k	36.7	a-g	60.1	a-i	52.67	k-o
Silmaker 5500	Frontier Hybrids	F. Sorghum	M	N	N	7.57	a-k	27.3	b-s	45.6	b-n	62	a-o
Silmaker 5700	Frontier Hybrids	F. Sorghum	ML	N	N	8.57	a-g	23.7	k-s	41.1	j-n	66.33	a-j
Silmaker 6000	Frontier Hybrids	F. Sorghum	M	N	N	7.73	a-k	24.5	g-s	43.5	e-n	62.33	a-o
Silmaker 6500	Frontier Hybrids	F. Sorghum	M	N	N	7.83	a-k	21.1	rs	37.3	mn	68.67	abc
Silmaker 7000	Frontier Hybrids	F. Sorghum	ML	N	N	5.77	e-k	29.9	a-s	52.6	a-n	54.67	e-o
Nutri Plus BMR	Frontier Hybrids	Sorghum/Sudan	ML	Y	N	8.97	a-d	27.3	b-s	48.8	a-n	59.33	a-o
Garst 325	Garst Seed Company	F. Sorghum	L	N	N	7.63	a-k	22.5	n-s	40.8	j-n	64	a-n
Garst 320	Garst Seed Company	F. Sorghum	M	N	N	9.2	abc	21.9	p-s	36.1	mn	68	a-e
Garst 753 BMR	Garst Seed Company	Sorghum/Sudan	PS	Y	N	6.23	c-k	34.0	a-p	60.3	a-h	62.33	a-o
Garst N322x	Garst Seed Company	F. Sorghum	ML	N	N	7.43	a-k	31.6	a-s	53.0	a-n	55	d-o
Garst R332x	Garst Seed Company	F. Sorghum	ML	N	N	6.8	a-k	30.8	a-s	49.4	a-n	59	a-o
Garst Ex 2211	Garst Seed Company	F. Sorghum	M	N	N	7	a-k	25.4	e-s	43.3	f-n	64	a-n
Garst Ex Chpr X	Garst Seed Company	F. Sorghum	M	N	N	8.97	a-d	23.0	m-s	37.5	mn	66.33	a-j
Garst Graze-N-Bale+	Garst Seed Company	Sorghum/Sudan	PS	N	N	5.43	g-k	37.4	a-f	61.5	a-g	52	l-o
Garst EX 32007	Garst Seed Company	Sorghum/Sudan	PS	Y	N	6.87	a-k	34.0	a-p	59.3	a-j	59.33	a-o
4-S	Kelly Green Seeds	Sorghum/Sudan	ME	N	N	8.57	a-g	29.5	a-s	49.8	a-n	59.33	a-o
4-S BMR	Kelly Green Seeds	Sorghum/Sudan	ME	Y	N	8.23	a-k	27.4	b-s	47.3	a-n	66.67	a-i
MMR 366/70 BMR	MMR Genetcs LLC	F. Sorghum	PS	Y	N	5.37	h-k	36.0	a-j	60.7	a-g	58.67	a-o
MMR 366/67 BMR	MMR Genetcs LLC	Sorghum/Sudan	M	Y	N	7.3	a-k	32.3	a-r	52.5	a-n	62	a-o
Dekalb FS-5	Monsanto	F. Sorghum	M	N	N	8.17	a-k	24.7	g-s	42.8	g-n	63.67	a-n
Dekalb FS-25E	Monsanto	F. Sorghum	L	N	N	6.67	a-k	28.7	a-s	49.7	a-n	59	a-o
Dekalb DKS 59-09	Monsanto	F. Sorghum	M	N	N	8.2	a-k	25.1	f-s	44.8	d-n	66	a-k
4 Ever Green	Walter Moss Seed Company	F. Sorghum	PS	N	N	6.8	a-k	37.9	a-d	63.9	abc	55	d-o
Mega Green	Walter Moss Seed Company	Sorghum/Sudan	PS	N	N	6.47	a-k	34.8	a-m	58.2	a-k	52.33	l-o
4 Ever Green BMR	Walter Moss Seed Company	F. Sorghum	PS	Y	N	5.37	h-k	34.6	a-o	58.7	a-j	61	a-o
Century BMR	Walter Moss Seed Company	Sorghum/Sudan	M	Y	N	6.87	a-k	29.6	a-s	49.8	a-n	59.67	a-o
Millennium BMR	Walter Moss Seed Company	F. Sorghum	L	Y	N	6.43	a-k	25.7	d-s	46.1	b-n	65.33	a-l
Su-2-LM	Walter Moss Seed Company	Sorghum/Sudan	L	N	N	5.23	jk	36.1	a-i	58.6	a-j	53	j-o

Table 2. 2004 Comparison of sorghum hybrids for agronomic characteristics, yield, and nutrient composition.

Variety Information ¹⁾													
HYBRID	COMPANY	Sorghum Type	Maturity	BMR	Male Sterile	% Crude Protein		% ADF		% NDF		TDN	
NC+ Nutri-Choice II	NC+ Hybrids	F. Sorghum	ML	N	N	7.93	a-k	25.3	f-s	44.9	d-n	61	a-o
NC+ Nutrii-Cane II	NC+ Hybrids	F. Sorghum	M	N	Y	7.2	a-k	27.6	b-s	47.2	a-n	59.33	a-o
NC+ 800HS	NC+ Hybrids	Sorghum/Sudan	PS	N	Y	5.1	k	40.0	a	65.9	a	53	j-o
NC+ Nutri-Ton II	NC+ Hybrids	F. Sorghum	ML	N	N	6.63	a-k	32.4	a-r	54.6	a-m	55	d-o
811F	Pioneer Hi-Bred Int., Inc.	F. Sorghum	PS	N	N	5.87	d-k	38.2	ab	64.2	ab	52.33	l-o
84B52	Pioneer Hi-Bred Int., Inc.	F. Sorghum	M	Y	N	7	a-k	27.2	b-s	48.3	a-n	60	a-o
979	Pioneer Hi-Bred Int., Inc.	Sorghum/Sudan	ML	N	Y	8.9	a-e	27.2	b-s	46.4	b-n	61.33	a-o
Nutri Plus BMR	Production Plus	Sorghum/Sudan	ML	Y	N	8.8	a-e	27.2	b-s	50.9	a-n	61	a-o
Nutri Plus DS	Production Plus	Sorghum/Sudan	ML	Y	N	8.47	a-h	27.5	b-s	49.8	a-n	61	a-o
Dry Stalk BMR	Production Plus	Sorghum/Sudan	M	Y	N	8.81	a-e	28.8	a-s	48.2	a-n	59.69	a-o
RedTop Plus BMR	Production Plus	F. Sorghum	ML	Y	N	8.4	a-i	24.8	g-s	44.8	d-n	64	a-n
Silo Plus BMR	Production Plus	F. Sorghum	ML	Y	N	8.27	a-j	24.8	g-s	43.7	e-n	66	a-k
Pacesetter BMR	Richardson Seeds, LTD.	F. Sorghum	PS	Y	N	5.3	ijk	34.6	a-o	60.7	a-g	61.33	a-o
Sweeter 'N Honey BMR	Richardson Seeds, LTD.	F. Sorghum	M	Y	N	7.83	a-k	28.4	a-s	48.0	a-n	63.67	a-n
Dairy Master BMR	Richardson Seeds, LTD.	F. Sorghum	ML	Y	N	7.47	a-k	25.9	c-s	43.2	f-n	65	a-l
Bundle King BMR	Richardson Seeds, LTD.	F. Sorghum	L	Y	Y	5.57	f-k	31.5	a-s	53.7	a-n	59	a-o
SILO 600D	Richardson Seeds, LTD.	F. Sorghum	M	N	N	8.4	a-i	22.7	m-s	41.5	i-n	64	a-n
SILO 700D	Richardson Seeds, LTD.	F. Sorghum	ML	N	N	8.6	a-f	19.5	s	36.0	mn	68.33	a-d
Canex BMR 208	Sharp Brothers Seed Company	F. Sorghum	ME	Y	N	9.5	a	21.6	qrs	37.6	mn	70.33	ab
Canex BMR 248	Sharp Brothers Seed Company	F. Sorghum	ME	Y	N	7.37	a-k	26.4	b-s	45.0	d-n	67	a-h
Canex BMR 328	Sharp Brothers Seed Company	F. Sorghum	ME	Y	N	8	a-k	25.4	e-s	43.8	e-n	64.67	a-m
Silex BMR 501	Sharp Brothers Seed Company	F. Sorghum	ML	Y	Y	7.93	a-k	23.8	j-s	39.8	k-n	67.33	a-g
Canex BMR 310	Sharp Brothers Seed Company	F. Sorghum	ME	Y	N	8.48	a-h	20.9	rs	39.2	lmn	70.62	a
Grazex BMR 727	Sharp Brothers Seed Company	Sorghum/Sudan	ME	Y	N	7.3	a-k	32.2	a-r	54.2	a-n	58.33	a-o
Grazex BMR 782	Sharp Brothers Seed Company	Sorghum/Sudan	ME	Y	N	7.83	a-k	27.5	b-s	49.0	a-n	61.67	a-o
Canex BMR 317	Sharp Brothers Seed Company	F. Sorghum	ME	Y	Y	7.53	a-k	28.0	a-s	47.1	b-n	66.33	a-j
Grazex BMR 771	Sharp Brothers Seed Company	Sorghum/Sudan	ME	Y	Y	7.1	a-k	31.8	a-s	52.6	a-n	56	c-o
FAME	Seed Resource	F. Sorghum	ME	N	N	8.1	a-k	23.5	k-s	38.6	mn	65	a-l
BMR 106	Seed Resource	F. Sorghum	ME	Y	N	7.83	a-k	27.2	b-s	45.9	b-n	64.67	a-m
Sug-R-Cane	Seed Resource	F. Sorghum	M	N	Y	7.97	a-k	23.2	l-s	41.1	j-n	67.67	a-f
BMR 100	Seed Resource	F. Sorghum	M	Y	N	8.47	a-h	24.4	g-s	43.1	f-n	63.67	a-n
FS 515 HQ	Seed Resource	F. Sorghum	L	N	N	8.07	a-k	24.2	h-s	41.2	j-n	64	a-n
FS 555	Seed Resource	F. Sorghum	L	N	N	6.33	b-k	28.4	a-s	49.0	a-n	56.33	c-o
NK 300	Sorghum Partners, Inc.	F. Sorghum	M	N	N	7.87	a-k	22.4	o-s	41.0	j-n	66.33	a-j
HIKANE II	Sorghum Partners, Inc.	F. Sorghum	M	N	N	7.03	a-k	26.2	b-s	46.4	b-n	65	a-l
SS 405	Sorghum Partners, Inc.	F. Sorghum	L	N	N	7.4	a-k	27.2	b-s	49.4	a-n	57.33	a-o
SS 506	Sorghum Partners, Inc.	F. Sorghum	L	N	N	7.23	a-k	35.4	a-l	59.3	a-j	53	j-o

Table 2. 2004 Comparison of sorghum hybrids for agronomic characteristics, yield, and nutrient composition.

Variety Information ¹⁾													
HYBRID	COMPANY	Sorghum Type	Maturity	BMR	Male Sterile	% Crude Protein		% ADF		% NDF		TDN	
1990	Sorghum Partners, Inc.	F. Sorghum	PS	N	N	5.5	f-k	36.4	a-h	62.2	a-e	52.33	l-o
Sordan 79	Sorghum Partners, Inc.	Sorghum/Sudan	M	N	N	6.57	a-k	30.0	a-s	51.6	a-n	58.33	a-o
Sordan Headless	Sorghum Partners, Inc.	Sorghum/Sudan	PS	N	N	6.03	d-k	35.6	a-k	60.2	a-i	51.33	mno
Trudan 8	Sorghum Partners, Inc.	Sudangrass	M	N	N	9.2	abc	20.2	rs	35.6	n	68.33	a-d
Trudan Headless	Sorghum Partners, Inc.	Sudangrass	PS	N	N	6.3	b-k	37.7	a-e	60.3	a-h	51	no
2-Way	Warner Seeds, Inc.	F. Sorghum	ML	N	N	7.7	a-k	26.1	b-s	45.2	c-n	62	a-o
2-Way SRS	Warner Seeds, Inc.	F. Sorghum	ML	N	N	7.77	a-k	26.0	b-s	43.5	e-n	62	a-o
2-Way BMR	Warner Seeds, Inc.	F. Sorghum	M	Y	N	7.07	a-k	27.8	a-s	48.1	a-n	61.33	a-o
Nutrigreen BMR	Warner Seeds, Inc.	F. Sorghum	PS	Y	N	6.73	a-k	34.9	a-m	61.7	a-f	60	a-o
2-Way F-104	Warner Seeds, Inc.	F. Sorghum	ML	N	N	8.1	a-k	25.2	f-s	44.5	e-n	64.67	a-m
2-Way F-103	Warner Seeds, Inc.	F. Sorghum	ML	N	N	7.27	a-k	28.2	a-s	50.5	a-n	56.33	c-o
Sweet Bee Sterile II	Warner Seeds, Inc.	F. Sorghum	M	N	N	8.23	a-k	26.9	b-s	46.4	b-n	61	a-o
Sweet Bee	Warner Seeds, Inc.	F. Sorghum	M	N	N	7.47	a-k	24.7	g-s	45.0	d-n	62	a-o
2-Way 199 PS	Warner Seeds, Inc.	F. Sorghum	PS	N	N	6.97	a-k	38.1	abc	63.5	a-d	52.67	k-o
Sucrosse 6-R BMR	Warner Seeds, Inc.	F. Sorghum	M	Y	N	8.57	a-g	25.6	d-s	44.5	e-n	67.33	a-g
Sucrosse 5-R BMR	Warner Seeds, Inc.	Sorghum/Sudan	ME	Y	N	7.2	a-k	27.9	a-s	49.2	a-n	62.67	a-o
Sucrosse 9-R PS	Warner Seeds, Inc.	Sorghum/Sudan	PS	N	N	5.1	k	38.2	ab	60.9	a-g	50	o
Sweet King	AR-B Seeds	Sorghum/Sudan	ML	Y	N	8.6	a-f	28.6	a-s	46.9	b-n	57	b-o
Sweet Choice	AR-B Seeds	F. Sorghum	ML	Y	Y	9.43	ab	24.0	i-s	44.7	e-n	67.67	a-f
Check 1(A571)	Texas Agri. Exp. Station	Grain Sorghum	M	N	N	8.93	a-d	26.3	b-s	43.8	e-n	64.67	a-m
Check 2(NC+ 7R83)	Texas Agri. Exp. Station	Grain Sorghum	M	N	N	8.53	a-g	26.1	b-s	44.1	e-n	63.67	a-n
Check 3(84G62)	Texas Agri. Exp. Station	Grain Sorghum	ML	N	N	7.57	a-k	28.3	a-s	48.8	a-n	59.67	a-o
LSD (P=.05)						1.714		6.724		10.248		7.364	
Standard Deviation						1.06		4.159		6.339		4.555	
CV						14.32		14.46		12.87		7.5	

¹⁾ Variety information provided by seed companies. Male sterile entries were cross pollinated my other entries.

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

Table 2. 2004 Comparison of sorghum hybrids for agronomic characteristics, yield, and nutrient composition.

Variety Information ¹⁾						Nutrient Composition ²⁾									
HYBRID	COMPANY	Sorghum Type	Maturity	BMR	Male Sterile	NEL, Mcal/lb	NEM, Mcal/lb	NEG, Mcal/lb	Ca	P					
Maxi Gain	Coffey Forage Seeds, Inc.	Sorghum/Sudan	PS	N	N	0.49	g-p	0.45	e-m	0.21	g-o	0.37	a-e	0.2	d-j
Sugar Graze Ultra	Coffey Forage Seeds, Inc.	Sorghum/Sudan	PS	N	N	0.49	f-p	0.46	e-m	0.21	f-o	0.3	a-e	0.21	c-j
Sugar Graze 2000	Coffey Forage Seeds, Inc.	Sorghum/Sudan	L	N	N	0.49	g-p	0.46	e-m	0.2	g-o	0.39	a-e	0.19	g-j
Sugar Graze 3000	Coffey Forage Seeds, Inc.	Sorghum/Sudan	L	N	N	0.49	h-p	0.44	f-m	0.2	h-o	0.29	a-e	0.2	d-j
GW 7816 G BMR	Crosbyton Seed Company	Sorghum/Sudan	M	Y	Y	0.52	e-p	0.47	d-m	0.22	e-o	0.39	a-e	0.22	c-j
GW 8528 F BMR	Crosbyton Seed Company	F. Sorghum	M	Y	N	0.69	a-g	0.67	a-e	0.4	a-g	0.27	a-e	0.23	a-j
GW 3072 F	Crosbyton Seed Company	F. Sorghum	L	N	N	0.64	a-o	0.61	a-m	0.35	a-n	0.32	a-e	0.26	a-h
DSS Dividend BMR	Drussel Seed & Supply, Inc.	F. Sorghum	ML	Y	N	0.62	a-p	0.6	a-m	0.34	a-o	0.3	a-e	0.24	a-j
DSS Bonus-R BMR	Drussel Seed & Supply, Inc.	Sorghum/Sudan	PS	Y	N	0.47	j-p	0.44	h-m	0.19	j-o	0.28	a-e	0.21	c-j
Silmaker 5500	Frontier Hybrids	F. Sorghum	M	N	N	0.63	a-p	0.6	a-m	0.34	a-o	0.45	abc	0.25	a-i
Silmaker 5700	Frontier Hybrids	F. Sorghum	ML	N	N	0.69	a-f	0.67	a-e	0.4	a-g	0.4	a-e	0.27	a-e
Silmaker 6000	Frontier Hybrids	F. Sorghum	M	N	N	0.64	a-p	0.6	a-m	0.34	a-o	0.28	a-e	0.26	a-i
Silmaker 6500	Frontier Hybrids	F. Sorghum	M	N	N	0.72	a-d	0.71	ab	0.43	abc	0.38	a-e	0.25	a-i
Silmaker 7000	Frontier Hybrids	F. Sorghum	ML	N	N	0.52	e-p	0.47	d-m	0.22	e-o	0.36	a-e	0.24	a-j
Nutri Plus BMR	Frontier Hybrids	Sorghum/Sudan	ML	Y	N	0.59	a-p	0.56	a-m	0.3	a-o	0.33	a-e	0.3	ab
Garst 325	Garst Seed Company	F. Sorghum	L	N	N	0.66	a-k	0.64	a-l	0.37	a-m	0.42	a-d	0.27	a-d
Garst 320	Garst Seed Company	F. Sorghum	M	N	N	0.72	a-d	0.7	abc	0.44	ab	0.27	a-e	0.27	a-d
Garst 753 BMR	Garst Seed Company	Sorghum/Sudan	PS	Y	N	0.56	a-p	0.58	a-m	0.32	a-o	0.32	a-e	0.2	d-j
Garst N322x	Garst Seed Company	F. Sorghum	ML	N	N	0.53	c-p	0.49	b-m	0.23	c-o	0.33	a-e	0.25	a-i
Garst R332x	Garst Seed Company	F. Sorghum	ML	N	N	0.58	a-p	0.55	a-m	0.3	a-o	0.29	a-e	0.21	c-j
Garst Ex 2211	Garst Seed Company	F. Sorghum	M	N	N	0.66	a-l	0.64	a-l	0.37	a-l	0.31	a-e	0.25	a-i
Garst Ex Chpr X	Garst Seed Company	F. Sorghum	M	N	N	0.69	a-e	0.67	a-e	0.4	a-g	0.32	a-e	0.25	a-i
Garst Graze-N-Bale+	Garst Seed Company	Sorghum/Sudan	PS	N	N	0.46	m-p	0.42	klm	0.17	mno	0.32	a-e	0.19	hij
Garst EX 32007	Garst Seed Company	Sorghum/Sudan	PS	Y	N	0.54	b-p	0.54	a-m	0.28	a-o	0.25	b-e	0.23	a-j
4-S	Kelly Green Seeds	Sorghum/Sudan	ME	N	N	0.59	a-p	0.56	a-m	0.3	a-o	0.35	a-e	0.24	a-j
4-S BMR	Kelly Green Seeds	Sorghum/Sudan	ME	Y	N	0.67	a-k	0.66	a-h	0.4	a-h	0.33	a-e	0.26	a-i
MMR 366/70 BMR	MMR Genetcs LLC	F. Sorghum	PS	Y	N	0.53	d-p	0.53	a-m	0.27	a-o	0.36	a-e	0.2	e-j
MMR 366/67 BMR	MMR Genetcs LLC	Sorghum/Sudan	M	Y	N	0.6	a-p	0.59	a-m	0.33	a-o	0.32	a-e	0.21	d-j
Dekalb FS-5	Monsanto	F. Sorghum	M	N	N	0.65	a-m	0.63	a-l	0.36	a-n	0.37	a-e	0.25	a-i
Dekalb FS-25E	Monsanto	F. Sorghum	L	N	N	0.58	a-p	0.54	a-m	0.29	a-o	0.35	a-e	0.25	a-i
Dekalb DKS 59-09	Monsanto	F. Sorghum	M	N	N	0.67	a-i	0.67	a-f	0.4	a-h	0.31	a-e	0.25	a-i
4 Ever Green	Walter Moss Seed Company	F. Sorghum	PS	N	N	0.47	k-p	0.46	e-m	0.21	g-o	0.38	a-e	0.19	f-j
Mega Green	Walter Moss Seed Company	Sorghum/Sudan	PS	N	N	0.48	i-p	0.44	h-m	0.19	j-o	0.36	a-e	0.21	d-j
4 Ever Green BMR	Walter Moss Seed Company	F. Sorghum	PS	Y	N	0.56	a-p	0.57	a-m	0.31	a-o	0.32	a-e	0.2	d-j
Century BMR	Walter Moss Seed Company	Sorghum/Sudan	M	Y	N	0.59	a-p	0.56	a-m	0.3	a-o	0.28	a-e	0.23	a-j
Millennium BMR	Walter Moss Seed Company	F. Sorghum	L	Y	N	0.66	a-l	0.65	a-i	0.38	a-k	0.21	de	0.25	a-i
Su-2-LM	Walter Moss Seed Company	Sorghum/Sudan	L	N	N	0.48	i-p	0.44	f-m	0.19	i-o	0.3	a-e	0.19	f-j

Table 2. 2004 Comparison of sorghum hybrids for agronomic characteristics, yield, and nutrient composition.

Variety Information ¹⁾						Nutrient Composition ²⁾									
HYBRID	COMPANY	Sorghum Type	Maturity	BMR	Male Sterile	NEL, Mcal/lb	NEM, Mcal/bl	NEG, Mcal/lb	Ca	P					
NC+ Nutri-Choice II	NC+ Hybrids	F. Sorghum	ML	N	N	0.62	a-p	0.58	a-m	0.33	a-o	0.34	a-e	0.26	a-g
NC+ Nutrii-Cane II	NC+ Hybrids	F. Sorghum	M	N	Y	0.6	a-p	0.57	a-m	0.31	a-o	0.29	a-e	0.21	d-j
NC+ 800HS	NC+ Hybrids	Sorghum/Sudan	PS	N	Y	0.44	p	0.44	g-m	0.19	j-o	0.31	a-e	0.17	j
NC+ Nutri-Ton II	NC+ Hybrids	F. Sorghum	ML	N	N	0.52	e-p	0.48	c-m	0.23	d-o	0.37	a-e	0.24	a-j
811F	Pioneer Hi-Bred Int., Inc.	F. Sorghum	PS	N	N	0.45	op	0.43	i-m	0.19	j-o	0.36	a-e	0.2	e-j
84B52	Pioneer Hi-Bred Int., Inc.	F. Sorghum	M	Y	N	0.6	a-p	0.56	a-m	0.31	a-o	0.31	a-e	0.26	a-i
979	Pioneer Hi-Bred Int., Inc.	Sorghum/Sudan	ML	N	Y	0.62	a-p	0.59	a-m	0.33	a-o	0.37	a-e	0.24	a-j
Nutri Plus BMR	Production Plus	Sorghum/Sudan	ML	Y	N	0.6	a-p	0.58	a-m	0.32	a-o	0.4	a-e	0.28	abc
Nutri Plus DS	Production Plus	Sorghum/Sudan	ML	Y	N	0.61	a-p	0.59	a-m	0.32	a-o	0.33	a-e	0.27	a-e
Dry Stalk BMR	Production Plus	Sorghum/Sudan	M	Y	N	0.6	a-p	0.56	a-m	0.31	a-o	0.35	a-e	0.26	a-h
RedTop Plus BMR	Production Plus	F. Sorghum	ML	Y	N	0.65	a-m	0.63	a-l	0.37	a-m	0.23	cde	0.27	a-d
Silo Plus BMR	Production Plus	F. Sorghum	ML	Y	N	0.68	a-i	0.66	a-g	0.39	a-i	0.23	cde	0.26	a-i
Pacesetter BMR	Richardson Seeds, LTD.	F. Sorghum	PS	Y	N	0.54	a-p	0.56	a-m	0.3	a-o	0.27	a-e	0.2	d-j
Sweeter 'N Honey BMR	Richardson Seeds, LTD.	F. Sorghum	M	Y	N	0.63	a-p	0.62	a-l	0.36	a-n	0.4	a-e	0.23	a-j
Dairy Master BMR	Richardson Seeds, LTD.	F. Sorghum	ML	Y	N	0.67	a-j	0.65	a-i	0.38	a-k	0.27	a-e	0.22	b-j
Bundle King BMR	Richardson Seeds, LTD.	F. Sorghum	L	Y	Y	0.56	a-p	0.54	a-m	0.29	a-o	0.28	a-e	0.19	hij
SILO 600D	Richardson Seeds, LTD.	F. Sorghum	M	N	N	0.66	a-k	0.64	a-l	0.37	a-m	0.42	a-d	0.26	a-g
SILO 700D	Richardson Seeds, LTD.	F. Sorghum	ML	N	N	0.72	a-d	0.7	abc	0.43	a-d	0.41	a-d	0.27	a-f
Canex BMR 208	Sharp Brothers Seed Company	F. Sorghum	ME	Y	N	0.74	a	0.73	a	0.46	a	0.26	a-e	0.23	a-j
Canex BMR 248	Sharp Brothers Seed Company	F. Sorghum	ME	Y	N	0.68	a-h	0.67	a-e	0.4	a-g	0.25	b-e	0.21	c-j
Canex BMR 328	Sharp Brothers Seed Company	F. Sorghum	ME	Y	N	0.66	a-k	0.64	a-j	0.38	a-k	0.24	b-e	0.24	a-j
Silex BMR 501	Sharp Brothers Seed Company	F. Sorghum	ML	Y	Y	0.71	a-e	0.69	a-d	0.42	a-d	0.26	a-e	0.24	a-j
Canex BMR 310	Sharp Brothers Seed Company	F. Sorghum	ME	Y	N	0.73	ab	0.73	a	0.46	a	0.35	a-e	0.26	a-i
Grazex BMR 727	Sharp Brothers Seed Company	Sorghum/Sudan	ME	Y	N	0.56	a-p	0.53	a-m	0.28	a-o	0.38	a-e	0.23	a-j
Grazex BMR 782	Sharp Brothers Seed Company	Sorghum/Sudan	ME	Y	N	0.61	a-p	0.59	a-m	0.33	a-o	0.46	ab	0.25	a-i
Canex BMR 317	Sharp Brothers Seed Company	F. Sorghum	ME	Y	Y	0.66	a-k	0.66	a-g	0.4	a-h	0.3	a-e	0.23	a-j
Grazex BMR 771	Sharp Brothers Seed Company	Sorghum/Sudan	ME	Y	Y	0.54	b-p	0.5	b-m	0.24	b-o	0.34	a-e	0.21	c-j
FAME	Seed Resource	F. Sorghum	ME	N	N	0.68	a-i	0.65	a-i	0.39	a-j	0.3	a-e	0.24	a-j
BMR 106	Seed Resource	F. Sorghum	ME	Y	N	0.65	a-n	0.64	a-l	0.37	a-l	0.25	a-e	0.23	a-j
Sug-R-Cane	Seed Resource	F. Sorghum	M	N	Y	0.7	a-e	0.69	a-d	0.41	a-f	0.29	a-e	0.23	a-j
BMR 100	Seed Resource	F. Sorghum	M	Y	N	0.65	a-n	0.62	a-l	0.36	a-n	0.35	a-e	0.27	a-f
FS 515 HQ	Seed Resource	F. Sorghum	L	N	N	0.66	a-l	0.64	a-l	0.37	a-m	0.18	e	0.3	a
FS 555	Seed Resource	F. Sorghum	L	N	N	0.55	a-p	0.51	b-m	0.25	b-o	0.33	a-e	0.25	a-i
NK 300	Sorghum Partners, Inc.	F. Sorghum	M	N	N	0.69	a-g	0.67	a-f	0.4	a-g	0.4	a-e	0.27	a-f
HIKANE II	Sorghum Partners, Inc.	F. Sorghum	M	N	N	0.65	a-m	0.64	a-j	0.37	a-l	0.22	de	0.24	a-j
SS 405	Sorghum Partners, Inc.	F. Sorghum	L	N	N	0.56	a-p	0.52	a-m	0.27	a-o	0.37	a-e	0.22	c-j
SS 506	Sorghum Partners, Inc.	F. Sorghum	L	N	N	0.48	i-p	0.44	f-m	0.2	h-o	0.37	a-e	0.19	g-j

Table 2. 2004 Comparison of sorghum hybrids for agronomic characteristics, yield, and nutrient composition.

Variety Information ¹⁾						Nutrient Composition ²⁾									
HYBRID	COMPANY	Sorghum Type	Maturity	BMR	Male Sterile	NEL, Mcal/lb	NEM, Mcal/bl	NEG, Mcal/lb	Ca	P					
1990	Sorghum Partners, Inc.	F. Sorghum	PS	N	N	0.46	l-p	0.43	i-m	0.18	k-o	0.34	a-e	0.2	e-j
Sordan 79	Sorghum Partners, Inc.	Sorghum/Sudan	M	N	N	0.57	a-p	0.53	a-m	0.28	a-o	0.43	a-d	0.22	c-j
Sordan Headless	Sorghum Partners, Inc.	Sorghum/Sudan	PS	N	N	0.46	l-p	0.42	j-m	0.17	l-o	0.31	a-e	0.2	d-j
Trudan 8	Sorghum Partners, Inc.	Sudangrass	M	N	N	0.73	abc	0.71	ab	0.44	ab	0.42	a-d	0.26	a-i
Trudan Headless	Sorghum Partners, Inc.	Sudangrass	PS	N	N	0.46	m-p	0.41	lm	0.16	no	0.38	a-e	0.18	ij
2-Way	Warner Seeds, Inc.	F. Sorghum	ML	N	N	0.62	a-p	0.6	a-m	0.33	a-o	0.23	cde	0.23	a-j
2-Way SRS	Warner Seeds, Inc.	F. Sorghum	ML	N	N	0.64	a-p	0.61	a-m	0.35	a-o	0.32	a-e	0.24	a-j
2-Way BMR	Warner Seeds, Inc.	F. Sorghum	M	Y	N	0.61	a-p	0.59	a-m	0.33	a-o	0.31	a-e	0.22	c-j
Nutrigreen BMR	Warner Seeds, Inc.	F. Sorghum	PS	Y	N	0.53	c-p	0.54	a-m	0.29	a-o	0.31	a-e	0.2	d-j
2-Way F-104	Warner Seeds, Inc.	F. Sorghum	ML	N	N	0.65	a-m	0.64	a-l	0.37	a-l	0.3	a-e	0.25	a-i
2-Way F-103	Warner Seeds, Inc.	F. Sorghum	ML	N	N	0.55	a-p	0.51	b-m	0.25	b-o	0.3	a-e	0.23	a-j
Sweet Bee Sterile II	Warner Seeds, Inc.	F. Sorghum	M	N	N	0.61	a-p	0.58	a-m	0.32	a-o	0.31	a-e	0.24	a-j
Sweet Bee	Warner Seeds, Inc.	F. Sorghum	M	N	N	0.63	a-p	0.6	a-m	0.34	a-o	0.27	a-e	0.25	a-i
2-Way 199 PS	Warner Seeds, Inc.	F. Sorghum	PS	N	N	0.45	nop	0.44	g-m	0.19	j-o	0.47	a	0.2	d-j
Sucrosse 6-R BMR	Warner Seeds, Inc.	F. Sorghum	M	Y	N	0.69	a-g	0.69	a-d	0.42	a-e	0.31	a-e	0.21	c-j
Sucrosse 5-R BMR	Warner Seeds, Inc.	Sorghum/Sudan	ME	Y	N	0.62	a-p	0.6	a-m	0.34	a-o	0.33	a-e	0.23	a-j
Sucrosse 9-R PS	Warner Seeds, Inc.	Sorghum/Sudan	PS	N	N	0.45	op	0.39	m	0.15	o	0.33	a-e	0.19	f-j
Sweet King	AR-B Seeds	Sorghum/Sudan	ML	Y	N	0.57	a-p	0.53	a-m	0.27	a-o	0.33	a-e	0.24	a-j
Sweet Choice	AR-B Seeds	F. Sorghum	ML	Y	Y	0.69	a-f	0.69	a-d	0.42	a-d	0.25	a-e	0.3	ab
Check 1(A571)	Texas Agri. Exp. Station	Grain Sorghum	M	N	N	0.65	a-m	0.64	a-k	0.38	a-k	0.4	a-e	0.26	a-g
Check 2(NC+ 7R83)	Texas Agri. Exp. Station	Grain Sorghum	M	N	N	0.65	a-n	0.63	a-l	0.37	a-m	0.31	a-e	0.28	abc
Check 3(84G62)	Texas Agri. Exp. Station	Grain Sorghum	ML	N	N	0.6	a-p	0.56	a-m	0.31	a-o	0.24	b-e	0.25	a-i
LSD (P=.05)						0.108		0.122		0.111		0.124		0.041	
Standard Deviation						0.067		0.076		0.069		0.076		0.025	
CV						11.18		13.17		21.72		23.53		10.76	

¹⁾ Variety information provided by seed companies. Male sterile entries were cross pollinated my other entries.

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

Table 2. 2004 Comparison of sorghum hybrids for agronomic characteristics, yield, and nutrient composition.

Variety Information ¹⁾															
HYBRID	COMPANY	Sorghum Type	Maturity	BMR	Male Sterile	Mg		K		S		% Lignin	% IVTD		
Maxi Gain	Coffey Forage Seeds, Inc.	Sorghum/Sudan	PS	N	N	0.21	a-d	1.45	a-m	0.17	abc	5.07	a-h	69.7	c-h
Sugar Graze Ultra	Coffey Forage Seeds, Inc.	Sorghum/Sudan	PS	N	N	0.17	a-d	1.58	a-g	0.16	a-e	4.67	a-h	70.7	b-h
Sugar Graze 2000	Coffey Forage Seeds, Inc.	Sorghum/Sudan	L	N	N	0.2	a-d	1.14	c-r	0.15	a-f	5.83	abc	70.0	b-h
Sugar Graze 3000	Coffey Forage Seeds, Inc.	Sorghum/Sudan	L	N	N	0.19	a-d	1.19	b-r	0.11	d-h	6	a	69.3	d-h
GW 7816 G BMR	Crosbyton Seed Company	Sorghum/Sudan	M	Y	Y	0.19	a-d	1.37	a-o	0.12	c-h	5.97	ab	70.0	b-h
GW 8528 F BMR	Crosbyton Seed Company	F. Sorghum	M	Y	N	0.17	a-d	1.15	c-r	0.15	a-f	3.03	d-h	79.0	a-g
GW 3072 F	Crosbyton Seed Company	F. Sorghum	L	N	N	0.22	a-d	1.05	d-r	0.11	e-h	4.03	a-h	75.0	a-h
DSS Dividend BMR	Drussel Seed & Supply, Inc.	F. Sorghum	ML	Y	N	0.19	a-d	1.6	a-f	0.15	a-f	3.47	a-h	78.0	a-h
DSS Bonus-R BMR	Drussel Seed & Supply, Inc.	Sorghum/Sudan	PS	Y	N	0.21	a-d	1.51	a-k	0.16	abc	4.1	a-h	69.7	c-h
Silmaker 5500	Frontier Hybrids	F. Sorghum	M	N	N	0.17	a-d	1.03	e-r	0.13	a-h	4.97	a-h	76.0	a-h
Silmaker 5700	Frontier Hybrids	F. Sorghum	ML	N	N	0.19	a-d	1.18	b-r	0.13	a-h	3.3	a-h	79.0	a-g
Silmaker 6000	Frontier Hybrids	F. Sorghum	M	N	N	0.18	a-d	1.03	f-r	0.11	d-h	4.3	a-h	77.3	a-h
Silmaker 6500	Frontier Hybrids	F. Sorghum	M	N	N	0.15	bcd	0.88	l-r	0.13	a-h	3.6	a-h	81.0	abc
Silmaker 7000	Frontier Hybrids	F. Sorghum	ML	N	N	0.18	a-d	1.08	d-r	0.11	d-h	4.63	a-h	70.3	b-h
Nutri Plus BMR	Frontier Hybrids	Sorghum/Sudan	ML	Y	N	0.16	a-d	1.31	a-r	0.15	a-f	4.97	a-h	74.0	a-h
Garst 325	Garst Seed Company	F. Sorghum	L	N	N	0.21	a-d	0.71	r	0.09	h	4.53	a-h	76.7	a-h
Garst 320	Garst Seed Company	F. Sorghum	M	N	N	0.21	a-d	0.82	n-r	0.11	d-h	3.93	a-h	80.3	a-e
Garst 753 BMR	Garst Seed Company	Sorghum/Sudan	PS	Y	N	0.25	ab	1.58	a-g	0.16	a-e	3.77	a-h	79.3	a-f
Garst N322x	Garst Seed Company	F. Sorghum	ML	N	N	0.2	a-d	1.55	a-h	0.1	fgh	4.8	a-h	72.0	a-h
Garst R332x	Garst Seed Company	F. Sorghum	ML	N	N	0.2	a-d	1.29	a-r	0.11	e-h	4.97	a-h	74.7	a-h
Garst Ex 2211	Garst Seed Company	F. Sorghum	M	N	N	0.19	a-d	0.92	j-r	0.12	c-h	4.6	a-h	78.3	a-h
Garst Ex Chpr X	Garst Seed Company	F. Sorghum	M	N	N	0.16	a-d	1.14	c-r	0.14	a-h	3.13	c-h	79.0	a-g
Garst Graze-N-Bale+	Garst Seed Company	Sorghum/Sudan	PS	N	N	0.21	a-d	1.36	a-p	0.16	abc	5.43	a-h	68.3	fgh
Garst EX 32007	Garst Seed Company	Sorghum/Sudan	PS	Y	N	0.22	a-d	1.64	a-e	0.17	abc	3.43	a-h	76.3	a-h
4-S	Kelly Green Seeds	Sorghum/Sudan	ME	N	N	0.22	a-d	1.12	c-r	0.15	a-f	5.13	a-h	74.0	a-h
4-S BMR	Kelly Green Seeds	Sorghum/Sudan	ME	Y	N	0.26	a	0.99	g-r	0.12	c-h	4.53	a-h	80.7	a-d
MMR 366/70 BMR	MMR Genetcs LLC	F. Sorghum	PS	Y	N	0.22	a-d	1.78	ab	0.14	a-g	4.27	a-h	74.7	a-h
MMR 366/67 BMR	MMR Genetcs LLC	Sorghum/Sudan	M	Y	N	0.24	a-d	1.29	a-r	0.16	a-d	4.63	a-h	78.3	a-h
Dekalb FS-5	Monsanto	F. Sorghum	M	N	N	0.21	a-d	1.18	b-r	0.13	a-h	4.2	a-h	78.3	a-h
Dekalb FS-25E	Monsanto	F. Sorghum	L	N	N	0.21	a-d	1.1	c-r	0.1	fgh	5.07	a-h	73.0	a-h
Dekalb DKS 59-09	Monsanto	F. Sorghum	M	N	N	0.21	a-d	1.28	a-r	0.14	a-g	3.57	a-h	80.7	a-d
4 Ever Green	Walter Moss Seed Company	F. Sorghum	PS	N	N	0.22	a-d	1.65	a-d	0.15	a-f	5.43	a-h	72.0	a-h
Mega Green	Walter Moss Seed Company	Sorghum/Sudan	PS	N	N	0.2	a-d	1.45	a-m	0.16	a-d	5.1	a-h	68.3	fgh
4 Ever Green BMR	Walter Moss Seed Company	F. Sorghum	PS	Y	N	0.2	a-d	1.85	a	0.14	a-g	3.63	a-h	79.0	a-g
Century BMR	Walter Moss Seed Company	Sorghum/Sudan	M	Y	N	0.18	a-d	1.05	d-r	0.12	b-h	4.93	a-h	75.3	a-h
Millennium BMR	Walter Moss Seed Company	F. Sorghum	L	Y	N	0.17	a-d	1.18	b-r	0.13	a-h	3.4	a-h	80.7	a-d
Su-2-LM	Walter Moss Seed Company	Sorghum/Sudan	L	N	N	0.19	a-d	1.3	a-r	0.16	abc	5.07	a-h	69.3	d-h

Table 2. 2004 Comparison of sorghum hybrids for agronomic characteristics, yield, and nutrient composition.

Variety Information ¹⁾															
HYBRID	COMPANY	Sorghum Type	Maturity	BMR	Male Sterile	Mg		K		S		% Lignin	% IVTD		
NC+ Nutri-Choice II	NC+ Hybrids	F. Sorghum	ML	N	N	0.24	abc	1.02	f-r	0.11	e-h	4.17	a-h	75.0	a-h
NC+ Nutri-Cane II	NC+ Hybrids	F. Sorghum	M	N	Y	0.13	d	1.21	b-r	0.12	b-h	4.23	a-h	73.3	a-h
NC+ 800HS	NC+ Hybrids	Sorghum/Sudan	PS	N	Y	0.2	a-d	1.41	a-o	0.14	a-h	5.8	a-d	69.7	c-h
NC+ Nutri-Ton II	NC+ Hybrids	F. Sorghum	ML	N	N	0.22	a-d	1.39	a-o	0.09	h	5.6	a-g	70.3	b-h
811F	Pioneer Hi-Bred Int., Inc.	F. Sorghum	PS	N	N	0.24	ab	1.53	a-i	0.15	a-f	4.83	a-h	69.0	e-h
84B52	Pioneer Hi-Bred Int., Inc.	F. Sorghum	M	Y	N	0.17	a-d	1.19	b-r	0.13	a-h	3.97	a-h	75.0	a-h
979	Pioneer Hi-Bred Int., Inc.	Sorghum/Sudan	ML	N	Y	0.22	a-d	1.16	c-r	0.15	a-f	4.27	a-h	75.7	a-h
Nutri Plus BMR	Production Plus	Sorghum/Sudan	ML	Y	N	0.26	a	1.43	a-m	0.15	a-f	3.57	a-h	76.0	a-h
Nutri Plus DS	Production Plus	Sorghum/Sudan	ML	Y	N	0.22	a-d	1.3	a-r	0.15	a-f	4.13	a-h	75.3	a-h
Dry Stalk BMR	Production Plus	Sorghum/Sudan	M	Y	N	0.18	a-d	1.34	a-q	0.13	a-h	4.77	a-h	74.7	a-h
RedTop Plus BMR	Production Plus	F. Sorghum	ML	Y	N	0.2	a-d	1.26	a-r	0.15	a-f	2.93	fgh	78.0	a-h
Silo Plus BMR	Production Plus	F. Sorghum	ML	Y	N	0.2	a-d	1.07	d-r	0.18	a	2.87	gh	80.3	a-e
Pacesetter BMR	Richardson Seeds, LTD.	F. Sorghum	PS	Y	N	0.25	ab	1.59	a-g	0.15	a-f	4.17	a-h	77.7	a-h
Sweeter 'N Honey BMR	Richardson Seeds, LTD.	F. Sorghum	M	Y	N	0.21	a-d	1.33	a-q	0.14	a-h	3.77	a-h	77.7	a-h
Dairy Master BMR	Richardson Seeds, LTD.	F. Sorghum	ML	Y	N	0.16	a-d	1.31	a-r	0.14	a-h	3.37	a-h	79.7	a-f
Bundle King BMR	Richardson Seeds, LTD.	F. Sorghum	L	Y	Y	0.18	a-d	1.35	a-q	0.13	a-h	4.4	a-h	75.7	a-h
SILO 600D	Richardson Seeds, LTD.	F. Sorghum	M	N	N	0.25	ab	1.07	d-r	0.13	a-h	3.9	a-h	79.0	a-g
SILO 700D	Richardson Seeds, LTD.	F. Sorghum	ML	N	N	0.17	a-d	0.74	qr	0.12	b-h	3.7	a-h	81.3	ab
Canex BMR 208	Sharp Brothers Seed Company	F. Sorghum	ME	Y	N	0.18	a-d	0.88	l-r	0.15	a-f	3.2	b-h	82.7	a
Canex BMR 248	Sharp Brothers Seed Company	F. Sorghum	ME	Y	N	0.17	a-d	1.06	d-r	0.14	a-g	3.07	c-h	81.0	abc
Canex BMR 328	Sharp Brothers Seed Company	F. Sorghum	ME	Y	N	0.17	a-d	1.29	a-r	0.13	a-h	3.1	c-h	78.7	a-h
Silex BMR 501	Sharp Brothers Seed Company	F. Sorghum	ML	Y	Y	0.16	a-d	1.18	b-r	0.14	a-g	2.77	h	80.3	a-e
Canex BMR 310	Sharp Brothers Seed Company	F. Sorghum	ME	Y	N	0.2	a-d	0.85	m-r	0.15	a-f	3	e-h	82.6	a
Grazex BMR 727	Sharp Brothers Seed Company	Sorghum/Sudan	ME	Y	N	0.21	a-d	1.38	a-o	0.12	b-h	5.77	a-e	74.3	a-h
Grazex BMR 782	Sharp Brothers Seed Company	Sorghum/Sudan	ME	Y	N	0.22	a-d	1.27	a-r	0.13	a-h	4.43	a-h	76.3	a-h
Canex BMR 317	Sharp Brothers Seed Company	F. Sorghum	ME	Y	Y	0.18	a-d	1.09	c-r	0.13	a-h	3.77	a-h	79.7	a-f
Grazex BMR 771	Sharp Brothers Seed Company	Sorghum/Sudan	ME	Y	Y	0.15	bcd	1.36	a-p	0.12	c-h	5.7	a-f	70.7	b-h
FAME	Seed Resource	F. Sorghum	ME	N	N	0.17	a-d	1.1	c-r	0.12	b-h	3.8	a-h	78.0	a-h
BMR 106	Seed Resource	F. Sorghum	ME	Y	N	0.14	cd	1.41	a-n	0.12	b-h	3.67	a-h	79.0	a-g
Sug-R-Cane	Seed Resource	F. Sorghum	M	N	Y	0.21	a-d	0.9	k-r	0.14	a-h	3.67	a-h	80.0	a-e
BMR 100	Seed Resource	F. Sorghum	M	Y	N	0.17	a-d	1.47	a-l	0.13	a-h	3.37	a-h	78.3	a-h
FS 515 HQ	Seed Resource	F. Sorghum	L	N	N	0.2	a-d	0.96	h-r	0.09	gh	4.43	a-h	76.3	a-h
FS 555	Seed Resource	F. Sorghum	L	N	N	0.21	a-d	1.18	b-r	0.09	gh	4.6	a-h	72.0	a-h
NK 300	Sorghum Partners, Inc.	F. Sorghum	M	N	N	0.21	a-d	1.07	d-r	0.12	b-h	4.03	a-h	80.7	a-d
HIKANE II	Sorghum Partners, Inc.	F. Sorghum	M	N	N	0.21	a-d	1.19	b-r	0.16	abc	3.43	a-h	80.3	a-e
SS 405	Sorghum Partners, Inc.	F. Sorghum	L	N	N	0.2	a-d	0.98	g-r	0.11	e-h	5.43	a-h	71.7	a-h
SS 506	Sorghum Partners, Inc.	F. Sorghum	L	N	N	0.23	a-d	1.37	a-o	0.15	a-f	5.07	a-h	67.7	gh

Table 2. 2004 Comparison of sorghum hybrids for agronomic characteristics, yield, and nutrient composition.

Variety Information ¹⁾															
HYBRID	COMPANY	Sorghum Type	Maturity	BMR	Male Sterile	Mg		K		S	% Lignin	% IVTD			
1990	Sorghum Partners, Inc.	F. Sorghum	PS	N	N	0.18	a-d	1.25	a-r	0.14	a-h	5.33	a-h	69.0	e-h
Sordan 79	Sorghum Partners, Inc.	Sorghum/Sudan	M	N	N	0.16	a-d	1.35	a-q	0.12	b-h	5.13	a-h	74.0	a-h
Sordan Headless	Sorghum Partners, Inc.	Sorghum/Sudan	PS	N	N	0.19	a-d	1.44	a-m	0.16	a-e	4.97	a-h	67.7	gh
Trudan 8	Sorghum Partners, Inc.	Sudangrass	M	N	N	0.25	ab	0.75	pqr	0.12	b-h	3.97	a-h	79.3	a-f
Trudan Headless	Sorghum Partners, Inc.	Sudangrass	PS	N	N	0.22	a-d	1.22	b-r	0.17	ab	5.57	a-g	67.3	h
2-Way	Warner Seeds, Inc.	F. Sorghum	ML	N	N	0.18	a-d	1.19	b-r	0.12	b-h	4.23	a-h	75.0	a-h
2-Way SRS	Warner Seeds, Inc.	F. Sorghum	ML	N	N	0.21	a-d	1.06	d-r	0.12	b-h	4.23	a-h	76.7	a-h
2-Way BMR	Warner Seeds, Inc.	F. Sorghum	M	Y	N	0.16	bcd	1.48	a-l	0.12	b-h	3.63	a-h	76.0	a-h
Nutrigreen BMR	Warner Seeds, Inc.	F. Sorghum	PS	Y	N	0.23	a-d	1.55	a-h	0.15	a-f	4.3	a-h	76.3	a-h
2-Way F-104	Warner Seeds, Inc.	F. Sorghum	ML	N	N	0.19	a-d	0.8	o-r	0.11	e-h	4.27	a-h	80.0	a-e
2-Way F-103	Warner Seeds, Inc.	F. Sorghum	ML	N	N	0.22	a-d	0.96	h-r	0.1	fgh	4.3	a-h	71.7	a-h
Sweet Bee Sterile II	Warner Seeds, Inc.	F. Sorghum	M	N	N	0.2	a-d	1.26	a-r	0.13	a-h	4.23	a-h	75.3	a-h
Sweet Bee	Warner Seeds, Inc.	F. Sorghum	M	N	N	0.19	a-d	1.14	c-r	0.13	a-h	3.93	a-h	75.3	a-h
2-Way 199 PS	Warner Seeds, Inc.	F. Sorghum	PS	N	N	0.25	ab	1.52	a-j	0.15	a-f	5.53	a-h	69.3	d-h
Sucrosse 6-R BMR	Warner Seeds, Inc.	F. Sorghum	M	Y	N	0.18	a-d	1.22	b-r	0.14	a-h	3.7	a-h	80.3	a-e
Sucrosse 5-R BMR	Warner Seeds, Inc.	Sorghum/Sudan	ME	Y	N	0.21	a-d	1.37	a-o	0.13	a-h	4.57	a-h	78.3	a-h
Sucrosse 9-R PS	Warner Seeds, Inc.	Sorghum/Sudan	PS	N	N	0.18	a-d	1.69	abc	0.15	a-f	5.2	a-h	67.3	h
Sweet King	AR-B Seeds	Sorghum/Sudan	ML	Y	N	0.18	a-d	1.39	a-o	0.12	b-h	4.77	a-h	72.3	a-h
Sweet Choice	AR-B Seeds	F. Sorghum	ML	Y	Y	0.18	a-d	0.93	i-r	0.18	a	3.3	a-h	80.3	a-e
Check 1(A571)	Texas Agri. Exp. Station	Grain Sorghum	M	N	N	0.2	a-d	1.1	c-r	0.14	a-h	5.07	a-h	77.7	a-h
Check 2(NC+ 7R83)	Texas Agri. Exp. Station	Grain Sorghum	M	N	N	0.2	a-d	1.33	a-q	0.11	d-h	4.3	a-h	77.0	a-h
Check 3(84G62)	Texas Agri. Exp. Station	Grain Sorghum	ML	N	N	0.16	bcd	1.3	a-r	0.11	d-h	5.1	a-h	74.3	a-h
LSD (P=.05)						0.058		0.334		0.029		1.517		6.26	
Standard Deviation						0.036		0.207		0.018		0.938		3.872	
CV						18.02		16.71		13.41		21.66		5.13	

¹⁾ Variety information provided by seed companies. Male sterile entries were cross pollinated my other entries.

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