



2002 Texas Panhandle Forage Sorghum Silage Trial

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Introduction

An increase in dairies and a decline in irrigation capacity in many areas of the Texas High Plains have led producers to consider forage sorghum silage as an alternative to corn and other crops. In addition, many seed companies have increased their efforts to bring quality sorghum silage hybrids to the market. This includes many new brown midrib and photoperiod sensitive hybrids as well as conventional forage sorghum and sorghum/sudan hybrids. The main purpose of this trial was to compare hybrids for agronomic traits and nutrient composition. In addition, four corn hybrids were planted adjacent to the sorghum for comparison.

Methods and Materials

The trial was made up of 77 hybrids provided by seed companies. Several male sterile hybrids were included. These were all capable of producing grain due to cross-pollination with other hybrids. Seed companies will provide pollinator seed for male sterile hybrids if desired. The trial was fully irrigated 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 14.5 inches of water was applied during the season along with a pre-irrigation of 9.8 inches. Rainfall totaled 11.8 inches during the growing season (May - September). Each hybrid was harvested when grain reached the soft dough stage. Photoperiod sensitive hybrids were harvested on the last harvest date of the season. Other cultural practices and study information are listed below:

Trial Location:	Bush farm located one mile north of Bushland, TX.
Cooperator:	Texas Agricultural Experiment Station
Previous Crop:	Wheat
Soil Type:	Pullman Clay Loam, pH = 7.4
Plot Size:	Four 30 inch rows by 25 ft.
Replications:	3
Study Design:	Randomized complete block
Planting Date:	May 23, 2002
Planting Rate:	120,000 seed/acre
Seed Method:	John Deere Max-emerge Planter
Soil Moisture:	Study was pre-irrigated
Fertilizer:	90 lbs/acre N and 35 lbs P205
Herbicide:	One lb/acre atrazine applied preplant
Irrigation:	Furrow irrigated based on moisture block readings. A total of 14.5 inches applied during the growing season + pre-irrigation.

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Silage Harvest Date: Plots were checked weekly and harvested when grain was in the soft dough stage. Harvest dates ranged from August 28 to October 11 and are reported in Table 2.

Grain Harvest Date: November 6

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 six feet of row. Yield is reported at 65% moisture in tons/acre.
- Nutrient analysis: Whole plant subsamples were collected from the yield sample immediately after harvest, chopped, and frozen. These subsamples were sent to Dairy One Laboratory, Ithaca, NY for analysis. All nutrient constituents were adjusted to a 100% moisture-free basis.
- Nutrient Analysis Definitions
 - Crude Protein:** 6.25 * % total nitrogen.
 - C. Protein/ac:** Crude protein*forage yield (lbs DM/ac).
 - 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.
 - IVTD:** % in vitro true digestibility; positively 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.
 - P:** % Phosphorus.
 - P/ac:** %P * forage yield (lbs DM/ac); reported because of interest in crops that will remove P from soils fertilized with livestock manure.
 - IVTD/ac:** %IVTD * forage yield (lbs DM/ac).
- Grain yield was collected in November from 10 feet of row from each plot. Samples were thrashed and yield reported at 14% moisture.

Corn Silage Trial (Methods and Materials)

Four corn hybrids were planted adjacent to the sorghum silage trial for comparison. Maturity of corn hybrids ranged from 93 to 118 CRM. Prior to planting 180 lb/acre of N and 79 lb/acre of P were applied. Each hybrid was planted on April 30 in a 200 ft strip on four 30-inch rows at 34,000 seed/acre. Bicep II Magnum was applied immediately after planting at 2 qt/acre for weed control. Plots were irrigated based on gypsum block readings at soil depths of 1, 2, and 3 feet. Total in-season irrigation water applied averaged 24.6 inches and ranged from 19.9 to 29.3 inches depending on the hybrid. Similar to the sorghum, 9.8 inches of irrigation water was applied prior to planting due to the dry spring. Four samples were collected from each hybrid plot (strip) for yield and nutrient composition determination when each hybrid's milkline had advanced 1/2 to 2/3 of the way down the kernel.

Results and Discussion

A summary of yield, important agronomic traits, and nutrient composition are reported by groups of different sorghum and sorghum/sudan types along with corn in Table 1. During the season 14.5 inches of irrigation water was applied. In addition, the field was pre-irrigated with 9.8 inches of water. The average silage yield for the trial was 28.6 ton/acre. For the study 1.97 tons of silage were produced for every inch of seasonal irrigation water applied. The BMR forage sorghums yielded 9.2% less than the non-BMR forage sorghums. As in other trials conducted since 2000, highest yields were obtained with the photoperiod sensitive (PS) forage sorghum yielding an average of 43.4 ton/acre. This was closely followed by the PS sorghum/sudan non-BMR hybrids. Lodging varied considerably within groups and was hybrid specific. For example, the average lodging score for the BMR forage sorghums was 11.8, but lodging scores varied from 0 to 50% depending on the hybrid.

Corn silage yield ranged from 21.9 to 27.8 ton/acre and averaged 25 ton/acre. Average in-season irrigation water applied was 24.6 inches. In season irrigation water use efficiency ranged from 0.80 to 1.39 ton per acre-inch of water applied depending on the hybrid. Average irrigation water use efficiency was 1.0 ton/ac-in. Forage sorghum silage yielded almost twice as much per inch of water applied.

See Table 2 for a listing of each hybrid's agronomy characteristics, yield, and nutrient composition.

Chemical and Nutrient Analysis

Results of chemical and nutrient analysis are presented in Table 1. These are presented by groupings of different types. An average value for the group is presented along with the range of values within the group. As noted in previous years, there is overlap among these groups. Therefore we can discuss one group having characteristics that on average are more or less desirable than another group or groups but these points may not be valid when we begin examining individual entries within groups.

On average, the BMR types had higher in vitro digestibilities than the same forage type without the BMR mutation. The differences were not as wide as noted in previous years. The higher digestibilities were present despite very little difference in ADF content. ADF is the more indigestible portion of the plant material. This indicates that it is the chemical fractions that compose the ADF that are influencing digestibility rather than the total concentration of ADF in the plant material. Also, as observed in previous years, the BMR types contained more crude protein than the same forage type without the BMR mutation.

The range of in vitro digestibilities within a type is typically narrower within the BMR hybrids than in the same type of forage without the BMR mutation. Also, there are some hybrids of both BMR and non-BMR forage sorghums that had digestibilities similar to corn silage.

Figure 1 illustrates the in vitro digestibility of the different groups. Figure 2 combines these values with yield and water use to illustrate differences in the quantity of in vitro digestible dry matter produced per inch of irrigation water applied seasonally. Simply put, this is an indication of the amount of feed energy produced per unit of irrigation water. The first point to note from the data produced in this trial is that although corn is a relatively high yielding and high energy silage, it is the least efficient in terms of water requirements per ton of digestible forage

produced per acre inch of water. The photoperiod sensitive (PS) types appear to be the most efficient despite the fact that the concentration of in vitro digestible dry matter is lower in these types. The photoperiod sensitive types stand out simply based on total yield per inch of water (Figure 3). Because of total yield differences several of the BMR groups were not as efficient as the non-BMR varieties of the same type. But, the BMR forage sorghums on average were very close to the non-BMR forage sorghums.

Remember these are averages among several hybrids within a group. Because of the range of values and overlap, there are several exceptions to these generalities. Specific decision relating to hybrid selection should be based on comparisons of individual hybrids rather than broad groups.

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

Sorghum Type ¹⁾	Plant Ht. Ft.	% Lodging at Harvest	% Moisture at harvest	Ton/ac @ 65%	Grain lb/acre	% Crude Protein	% ADF	% NDF	% TDN	% IVTD	IVTD lbs/ac
Forage Sorghum Non-BMR (28)	8.4	8.7	68.4	28.2	5,576 1,164 - 10,056	7.2 5.8 - 8.1	30.0 26.6 - 43.2	47.6 41.3 - 63.3	58.6 48.3 - 61.7	77.6 66.3 - 81.3	15,280 10,953 - 21,189
Range	6.9 - 11	0 - 45	63.4 - 73.3	20 - 40							
Forage Sorghum BMR (21)	8.5	11.8	70.0	25.6	3,033 1,145 - 5,226	7.6 6.5 - 8.8	30.2 26.4 - 39.3	49.0 41.9 - 61.2	61.1 54.7 - 66	80.2 73.7 - 85.3	14,316 9,469 - 19,811
Range	6.8 - 11	0 - 50	66.6 - 74.6	17.5 - 38.4							
Forage Sorghum Non-BMR PS (4)	11.0	6.7	75.4	43.4	0	6.5	47.6 47.3 - 47.9	71.7 71.1 - 72.9	48.3	65.6 62.7 - 68.7	19,914 18,565 - 21,206
Range	10 - 12	0 - 10	73.2 - 78.2	41.5 - 45.5	0	6.3 - 6.8					
Sorghum/Sudan Non-BMR (6)	9.7 8.0 - 11.5	11.1	64.8	27.7	173	6.9	37.8 33.8 - 47.6	57.3 51.3 - 72.0	53.2 46.7 - 57.0	71.5 63.7 - 76.0	13,702 9,009 - 18,237
Range	0 - 50	41.1 - 71.4	17.8 - 40.9	0 - 568	6.2 - 7.3						
Sorghum/Sudan BMR (2)	8.5	16.7	71.7	21.6	1,516 1,331 - 1,702	7.7	34.6 34.3 - 34.7	52.3 51.9 - 52.6	55.2 54.0 - 56.3	73.7 72.7 - 74.7	11,115 11,085 - 11,145
Range	8 - 9	3.3 - 30	70.7 - 72.6	21.2 - 21.9	7.4 - 7.9						
Sorghum/Sudan Non-BMR PS (6)	11.6	0.3	74.5	41.1	0	6.3	47.7 47.1 - 49.1	71.4 70.7 - 73.1	48.8 46.7 - 50.3	66.4 64.3 - 68.0	19,080 16,107 - 22,848
Range	11 - 12	0 - 1.7	72.9 - 75.3	35.4 - 48.5	0	5.8 - 7.0					
Sorghum/Sudan BMR PS (3)	11.5	1.1	72.2	32.8	542	7.1	43.2 42.1 - 44.9	64.4 62.3 - 66.9	51.0 49.0 - 54.0	69.0 67.0 - 72.3	15,875 13,929 - 17,157
Range	11 - 12	0 - 3.3	71.6 - 72.7	29.7 - 34.9	409 - 659	6.5 - 7.3					
Grain Sorghum (4)	4.9	0.0	58.7	18.5	8,025 7,618 - 8,290	8.7	22.7 21.9 - 23.3	35.6 34.4 - 36.6	64.7 63.3 - 65.5	84.0 82.3 - 84.7	10,854 10,139 - 11,983
Range	4.6 - 5	0	53.2 - 62.8	17.1 - 20.8	8.6 - 9.0						
Test Average	8.9	8.6	68.4	28.6	3,199	7.2	34.0	53.1	57.0	75.7	15,085
Corn (4)		0	66.6	25.09	184.8	7.46	26.90	44.97	67.3	81.27	13,621

¹⁾ Number in parenthesis is the number of each sorghum type or corn hybrid. BMR = Brown mid-rib. PS = Photoperiod Sensitive.

Figure 1. Concentration of in vitro digestible dry matter (true digestibility) by group.

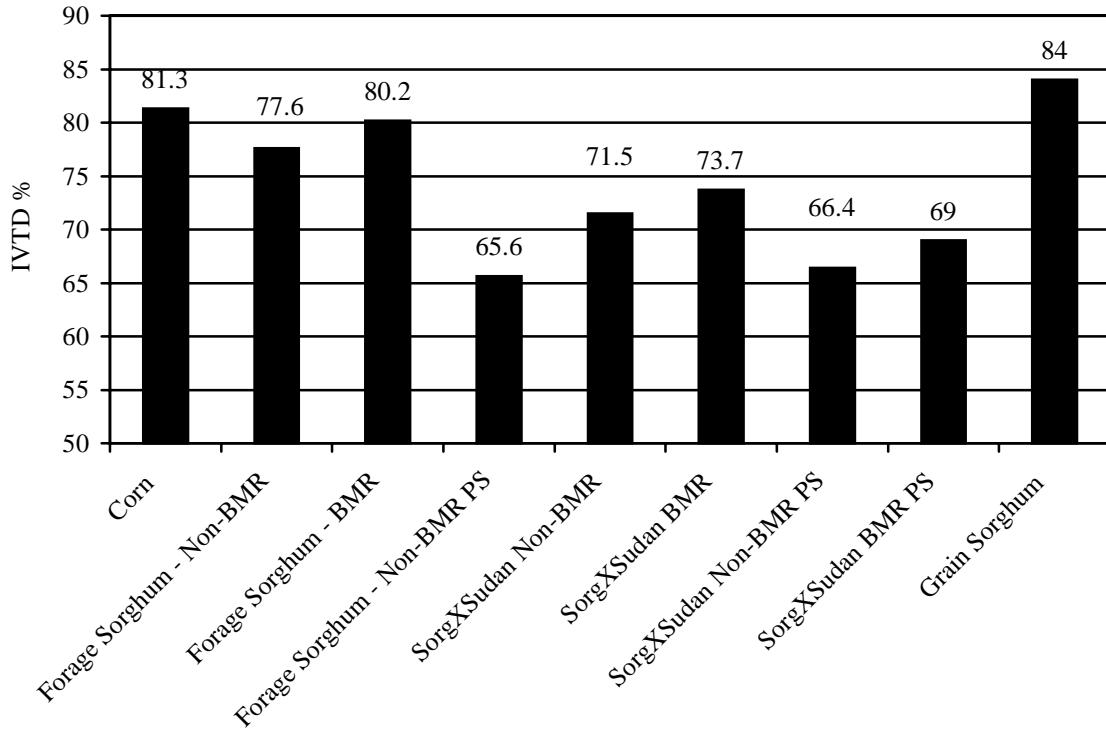


Figure 2. Yield of in vitro digestible dry matter (true digestibility) per acre inch of irrigation water applied seasonally.

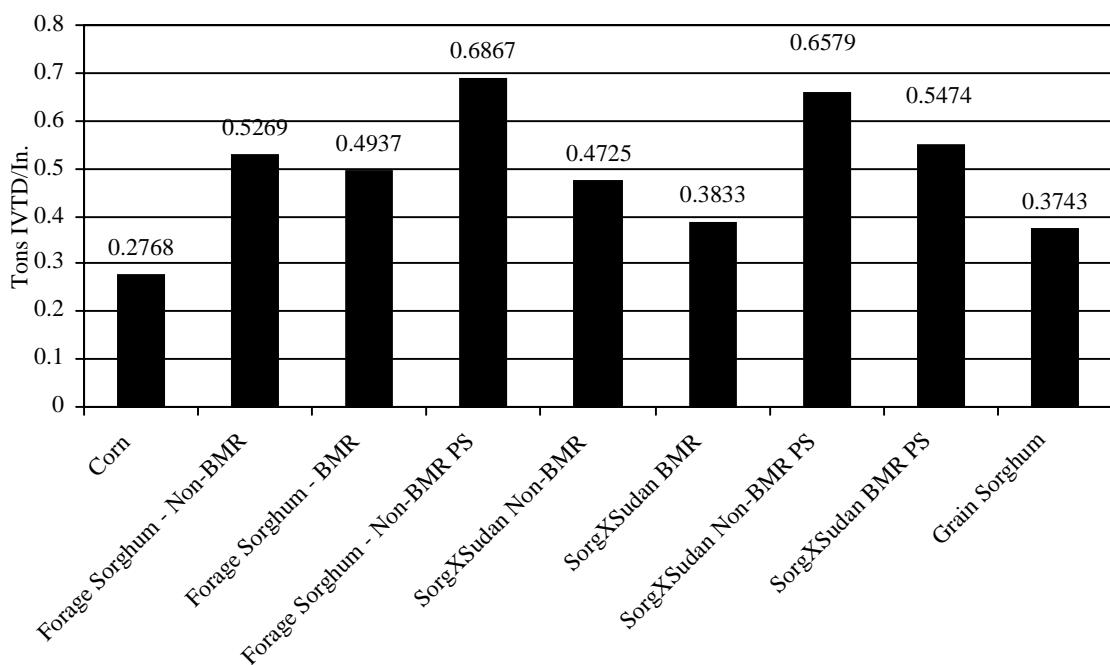


Figure 3. Silage yield (adjusted to 35% DM) per acre inch of irrigation water applied seasonally.

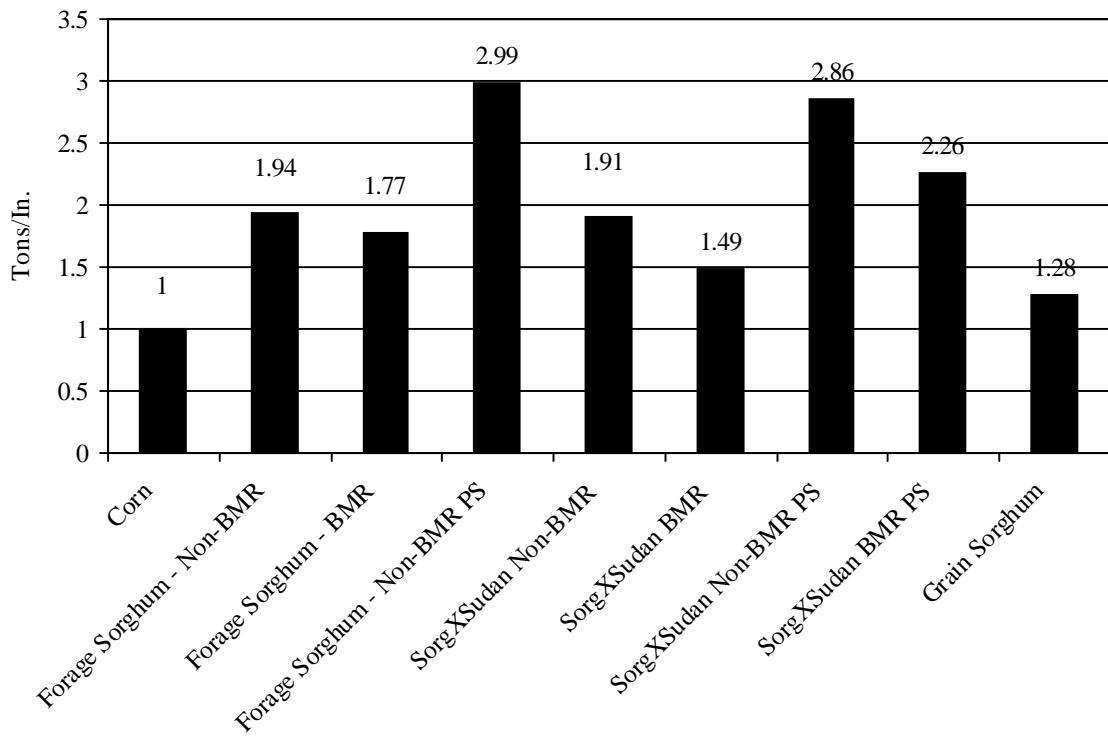


Table 2. 2002 Comparison of Sorghum hybrids for Standability, Silage and Grain Yield, and Nutrient Quality.

Entry No.	Entry Name	Company	Plant Characteristics ¹⁾				Silage ²⁾						Grain Ib/acre	% Crude Protein
			Sorghum Type	Maturity	Brown Midrib	Male Sterile ³⁾	Harv. Date	Plant Ht. Ft.	% Lodging	% Moisture	Ton/ac @ 65%			
1	SWEET KING	AR-B Seed	Sorghum/Sudan	ML	Y	N	05-Sep	8	3.3 ef	72.6 a-i	21.2 v-D	1,331 v-C	7.9 a-k	
2	SWEET CHOICE	AR-B Seed	Forage Sorghum	ML	Y	Y	18-Sep	7.3	3.3 ef	69.3 c-n	31.2 h-u	3,435 m-s	7.53 b-o	
3	SILAGE MASTER	Browning Seed	Forage Sorghum	ML	N	N	27-Sep	11	3.3 ef	67.9 c-o	31.7 h-s	4,030 k-q	6.97 h-t	
4	CADAN 99B	Browning Seed	3-Way Sorghum/Sudan	ML	N	N	05-Sep	9.2	0 f	67.8 c-o	23.2 r-D	147 BC	7.33 e-q	
5	TRIDAN	Browning Seed	3-Way Sorghum/Sudan	M	N	N	18-Sep	10.5	3.3 ef	41.1 r	17.8 BCD	0 C	6.17 p-t	
6	EXP. HYBRID 00X ⁴⁾	Browning Seed	Hybrid Sudangrass	ME	N	N	n/a	7.4	0 f	0 s	0 E	0 C		
7	SILO-N-FEED	Crosbyton Seed	Forage Sorghum	ML	N	N	27-Sep	8.3	20 de	66.2 g-o	33 f-p	6,812 d-g	7.4 d-q	
8	GW 8528	Crosbyton Seed	Forage Sorghum	M	Y	N	05-Sep	8.5	6.7 ef	66.6 f-o	17.5 CD	2,904 o-v	7.53 b-o	
9	GW 9530	Crosbyton Seed	Forage Sorghum	ML	N	N	11-Sep	8.5	3.3 ef	67.4 d-o	31.3 h-t	5,751 f-j	6.83 i-t	
10	DIVIDEND	Drussel Seed	Forage Sorghum	ML	Y	N	11-Sep	8.5	50 a	71.6 a-k	27.9 l-y	3,595 l-r	8.5 a-g	
11	BONUS BMR	Drussel Seed	Sorghum/Sudan	PS	Y	---	11-Oct	11	0 f	72.7 a-h	34.9 c-m	659 y-C	7.3 f-q	
12	BMR 100	Garrison & Townsend	Forage Sorghum	ML	Y	N	11-Sep	8.8	45 abc	71.5 a-k	28.2 l-y	3,633 l-r	8.13 a-i	
13	BMR EXP 2201	Garrison & Townsend	Forage Sorghum	M	Y	N	11-Sep	6.8	1.7 f	71.1 a-l	21.1 w-D	2,885 o-w	8.47 a-g	
14	SILO MILO	Garrison & Townsend	Forage Sorghum	M	N	N	28-Aug	8	0 f	70.9 a-m	22.9 r-D	5,546 g-k	7.03 h-t	
15	SILO MILO +	Garrison & Townsend	Forage Sorghum	M	N	N	05-Sep	8.4	8.3 ef	63.8 l-p	22.9 r-D	4,817 h-n	7.07 h-t	
16	BALE ALL III	Garrison & Townsend	Forage Sorghum	M	N	Y	18-Sep	8	6.7 ef	64.5 k-p	22.2 t-D	4,075 k-q	5.9 rst	
17	BMR 301	Garrison & Townsend	Sorghum/Sudan	PS	Y	---	11-Oct	12	3.3 ef	72.3 a-j	29.7 i-x	557 z-C	6.57 l-t	
18	BMR 302	Garrison & Townsend	Sorghum/Sudan	PS	Y	---	11-Oct	11.5	0 f	71.6 a-k	33.9 e-o	409 z-C	7.33 e-q	
19	BMR EXP 2202	Garrison & Townsend	Forage Sorghum	M	Y	N	11-Sep	7.5	0 f	70.7 b-m	23.2 r-D	2,328 r-x	8.63 a-e	
20	MMR 327M/438 BMR	MMR Genetics	Forage Sorghum	ML	Y	N	11-Sep	8	0 f	69.4 c-n	21.1 w-D	2,488 q-x	8.67 a-d	
21	MMR 366/35 BMR	MMR Genetics	Forage Sorghum	M	Y	N	11-Sep	7.5	3.3 ef	71.9 a-k	22.6 s-D	4,446 j-o	7.1 h-s	
22	MMR 366/23 BMR	MMR Genetics	Forage Sorghum	ML	Y	N	11-Sep	9.5	6.7 ef	70.7 b-m	38.2 b-j	3,237 n-t	6.97 h-t	
23	MMR 366/36 BMR	MMR Genetics	Forage Sorghum	L	Y	Y	11-Oct	9.5	3.3 ef	73.8 a-f	38.4 b-i	1,145 x-C	6.93 i-t	
24	FS-25E	Monsanto	Forage Sorghum	ML	N	N	27-Sep	9.5	0 f	73 a-g	38 b-k	5,610 g-k	7.23 g-q	
25	FS-5	Monsanto	Forage Sorghum	M	N	N	11-Sep	9.2	0 f	70.3 b-n	29 k-y	4,446 j-o	7.3 f-q	
26	DKS 59-09	Monsanto	Forage Sorghum	M	N	N	05-Sep	7	10 ef	71.8 a-k	23.7 q-D	7,260 c-f	7.9 a-k	
27	4-EVER GREEN	Walter Moss Seed	Forage Sorghum	PS	N	---	11-Oct	12	10 ef	78.2 a	41.5 a-f	0 C	6.77 j-t	
28	MEGA GREEN	Walter Moss Seed	Sorghum/Sudan	PS	N	---	11-Oct	12	0 f	75 abc	35.4 c-l	0 C	5.83 st	
29	MILLENIUM	Walter Moss Seed	Forage Sorghum	ML	Y	N	11-Sep	9	3.3 ef	70 b-n	25.6 n-C	1,247 w-C	7.43 c-p	
30	NUTRI-CANE II	NC +	Forage Sorghum	M	N	Y	05-Sep	8.5	0 f	68.1 c-o	21.1 w-D	6,141 e-h	7.27 g-q	
31	NUTRI-CHOICE II	NC +	Forage Sorghum	ML	N	N	27-Sep	6.2	0 f	65.1 j-p	29 j-y	9,781 ab	7.63 b-m	
32	NUTRI-TON	NC +	Forage Sorghum	M	N	N	27-Sep	7.5	0 f	66.4 f-o	33.6 e-o	5,789 f-j	7.6 b-n	
33	8 R 18	NC +	Grain Sorghum	ML	N	N	27-Sep	5	0 f	58.1 pq	20.8 x-D	8,290 bcd	8.97 a	

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Entry No.	Entry Name	Company	Plant Characteristics ¹⁾				Silage ²⁾						Grain Ib/acre	% Crude Protein
			Sorghum Type	Maturity	Brown Midrib	Male Sterile ³⁾	Harv. Date	Plant Ht. Ft.	% Lodging	% Moisture	Ton/ac @ 65%			
34	800 HS	NC +	Sorghum/Sudan	L	N	---	11-Oct	11.5	0 f	71.4 a-k	40.9 a-g	0 C	6.93 i-t	
35	811 F	Pioneer Hi-Bred Int.	Forage Sorghum	PS	N	N	11-Oct	10	0 f	73.3 a-g	42.3 a-e	0 C	6.3 n-t	
36	979	Pioneer Hi-Bred Int.	Sorghum/Sudan	ML	N	Y	28-Aug	8	13.3 def	68.3 c-n	22.1 u-D	569 z-C	7.2 g-r	
37	NUTRI-PLUS BMR	Production Plus	Sorghum/Sudan	M	Y	N	05-Sep	9	30 bcd	70.7 b-m	21.9 v-D	1,702 t-B	7.4 d-q	
38	REDTOP PLUS BMR	Production Plus	Forage Sorghum	ML	Y	Y	27-Sep	8	0 f	66.4 f-o	22.6 s-D	2,533 q-x	8.8 ab	
39	SILO PLUS BMR	Production Plus	Forage Sorghum	M	Y	N	05-Sep	8	28.3 cd	65.5 h-p	21 w-D	1,817 s-A	7.77 a-l	
40	SILO 600 D	Richardson Seed	Forage Sorghum	M	N	N	18-Sep	6.9	0 f	65.2 i-p	22.6 s-D	8,661 abc	8.03 a-j	
41	SILO 700 D	Richardson Seed	Forage Sorghum	L	N	N	27-Sep	7.2	0 f	66.8 e-o	30 i-w	8,902 abc	7.27 g-q	
42	SILO MASTER D	Richardson Seed	Forage Sorghum	L	N	N	27-Sep	8.5	6.7 ef	64.4 k-p	25.3 o-D	5,546 g-k	7.1 h-s	
43	PACESETTER	Richardson Seed	Sorghum/Sudan	PS	N	---	11-Oct	11	0 f	74.4 a-d	43.9 abc	0 C	5.77 t	
44	PACESETTER PLUS	Richardson Seed	Sorghum/Sudan	PS	N	---	11-Oct	11	0 f	72.9 a-h	35.6 c-l	0 C	6.57 l-t	
45	BUNDLE KING BMR	Richardson Seed	Forage Sorghum	L	Y	Y	11-Oct	11	0 f	70.9 a-m	27.6 l-z	2,047 r-z	6.77 j-t	
46	DAIRY MASTER BMR	Richardson Seed	Forage Sorghum	ML	Y	N	11-Sep	9	13.3 def	72.1 a-j	23.6 q-D	1,580 u-C	7.4 d-q	
47	CANEX	Sharp Brothers Seed	Forage Sorghum	ME	N	Y	28-Sep	7.5	0 f	73.3 a-g	23.9 p-D	2,719 p-x	7.63 b-m	
48	CANEX BMR 208	Sharp Brothers Seed	Forage Sorghum	ME	Y	N	11-Sep	8.4	20 de	68.7 c-n	24.3 p-D	4,478 i-o	7.27 g-q	
49	CANEX BMR 310	Sharp Brothers Seed	Forage Sorghum	ME	Y	N	11-Sep	8	1.7 f	68.4 c-n	18.4 A-D	5,226 g-l	7.53 b-o	
50	FAME	Seed Resource	Forage Sorghum	ME	N	N	05-Sep	8	41.7 abc	69.6 b-n	20.4 y-D	6,115 e-i	6.6 k-t	
51	SUGAR-R-CANE	Seed Resource	Forage Sorghum	M	N	Y	11-Sep	8.5	45 abc	71.7 a-k	29.6 i-x	6,275 e-h	6.43 m-t	
52	FS-S55	Seed Resource	Forage Sorghum	M	N	N	27-Sep	11	40 abc	72.1 a-j	32 g-r	2,661 p-x	6.6 k-t	
53	BMR 100	Seed Resource	Forage Sorghum	M	Y	N	11-Sep	8	41.7 abc	74.6 a-d	26.9 l-A	4,209 j-p	8.27 a-h	
54	BMR 106	Seed Resource	Forage Sorghum	M	Y	N	05-Sep	9	6.7 ef	68.5 c-n	22.8 s-D	5,079 h-m	6.5 l-t	
55	NK 300	Sorghum Partners	Forage Sorghum	M	N	N	27-Sep	6.9	0 f	63.4 m-p	25.8 m-C	8,079 cd	7.43 c-p	
56	HIKANE II	Sorghum Partners	Forage Sorghum	M	N	N	28-Aug	8	0 f	74.3 a-e	24.1 p-D	2,942 o-v	7.5 b-o	
57	SS 405	Sorghum Partners	Forage Sorghum	ML	N	N	27-Sep	10.5	3.3 ef	68.1 c-o	32.5 f-q	2,738 p-x	6.1 q-t	
58	SS 506	Sorghum Partners	Forage Sorghum	ML	N	N	11-Oct	11	6.7 ef	70.2 b-n	35.7 c-l	1,164 x-C	6.53 l-t	
59	1990	Sorghum Partners	Forage Sorghum	PS	N	N	11-Oct	10.5	8.3 ef	73.2 a-g	45.9 ab	0 C	6.43 m-t	
60	SORDAN 79	Sorghum Partners	Sorghum/Sudan	M	N	N	11-Sep	8.5	50 a	70.7 b-m	29.5 i-y	198 ABC	6.83 i-t	
61	TRUDAN 8	Sorghum Partners	True Sudangrass	M	N	N	28-Aug	8	46.7 ab	63.6 m-p	16.2 D	224 ABC	6.37 m-t	
62	Headless Trudan	Sorghum Partners	Hybrid Sudangrass	PS	N	N	11-Oct	9	0 f	70.3 b-n	34.6 d-n	0 C	5.77 t	
63	Headless Sordan	Sorghum Partners	Sorghum/Sudan	PS	N	N	11-Oct	11.6	1.7 f	74.4 a-d	39.9 a-h	0 C	6.5 l-t	
64	SUPER SILE SH26	Triumph Seed	Forage Sorghum	M	N	N	27-Sep	7.2	13.3 def	65.1 j-p	30.4 i-v	10,056 a	8.13 a-i	
65	2-WAY BMR	Warner Seed	Forage Sorghum	M	Y	N	11-Sep	9.2	6.7 ef	70.3 b-m	26.8 l-B	2,244 r-y	6.97 h-t	
66	2-WAY 199	Warner Seed	Forage Sorghum	PS	N	N	11-Oct	11.5	8.3 ef	77 ab	43.8 a-d	0 C	6.53 l-t	

Table 2. 2002 Comparison of Sorghum hybrids for Standability, Silage and Grain Yield, and Nutrient Quality.

Entry No.	Entry Name	Company	Plant Characteristics ¹⁾				Silage ²⁾					Grain Ib/acre	% Crude Protein
			Sorghum Type	Maturity	Brown Midrib	Male Sterile ³⁾	Harv. Date	Plant Ht. Ft.	% Lodging	% Moisture	Ton/ac @ 65%		
67	SI-GRO H-1	Golden Harvest	Forage Sorghum	ME	N	Y	11-Sep	8.4	0 f	71.6 a-k	28.1 l-y	5,418 g-k	7.53 b-o
68	SI-GRO H-45	Golden Harvest	Forage Sorghum	M	N	N	18-Sep	7.5	0 f	67.2 d-o	24 p-D	8,508 abc	7.13 h-s
69	SI-GRO H-47	Golden Harvest	Forage Sorghum	M	Y	N	11-Sep	8.5	6.7 ef	68 c-o	27.6 l-z	3,134 o-u	7.47 c-p
70	84G62 (CHECK1)	Pioneer Hi-Bred Int.	Grain Sorghum	ML	N	N	05-Sep	4.6	0 f	60.6 opq	17.1 CD	7,618 cde	8.6 a-f
71	A571 (CHECK2)	Monsanto	Grain Sorghum	ML	N	N	05-Sep	5	0 f	62.8 nop	18.6 z-D	8,188 bcd	8.73 abc
72	NC+ 7R83 (CHECK3)	NC +	Grain Sorghum	M	N	N	27-Sep	4.8	0 f	53.2 q	17.4 CD	8,002 cd	8.63 a-e
73	MAXI-GAIN	Coffey Seed	Sorghum/Sudan	PS	N	N	11-Oct	12	0 f	75.3 abc	43.1 a-d	0 C	7.03 h-t
74	SUGAR GRAZE ULTRA	Coffey Seed	Sorghum/Sudan	PS	N	N	11-Oct	12	0 f	74.7 a-d	48.5 a	0 C	6.23 o-t
75	SUGAR GRAZE 2000	Coffey Seed	Sorghum/Sudan	L	N	N	11-Oct	10.5	0 f	69.6 b-n	32.6 f-q	122 BC	6.7 k-t
76	2-WAY	Warner Seed	Forage Sorghum	ML	N	N	27-Sep	9	15 def	67.2 d-o	27.5 l-A	3,569 m-r	7.07 h-t
77	2-WAY SRS	Warner Seed	Forage Sorghum	ML	N	N	27-Sep	10	20 de	69.4 c-n	40.2 a-h	2,725 p-x	7.57 b-n
LSD (P=.05)								18.23	7.49	9.16	1649.33	1.305	
Standard Deviation								11.28	4.64	5.67	1020.20	0.807	
CV								127.72	6.8	20.03	30.46	11.15	
Treatment Prob(F)								0.0001	0.0001	0.0001	0.0001	0.0001	

¹⁾ Plant characteristics as reported by seed companies.

²⁾ Means followed by same letter do not significantly differ (P=.05, LSD).

³⁾ Male sterile entries pollinated and produced grain due to cross-pollination with other entries. Care should be taken in interpreting these results.

⁴⁾ Exp. Hybrid 00X emerged very poorly and was not harvested.

Table 2. 2002 Comparison of Sorghum hybrids for Standability, Silage and Grain Yield, and Nutrient Quality.

Entry No.	Entry Name	Company	Plant Characteristics ¹⁾				% ADF	% NDF	% TDN	NEL (Mcal/lb)	NEM (Mcal/lb)	NEG (Mcal/lb)
			Sorghum Type	Maturity	Brown Midrib	Male Sterile ³⁾						
1	SWEET KING	AR-B Seed	Sorghum/Sudan	ML	Y	N	34.4 i-p	51.9 h-n	56.3 j-p	0.55 k-q	0.51 g-n	0.25 i-q
2	SWEET CHOICE	AR-B Seed	Forage Sorghum	ML	Y	Y	27.4 t-w	44.27 p-t	62 a-h	0.64 b-h	0.61 a-f	0.35 a-h
3	SILAGE MASTER	Browning Seed	Forage Sorghum	ML	N	N	30.2 n-u	47.17 k-t	60.3 c-k	0.61 e-k	0.58 a-i	0.32 b-i
4	CADAN 99B	Browning Seed	3-Way Sorghum/Sudan	ML	N	N	33.8 j-q	51.3 i-o	54.3 m-s	0.53 m-r	0.48 k-p	0.22 l-t
5	TRIDAN	Browning Seed	3-Way Sorghum/Sudan	M	N	N	35 h-m	54.87 e-i	54 n-t	0.51 o-s	0.47 l-r	0.22 m-t
6	EXP. HYBRID 00X ⁴⁾	Browning Seed	Hybrid Sudangrass	ME	N	N						
7	SILO-N-FEED	Crosbyton Seed	Forage Sorghum	ML	N	N	28.47 stu	46 l-t	58.3 g-n	0.59 f-n	0.54 c-m	0.28 e-o
8	GW 8528	Crosbyton Seed	Forage Sorghum	M	Y	N	30.63 l-u	50.1 i-p	58.3 g-n	0.58 g-n	0.36 tuv	0.29 e-o
9	GW 9530	Crosbyton Seed	Forage Sorghum	ML	N	N	29.5 q-u	46.67 l-t	59 e-m	0.6 f-m	0.56 c-l	0.3 d-m
10	DIVIDEND	Drussel Seed	Forage Sorghum	ML	Y	N	32.93 k-s	50.57 i-p	58.7 f-n	0.58 g-n	0.55 c-m	0.29 e-o
11	BONUS BMR	Drussel Seed	Sorghum/Sudan	PS	Y	---	44.93 a-d	66.87 abc	50 r-x	0.41 v-y	0.4 o-v	0.15 s-y
12	BMR 100	Garrison & Townsend	Forage Sorghum	ML	Y	N	28.8 r-u	46.13 l-t	58.7 f-n	0.59 f-m	0.56 c-l	0.3 d-n
13	BMR EXP 2201	Garrison & Townsend	Forage Sorghum	M	Y	N	28.9 r-u	48.4 i-s	61 b-j	0.61 f-k	0.58 a-h	0.32 a-i
14	SILO MILO	Garrison & Townsend	Forage Sorghum	M	N	N	34.63 h-n	49.43 i-q	58.3 g-n	0.58 g-n	0.54 c-m	0.29 e-o
15	SILO MILO +	Garrison & Townsend	Forage Sorghum	M	N	N	29.73 p-u	46.03 l-t	57 i-o	0.58 h-n	0.52 f-n	0.27 g-p
16	BALE ALL III	Garrison & Townsend	Forage Sorghum	M	N	Y	27.47 tuv	44.43 p-t	58 h-o	0.59 f-m	0.54 c-m	0.19 p-v
17	BMR 301	Garrison & Townsend	Sorghum/Sudan	PS	Y	---	42.07 def	64.17 bcd	49 u-x	0.43 t-w	0.39 p-v	0.14 t-y
18	BMR 302	Garrison & Townsend	Sorghum/Sudan	PS	Y	---	42.7 c-f	62.27 cd	54 n-t	0.48 r-u	0.46 m-s	0.21 o-u
19	BMR EXP 2202	Garrison & Townsend	Forage Sorghum	M	Y	N	28.43 stu	45.87 m-t	62 a-h	0.63 c-h	0.6 a-g	0.34 a-h
20	MMR 327M/438 BMR	MMR Genetics	Forage Sorghum	ML	Y	N	30.57 l-u	50.03 i-p	61 b-j	0.6 f-l	0.59 a-g	0.33 a-i
21	MMR 366/35 BMR	MMR Genetics	Forage Sorghum	M	Y	N	29.4 q-u	48.47 i-s	62.3 a-h	0.62 d-i	0.61 a-f	0.34 a-h
22	MMR 366/23 BMR	MMR Genetics	Forage Sorghum	ML	Y	N	30.1 n-u	49.5 i-q	62.3 a-h	0.62 d-k	0.6 a-g	0.34 a-h
23	MMR 366/36 BMR	MMR Genetics	Forage Sorghum	L	Y	Y	38.3 f-j	61.17 cde	54.7 l-r	0.49 q-t	0.47 l-q	0.22 l-t
24	FS-25E	Monsanto	Forage Sorghum	ML	N	N	33.37 k-r	54.1 f-j	56.3 j-p	0.54 l-r	0.51 g-n	0.25 i-q
25	FS-5	Monsanto	Forage Sorghum	M	N	N	30.33 m-u	47.97 j-s	57.7 h-o	0.58 h-n	0.53 e-m	0.28 e-o
26	DKS 59-09	Monsanto	Forage Sorghum	M	N	N	26.57 uvw	41.27 t-w	63 a-g	0.65 a-f	0.62 a-f	0.35 a-f
27	4-EVER GREEN	Walter Moss Seed	Forage Sorghum	PS	N	---	47.33 abc	71.23 a	51 q-w	0.38 w-z	0.41 o-v	0.16 r-y
28	MEGA GREEN	Walter Moss Seed	Sorghum/Sudan	PS	N	---	47.77 ab	71.6 a	47.7 vwx	0.35 yz	0.35 tuv	0.11 wxy
29	MILLENIUM	Walter Moss Seed	Forage Sorghum	ML	Y	N	30.17 n-u	48.3 i-s	64 a-d	0.64 a-h	0.63 a-d	0.36 a-e
30	NUTRI-CANE II	NC +	Forage Sorghum	M	N	Y	28.6 stu	45.9 m-t	58 h-o	0.59 f-n	0.54 c-m	0.29 e-o
31	NUTRI-CHOICE II	NC +	Forage Sorghum	ML	N	N	27.37 t-w	45.23 o-t	61.7 a-i	0.63 c-h	0.6 a-g	0.34 a-h
32	NUTRI-TON	NC +	Forage Sorghum	M	N	N	27.17 t-w	45.87 m-t	60 d-k	0.61 f-k	0.57 b-j	0.32 c-j
33	8 R 18	NC +	Grain Sorghum	ML	N	N	21.87 x	35.5 wx	63.3 a-f	0.68 a-e	0.64 abc	0.37 a-d

Table 2. 2002 Comparison of Sorghum hybrids for Standability, Silage and Grain Yield, and Nutrient Quality.

Entry No.	Entry Name	Company	Plant Characteristics ¹⁾				% ADF	% NDF	% TDN	NEL (Mcal/lb)	NEM (Mcal/lb)	NEG (Mcal/lb)
			Sorghum Type	Maturity	Brown Midrib	Male Sterile ³⁾						
34	800 HS	NC +	Sorghum/Sudan	L	N	---	47.6 ab	71.97 a	46.3 wx	0.34 z	0.34 uv	0.09 xy
35	811 F	Pioneer Hi-Bred Int.	Forage Sorghum	PS	N	N	47.9 a	72.9 a	45.7 x	0.33 z	0.32 v	0.08 y
36	979	Pioneer Hi-Bred Int.	Sorghum/Sudan	ML	N	Y	34.53 i-n	52.43 h-m	57 i-o	0.56 j-p	0.52 f-n	0.27 h-q
37	NUTRI-PLUS BMR	Production Plus	Sorghum/Sudan	M	Y	N	34.73 h-n	52.6 h-l	54 n-t	0.53 n-r	0.48 j-p	0.23 k-s
38	REDTOP PLUS BMR	Production Plus	Forage Sorghum	ML	Y	Y	26.4 u-x	41.9 s-w	66 a	0.68 a-d	0.66 ab	0.4 abc
39	SILO PLUS BMR	Production Plus	Forage Sorghum	M	Y	N	26.5 u-x	42.57 r-v	61.7 a-i	0.64 a-h	0.6 a-g	0.34 a-h
40	SILO 600 D	Richardson Seed	Forage Sorghum	M	N	N	27.13 t-w	42.87 q-u	61 b-j	0.63 b-h	0.59 a-g	0.33 a-i
41	SILO 700 D	Richardson Seed	Forage Sorghum	L	N	N	28.83 r-u	45.7 n-t	61.7 a-i	0.63 c-h	0.6 a-g	0.34 a-h
42	SILO MASTER D	Richardson Seed	Forage Sorghum	L	N	N	27.3 t-w	44.87 o-t	59.3 d-l	0.61 f-k	0.56 c-l	0.3 d-l
43	PACESETTER	Richardson Seed	Sorghum/Sudan	PS	N	---	47.77 ab	70.73 ab	46.7 wx	0.36 yz	0.34 tuv	0.1 xy
44	PACESETTER PLUS	Richardson Seed	Sorghum/Sudan	PS	N	---	47.1 abc	70.93 a	50.3 r-x	0.38 w-z	0.4 o-v	0.15 s-y
45	BUNDLE KING BMR	Richardson Seed	Forage Sorghum	L	Y	Y	39.3 e-h	62.3 cd	55.7 k-q	0.49 p-s	0.49 i-o	0.24 j-r
46	DAIRY MASTER BMR	Richardson Seed	Forage Sorghum	ML	Y	N	27.47 tuv	46.67 l-t	63.7 a-e	0.64 a-g	0.63 a-e	0.36 a-e
47	CANEX	Sharp Brothers Seed	Forage Sorghum	ME	N	Y	28.8 r-u	46.4 l-t	60.3 c-k	0.61 e-k	0.58 a-i	0.32 c-j
48	CANEX BMR 208	Sharp Brothers Seed	Forage Sorghum	ME	Y	N	28.7 r-u	46.97 k-t	62 a-h	0.63 c-h	0.6 a-g	0.34 a-h
49	CANEX BMR 310	Sharp Brothers Seed	Forage Sorghum	ME	Y	N	28.93 r-u	48.2 j-s	63 a-g	0.63 b-h	0.62 a-f	0.35 a-g
50	FAME	Seed Resource	Forage Sorghum	ME	N	N	29.7 q-u	45.93 m-t	57.7 h-o	0.58 g-n	0.53 e-m	0.28 f-o
51	SUGAR-R-CANE	Seed Resource	Forage Sorghum	M	N	Y	28.13 tu	47 k-t	59.7 d-k	0.6 f-l	0.56 c-l	0.22 n-t
52	FS-S55	Seed Resource	Forage Sorghum	M	N	N	34.47 i-o	53.43 g-k	58 h-o	0.56 i-o	0.54 d-m	0.28 e-o
53	BMR 100	Seed Resource	Forage Sorghum	M	Y	N	31.8 l-t	49.33 i-q	59.3 d-l	0.59 f-n	0.56 c-l	0.3 d-n
54	BMR 106	Seed Resource	Forage Sorghum	M	Y	N	29.83 o-u	50.03 i-p	61 b-j	0.6 f-l	0.58 a-i	0.32 b-i
55	NK 300	Sorghum Partners	Forage Sorghum	M	N	N	26.9 uvw	43.23 q-u	60.7 b-j	0.63 c-h	0.49 h-o	0.33 a-i
56	HIKANE II	Sorghum Partners	Forage Sorghum	M	N	N	30.07 n-u	46.13 l-t	60 d-k	0.61 f-k	0.57 b-k	0.31 d-j
57	SS 405	Sorghum Partners	Forage Sorghum	ML	N	N	36.93 g-k	60.37 c-f	51 q-w	0.46 s-v	0.43 n-u	0.17 r-x
58	SS 506	Sorghum Partners	Forage Sorghum	ML	N	N	43.2 b-e	63.27 cd	48.3 vwx	0.42 u-x	0.38 q-v	0.13 u-y
59	1990	Sorghum Partners	Forage Sorghum	PS	N	N	47.5 ab	71.67 a	48.7 u-x	0.36 w-z	0.37 s-v	0.13 u-y
60	SORDAN 79	Sorghum Partners	Sorghum/Sudan	M	N	N	35.23 h-l	54.17 f-j	53.3 o-u	0.51 o-s	0.46 m-s	0.21 o-u
61	TRUDAN 8	Sorghum Partners	True Sudangrass	M	N	N	38.7 e-i	58.5 d-h	51.7 p-v	0.48 r-u	0.43 n-t	0.19 q-w
62	Headless Trudan	Sorghum Partners	Hybrid Sudangrass	PS	N	N	49.3 a	73.1 a	50.3 r-x	0.36 xyz	0.4 o-v	0.15 s-y
63	Headless Sordan	Sorghum Partners	Sorghum/Sudan	PS	N	N	47.27 abc	71.5 a	49 u-x	0.36 w-z	0.38 r-v	0.13 u-y
64	SUPER SILE SH26	Triumph Seed	Forage Sorghum	M	N	N	26.57 uvw	44 p-t	60 d-k	0.62 d-k	0.58 a-i	0.31 d-j
65	2-WAY BMR	Warner Seed	Forage Sorghum	M	Y	N	30.37 m-u	50.4 i-p	63 a-g	0.62 d-j	0.61 a-f	0.35 a-h
66	2-WAY 199	Warner Seed	Forage Sorghum	PS	N	N	47.83 ab	71.1 a	47.7 vwx	0.36 xyz	0.35 tuv	0.11 v-y

Table 2. 2002 Comparison of Sorghum hybrids for Standibility, Silage and Grain Yield, and Nutrient Quality.

Entry No.	Entry Name	Company	Plant Characteristics ¹⁾				% ADF	% NDF	% TDN	NEL (Mcal/lb)	NEM (Mcal/lb)	NEG (Mcal/lb)
			Sorghum Type	Maturity	Brown Midrib	Male Sterile ³⁾						
67	SI-GRO H-1	Golden Harvest	Forage Sorghum	ME	N	Y	28.67 stu	45.37 n-t	58.3 g-n	0.59 f-m	0.55 c-m	0.29 d-n
68	SI-GRO H-45	Golden Harvest	Forage Sorghum	M	N	N	30.9 l-u	48.5 i-s	58 h-o	0.58 h-n	0.54 d-m	0.28 f-o
69	SI-GRO H-47	Golden Harvest	Forage Sorghum	M	Y	N	29.27 q-u	48.17 j-s	62 a-h	0.62 d-j	0.6 a-g	0.34 a-h
70	84G62 (CHECK1)	Pioneer Hi-Bred Int.	Grain Sorghum	ML	N	N	23.3 vwx	35.97 vwx	65 abc	0.69 abc	0.66 ab	0.4 abc
71	A571 (CHECK2)	Monsanto	Grain Sorghum	ML	N	N	22.83 vwx	34.43 x	65.3 ab	0.7 a	0.67 a	0.4 a
72	NC+ 7R83 (CHECK3)	NC +	Grain Sorghum	M	N	N	22.73 wx	36.6 u-x	65.3 ab	0.69 ab	0.66 ab	0.4 ab
73	MAXI-GAIN	Coffey Seed	Sorghum/Sudan	PS	N	N	47.1 abc	70.57 ab	49.7 s-x	0.38 w-z	0.39 p-v	0.14 t-y
74	SUGAR GRAZE ULTRA	Coffey Seed	Sorghum/Sudan	PS	N	N	49.13 a	73.07 a	49.3 t-x	0.35 yz	0.38 r-v	0.13 u-y
75	SUGAR GRAZE 2000	Coffey Seed	Sorghum/Sudan	L	N	N	40.47 d-g	59.27 d-g	54 n-t	0.5 o-s	0.47 l-r	0.22 n-t
76	2-WAY	Warner Seed	Forage Sorghum	ML	N	N	29.6 q-u	48.73 i-r	58.7 f-n	0.59 f-n	0.55 c-m	0.29 d-n
77	2-WAY SRS	Warner Seed	Forage Sorghum	ML	N	N	28.7 r-u	46.97 k-t	61.7 a-i	0.62 d-i	0.59 a-g	0.31 d-k
LSD (P=.05)							4.672	6.655	4.71	0.0653	0.0942	0.0822
Standard Deviation							2.89	4.117	2.91	0.0404	0.0583	0.0508
CV							8.61	7.84	5.08	7.34	11.19	19.12
Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

¹⁾ Plant characteristics as reported by seed companies.

²⁾ Means followed by same letter do not significantly differ (P=.05, LSD).

³⁾ Male sterile entries pollinated and produced grain due to cross-pollination with other entries. Care should be taken

⁴⁾ Exp. Hybrid 00X emerged very poorly and was not harvested.

Table 2. 2002 Comparison of Sorghum hybrids for Standability, Silage and Grain Yield, and Nutrient Quality.

Entry No.	Entry Name	Company	Plant Characteristics ¹⁾				% P	% IVTD	IVTD lbs/ac	Crude Protein lbs/ac	P lbs/ac
			Sorghum Type	Maturity	Brown Midrib	Male Sterile ³⁾					
1	SWEET KING	AR-B Seed	Sorghum/Sudan	ML	Y	N	0.203 a-k	74.7 l-s	11,085	1,172	30
2	SWEET CHOICE	AR-B Seed	Forage Sorghum	ML	Y	Y	0.183 d-l	81.7 a-h	17,843	1,645	40
3	SILAGE MASTER	Browning Seed	Forage Sorghum	ML	N	N	0.183 d-l	80 a-l	17,752	1,547	41
4	CADAN 99B	Browning Seed	3-Way Sorghum/Sudan	ML	N	N	0.22 a-f	72.3 q-w	11,742	1,190	36
5	TRIDAN	Browning Seed	3-Way Sorghum/Sudan	M	N	N	0.177 f-l	72.3 q-w	9,009	769	22
6	EXP. HYBRID 00X ⁴⁾	Browning Seed	Hybrid Sudangrass	ME	N	N					
7	SILO-N-FEED	Crosbyton Seed	Forage Sorghum	ML	N	N	0.223 a-e	76.7 h-r	17,718	1,709	52
8	GW 8528	Crosbyton Seed	Forage Sorghum	M	Y	N	0.193 b-l	77.3 f-q	9,469	922	24
9	GW 9530	Crosbyton Seed	Forage Sorghum	ML	N	N	0.183 d-l	78.3 d-o	17,156	1,496	40
10	DIVIDEND	Drussel Seed	Forage Sorghum	ML	Y	N	0.19 c-l	77.3 f-q	15,097	1,660	37
11	BONUS BMR	Drussel Seed	Sorghum/Sudan	PS	Y	---	0.17 h-l	67.7 u-A	16,539	1,783	42
12	BMR 100	Garrison & Townsend	Forage Sorghum	ML	Y	N	0.2 a-l	77.3 f-q	15,259	1,605	39
13	BMR EXP 2201	Garrison & Townsend	Forage Sorghum	M	Y	N	0.173 g-l	79.3 b-m	11,713	1,251	26
14	SILO MILO	Garrison & Townsend	Forage Sorghum	M	N	N	0.183 d-l	77.7 f-q	12,455	1,127	29
15	SILO MILO +	Garrison & Townsend	Forage Sorghum	M	N	N	0.183 d-l	76 i-r	12,183	1,133	29
16	BALE ALL III	Garrison & Townsend	Forage Sorghum	M	N	Y	0.193 b-l	77 g-r	11,966	917	30
17	BMR 301	Garrison & Townsend	Sorghum/Sudan	PS	Y	---	0.177 f-l	67 w-A	13,929	1,366	37
18	BMR 302	Garrison & Townsend	Sorghum/Sudan	PS	Y	---	0.177 f-l	72.3 q-w	17,157	1,739	42
19	BMR EXP 2202	Garrison & Townsend	Forage Sorghum	M	Y	N	0.17 h-l	80.7 a-j	13,106	1,402	28
20	MMR 327M/438 BMR	MMR Genetics	Forage Sorghum	ML	Y	N	0.173 g-l	80 a-l	11,816	1,281	26
21	MMR 366/35 BMR	MMR Genetics	Forage Sorghum	M	Y	N	0.187 c-l	82 a-h	12,972	1,123	30
22	MMR 366/23 BMR	MMR Genetics	Forage Sorghum	ML	Y	N	0.16 k-l	81.7 a-h	21,847	1,864	43
23	MMR 366/36 BMR	MMR Genetics	Forage Sorghum	L	Y	Y	0.173 g-l	73.7 n-t	19,811	1,863	47
24	FS-25E	Monsanto	Forage Sorghum	ML	N	N	0.19 c-l	75 k-s	19,950	1,923	51
25	FS-5	Monsanto	Forage Sorghum	M	N	N	0.2 a-l	76.7 h-r	15,570	1,482	41
26	DKS 59-09	Monsanto	Forage Sorghum	M	N	N	0.243 a	82 a-h	13,604	1,311	40
27	4-EVER GREEN	Walter Moss Seed	Forage Sorghum	PS	N	---	0.21 a-i	68.7 t-z	19,957	1,967	61
28	MEGA GREEN	Walter Moss Seed	Sorghum/Sudan	PS	N	---	0.19 c-l	65 yzA	16,107	1,445	47
29	MILLENIUM	Walter Moss Seed	Forage Sorghum	ML	Y	N	0.157 l	83.7 a-d	14,999	1,331	28
30	NUTRI-CANE II	NC +	Forage Sorghum	M	N	Y	0.18 e-l	77.3 f-q	11,417	1,074	27
31	NUTRI-CHOICE II	NC +	Forage Sorghum	ML	N	N	0.217 a-g	81.3 a-i	16,504	1,549	44
32	NUTRI-TON	NC +	Forage Sorghum	M	N	N	0.173 g-l	79 c-n	18,581	1,788	41
33	8 R 18	NC +	Grain Sorghum	ML	N	N	0.23 abc	82.3 a-g	11,983	1,306	33

Table 2. 2002 Comparison of Sorghum hybrids for Standability, Silage and Grain Yield, and Nutrient Quality.

Entry No.	Entry Name	Company	Plant Characteristics ¹⁾				% P	% IVTD	IVTD lbs/ac	Crude Protein lbs/ac	P lbs/ac
			Sorghum Type	Maturity	Brown Midrib	Male Sterile ³⁾					
34	800 HS	NC +	Sorghum/Sudan	L	N	---	0.173 g-l	63.7 zA	18,237	1,984	50
35	811 F	Pioneer Hi-Bred Int.	Forage Sorghum	PS	N	N	0.177 f-l	62.7 A	18,565	1,865	52
36	979	Pioneer Hi-Bred Int.	Sorghum/Sudan	ML	N	Y	0.207 a-j	76 i-r	11,757	1,114	32
37	NUTRI-PLUS BMR	Production Plus	Sorghum/Sudan	M	Y	N	0.2 a-l	72.7 p-v	11,145	1,134	31
38	REDTOP PLUS BMR	Production Plus	Forage Sorghum	ML	Y	Y	0.2 a-l	85.3 a	13,494	1,392	32
39	SILO PLUS BMR	Production Plus	Forage Sorghum	M	Y	N	0.227 a-d	81.3 a-i	11,951	1,142	33
40	SILO 600 D	Richardson Seed	Forage Sorghum	M	N	N	0.203 a-k	80.3 a-k	12,703	1,270	32
41	SILO 700 D	Richardson Seed	Forage Sorghum	L	N	N	0.19 c-l	81 a-i	17,010	1,527	40
42	SILO MASTER D	Richardson Seed	Forage Sorghum	L	N	N	0.193 b-l	78 e-p	13,814	1,257	34
43	PACESETTER	Richardson Seed	Sorghum/Sudan	PS	N	---	0.163 jkl	64.3 zA	19,759	1,773	50
44	PACESETTER PLUS	Richardson Seed	Sorghum/Sudan	PS	N	---	0.163 jkl	68 u-A	16,946	1,637	41
45	BUNDLE KING BMR	Richardson Seed	Forage Sorghum	L	Y	Y	0.183 d-l	74 m-t	14,297	1,308	35
46	DAIRY MASTER BMR	Richardson Seed	Forage Sorghum	ML	Y	N	0.197 b-l	83.3 a-e	13,761	1,222	33
47	CANEX	Sharp Brothers Seed	Forage Sorghum	ME	N	Y	0.19 c-l	79.3 b-m	13,267	1,276	32
48	CANEX BMR 208	Sharp Brothers Seed	Forage Sorghum	ME	Y	N	0.177 f-l	81.7 a-h	13,897	1,237	30
49	CANEX BMR 310	Sharp Brothers Seed	Forage Sorghum	ME	Y	N	0.173 g-l	82.7 a-f	10,652	970	22
50	FAME	Seed Resource	Forage Sorghum	ME	N	N	0.183 d-l	76.7 h-r	10,953	942	26
51	SUGAR-R-CANE	Seed Resource	Forage Sorghum	M	N	Y	0.18 e-l	79 c-n	16,369	1,332	37
52	FS-S55	Seed Resource	Forage Sorghum	M	N	N	0.2 a-l	77.7 f-q	17,405	1,478	45
53	BMR 100	Seed Resource	Forage Sorghum	M	Y	N	0.213 a-h	78 e-p	14,687	1,557	40
54	BMR 106	Seed Resource	Forage Sorghum	M	Y	N	0.183 d-l	80.3 a-k	12,816	1,037	29
55	NK 300	Sorghum Partners	Forage Sorghum	M	N	N	0.223 a-e	80 a-l	14,448	1,342	40
56	HIKANE II	Sorghum Partners	Forage Sorghum	M	N	N	0.213 a-h	79.7 b-l	13,445	1,265	36
57	SS 405	Sorghum Partners	Forage Sorghum	ML	N	N	0.19 c-l	69 t-z	15,698	1,388	43
58	SS 506	Sorghum Partners	Forage Sorghum	ML	N	N	0.157 l	66.3 x-A	16,568	1,632	39
59	1990	Sorghum Partners	Forage Sorghum	PS	N	N	0.177 f-l	66 yzA	21,206	2,066	57
60	SORDAN 79	Sorghum Partners	Sorghum/Sudan	M	N	N	0.21 a-i	71.7 r-x	14,806	1,410	43
61	TRUDAN 8	Sorghum Partners	True Sudangrass	M	N	N	0.19 c-l	70 s-y	7,938	722	22
62	Headless Trudan	Sorghum Partners	Hybrid Sudangrass	PS	N	N	0.17 h-l	69 t-z	16,712	1,397	41
63	Headless Sordan	Sorghum Partners	Sorghum/Sudan	PS	N	N	0.197 b-l	66.3 x-A	18,518	1,815	55
64	SUPER SILE SH26	Triumph Seed	Forage Sorghum	M	N	N	0.203 a-k	78.7 d-n	16,747	1,730	43
65	2-WAY BMR	Warner Seed	Forage Sorghum	M	Y	N	0.173 g-l	82.3 a-g	15,439	1,308	32
66	2-WAY 199	Warner Seed	Forage Sorghum	PS	N	N	0.183 d-l	65 yzA	19,929	2,002	56

Table 2. 2002 Comparison of Sorghum hybrids for Standability, Silage and Grain Yield, and Nutrient Quality.

Entry No.	Entry Name	Company	Plant Characteristics ¹⁾				% P	% IVTD	IVTD lbs/ac	Crude Protein lbs/ac	P lbs/ac
			Sorghum Type	Maturity	Brown Midrib	Male Sterile ³⁾					
67	SI-GRO H-1	Golden Harvest	Forage Sorghum	ME	N	Y	0.183 d-l	78.3 d-o	15,402	1,481	36
68	SI-GRO H-45	Golden Harvest	Forage Sorghum	M	N	N	0.223 a-e	76.7 h-r	12,886	1,198	37
69	SI-GRO H-47	Golden Harvest	Forage Sorghum	M	Y	N	0.2 a-l	81.3 a-i	15,707	1,443	39
70	84G62 (CHECK1)	Pioneer Hi-Bred Int.	Grain Sorghum	ML	N	N	0.243 a	84.7 ab	10,139	1,029	29
71	A571 (CHECK2)	Monsanto	Grain Sorghum	ML	N	N	0.237 ab	84.7 ab	11,028	1,137	31
72	NC+ 7R83 (CHECK3)	NC +	Grain Sorghum	M	N	N	0.22 a-f	84.3 abc	10,268	1,051	27
73	MAXI-GAIN	Coffey Seed	Sorghum/Sudan	PS	N	N	0.167 i-l	67.3 v-A	20,304	2,121	50
74	SUGAR GRAZE ULTRA	Coffey Seed	Sorghum/Sudan	PS	N	N	0.16 kl	67.3 v-A	22,848	2,115	54
75	SUGAR GRAZE 2000	Coffey Seed	Sorghum/Sudan	L	N	N	0.183 d-l	73 o-u	16,659	1,529	42
76	2-WAY	Warner Seed	Forage Sorghum	ML	N	N	0.21 a-i	78.3 d-o	15,073	1,361	40
77	2-WAY SRS	Warner Seed	Forage Sorghum	ML	N	N	0.22 a-f	75.3 j-s	21,189	2,130	62
LSD (P=.05)							0.0452	5.4			
Standard Deviation							0.028	3.34			
CV							14.56	4.39			
Treatment Prob(F)							0.0052	0.0001			

¹⁾ Plant characteristics as reported by seed companies.

²⁾ Means followed by same letter do not significantly differ (P=.05, LSD).

³⁾ Male sterile entries pollinated and produced grain due to cross-pollination with other entries. Care should be taken

⁴⁾ Exp. Hybrid 00X emerged very poorly and was not harvested.