



2021 Texas A&M AgriLife Bushland Forage Sorghum Silage Trial

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The 2021 Texas A&M AgriLife Research and Extension Forage Sorghum Silage Trial consisted of 83 sorghum hybrids including forage sorghums, sorghum-sudangrasses, and grain sorghum hybrids. Evaluated hybrids included brown midrib (BMR) and brachytic variants and represented maturity classes ranging from early to photoperiod sensitive. Two grain sorghum hybrids (DKS 37-07 and P84G62) serve as long-term grain production checks. Grain yields are requested by companies at the time of entry, and the requested grain yields are reported to the USDA Farm Service Agency to annually update the USDA Loan Deficiency Payment tables for forage sorghum hybrids. Corn checks provide a comparison between the forage production potential in a water limited production environment.

The trial was located under center pivot irrigation and within a production forage sorghum field that was irrigated at approximately 50% ET (evapotranspiration demand of the crop). Seed companies submitted forage sorghum hybrids on a per fee basis except for the grain sorghum and corn hybrid checks. Timely in-season precipitation during the 2021 production season and moderate temperatures (Fig. 1) resulted in above average yields for many hybrids. Late May, pre-plant rains provided ideal planting moisture following harvest of the wheat hay crop. The average yield was 24.1 tons/ac (65% Moisture), and yields ranged from 17.4 to 32.5 tons/acre (65% moisture).

Agronomic Information

Cooperator: Michael Menke

Previous Crop: Wheat hay

Planting Date: June 7, 2021

Forage Sorghum Seeding Rate: 80,000 seeds/acre

Corn Silage Seeding Rate: 32,000 seeds/acre

Herbicide: Pre-plant Bicep (Atrazine + S-metolachlor) 1.5 pts/ac

Post-emergent Huskie FX (pyrasulfotole + bromoxynil + fluroxypyr) 14 oz/ac

Fertilizer: Manure pre-wheat; Pre-plant strip-tilled 220 lbs. N/ac and 90 lbs P2O5/ac

Insecticide: 1 application of Sivanto 7oz/ac aerially 8/4/21 at 5gpa (SCAs identified 7/29/21)

In-season Irrigation: Early to Med maturing varieties received ~8.25 inches to 9/10/21

Late and PS hybrids received ~9 inches to 9/16/21

In-season Precipitation: 7.53 inches to 9/10/21 and 7.94 inches to 9/30/21

Plot size: Four, 30-inch rows by 25 ft. (30 ft planted)

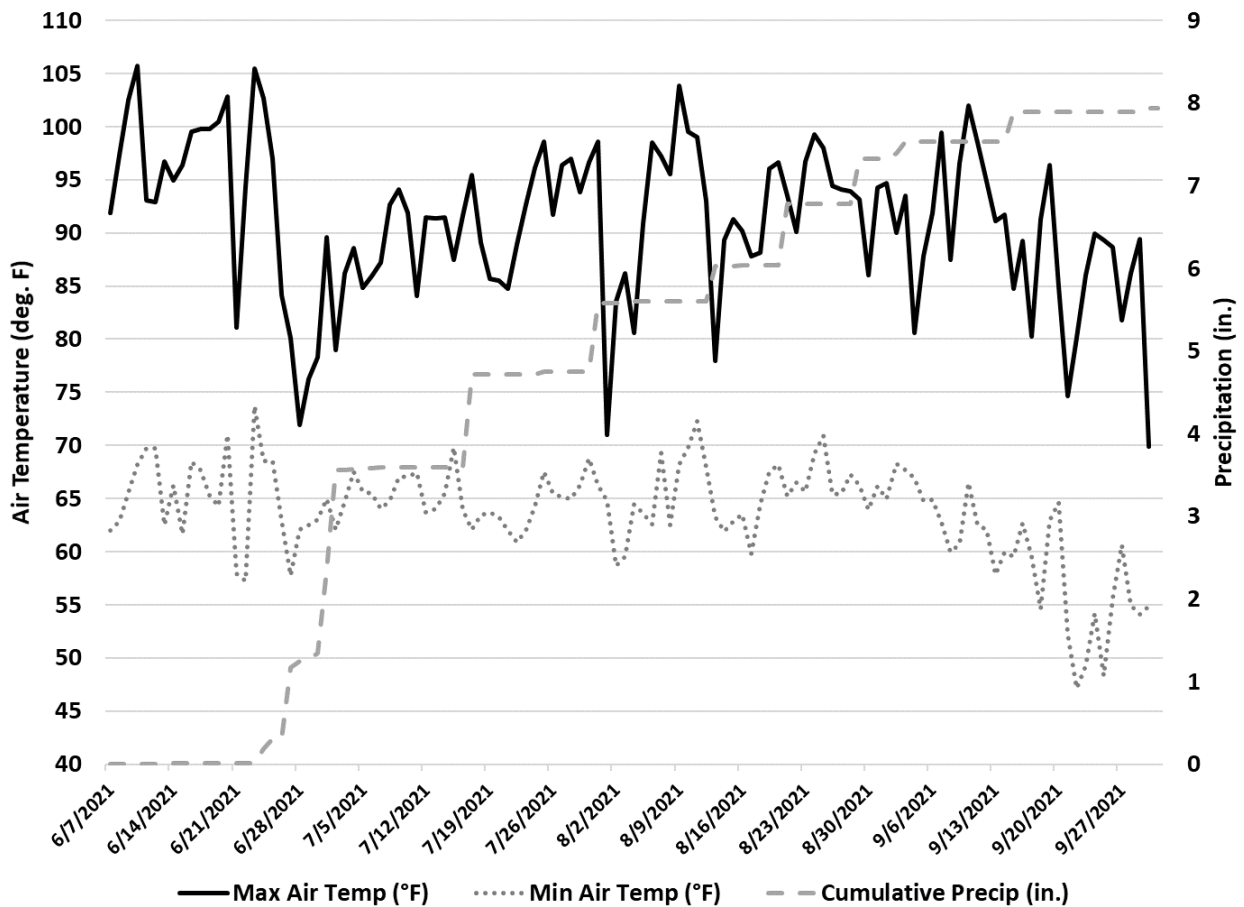


Figure 1. Daily temperatures and rainfall from panting to the final harvest.

Hybrids were blocked according to their marketed maturity class so that forages within each block could be mechanically harvested for yield when grain reached soft dough. The center 2 rows of each plot were mechanically chopped (sample size: 2 rows by 25 feet). Photoperiod sensitive hybrids were all harvested on the last sampling date (September 30, 2020). Uniform sub-samples were collected for dry matter and nutritional composition from all plots. A sub-sample of the chopped forage was dried at 221°F (105°C) to determine harvest moisture. All reported yields are corrected to 65% moisture and on a dry matter basis. A 600-gram sample was submitted to Dairyland Laboratories, Arcadia, WI via Servi-Tech Laboratory, Amarillo, TX for forage nutritional analyses using near infrared reflectance spectroscopy (NIR). Forage constituents are reported on a dry matter (DM) basis (Table 3). Sugarcane aphids (SCA) were identified on July 29, 2021. All plots were scouted for SCA infestation upon initial identification and following the Texas A&M AgriLife SCA threshold for forage sorghums, Sivanto (7oz/ac) was applied on August 4, 2021. Following the revised Texas A&M AgriLife threshold for forage sorghums, treatment is recommended when 20% of plants infested with 50 or more aphids (<https://access.onlinelibrary.wiley.com/doi/epdf/10.1002/agi2.20751>). Because of a timely insecticide application, there was no significant damage from SCAs in the 2021 trial.

Grain yields were collected following forage harvest and once grain reached physiological maturity for requested hybrids. Statistical analyses were completed for sorghum hybrids using SAS 9.4. Adjusted least significant differences for multiple comparisons were determined using Tukey's HSD. Effects and comparisons were determined significant at the 0.05 probability level. The discussion addresses broad averages for types of forage sorghums, grain sorghums, and sorghum-sudangrass hybrids evaluated in the 2021 test as a fresh forage but managed as a silage. It is not recommended that hybrid selection be made based on marketed forage type. While the marketed forage types provide an indication of potential quality and nutritive value, actual parameters vary for hybrids of the same forage type, and there is often an overlap among hybrids in these type categories. For example, comparing the %ADF and %IVTDMD48 for BMR and non-BMR hybrids validates that hybrid selection should be according to hybrid yield and associated nutritive value profiles not marketing class (Fig. 2). Because forage nutritive value requirements vary between livestock class and ration formulation, evaluated parameters provide a broad comparison of forage nutritive value in the respective production environment.

Forage Nutritive Analyses Defined:

CP: Crude Protein

ADF: Acid Detergent Fiber; a fraction of the cell wall includes cellulose and lignin, which is inversely related to energy availability

aNDF: Neutral Detergent Fiber; cell wall fraction of the forage

Lignin: The indigestible portion of plant, but a structural material for cell walls and thus important for plant standability.

uNDFom48: Undigested NDF after fermentation for the specified length of time (48 hrs.) expressed on an organic matter basis (om) to account for the ash

IVTDMD48: In Vitro True Dry Matter Digestibility (48 hour run). Provides an estimate of forage disappearance in the digestive tract.

NDFD48: NDF digestibility; estimated fiber digestibility after 48 hours.

Starch: A carbohydrate located in the grain and an indication of the potential energy content of the forage. Starch availability is a function of harvest timing and berry processing.

WSC: A measurement of simple sugars (glucose, fructose, and sucrose) and fructans. WSCs accumulate in the stalk until anthesis. After anthesis, they remobilize to the grain. WSCs are important for fermentation as they are used during the development of lactic acid

RFQ: Relative Forage Quality - an index for comparing forages, not just alfalfa. RFQ is based on the same scoring system as RFV with an average score of 100; higher scores indicate better feeding value

TDN-ADF: Total Digestible Nutrients (by Weiss equation) an index of energy concentration and a function of ADF.

Milk/ton: An index based on several variables that influence intake and nutritive value. These are applied to a standard dairy cow to project milk produced per ton of forage. Calculated using Milk 2006.

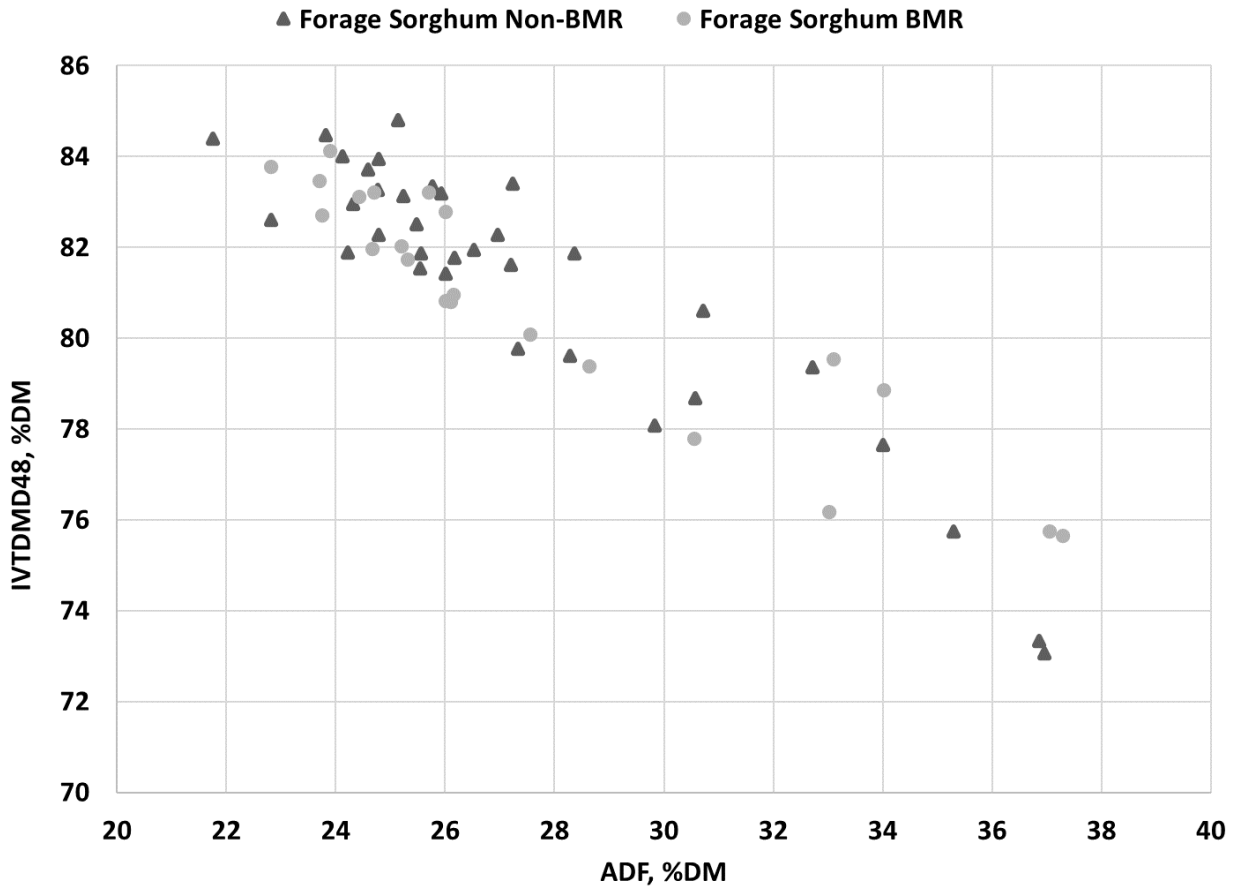


Figure 2. Comparison of % ADF to % IVTDMD48 for brown midrib and non-brown midrib hybrids. Increased % ADF indicates reduced digestibility.

Table 1. 2021 Texas A&M Agrilife Bushland Forage Sorghum Silage Trial mean yield, days to half-bloom (HB), average plant height, lodging, and harvest moisture. Male Sterile hybrids were pollinated by neighboring hybrids in the trial. FS=forage sorghum, SS=Sorghum Sudan, GS=Grain sorghum, PS=Photoperiod Sensitive

Hybrid Characteristics										Days to Half-Bloom (HB), Harvest Date, Height, Lodging, Moisture, and Yield						
Entry	HYBRID	Company	Type	Advertised Maturity	SCA Tolerance	BMR	Brach - ytic	Male Sterile	Days to HB†	Half Bloom Date	Harvest Date	Harvest Height (ft)	% Lodge	% Moisture at Harvest	Yield (tons/ac) DM Basis	Yield (tons/ac) 65% Moisture
1	ADV F7103	Advanta	FS	Early	No	Yes	Yes	No	61	8/6/2021	9/10/2021	8.5	5	67.7	6.8	19.3 ± 2.0
2	ADV F7216	Advanta	FS	Med-Early	No	Yes	No	No	65	8/10/2021	9/16/2021	8.4	22	63.0	7.3	20.9 ± 3.0
3	ADV F7424	Advanta	FS	Med-Early	No	Yes	No	No	79	8/25/2021	9/16/2021	7.0	23	78.2	7.4	21.0 ± 1.2
4	ADV F8322	Advanta	FS	Med	Yes	No	No	No	79	8/25/2021	9/29/2021	7.7	2	66.9	11.4	32.5 ± 1.5
5	ADV S6504	Advanta	SS	PS	No	Yes	No	No	.	.	9/30/2021	10.3	0	75.8	10.7	30.5 ± 3.2
6	ADV S6520	Advanta	SS	PS	Yes	Yes	No	No	69	8/15/2021	9/30/2021	9.2	3	73.6	8.6	24.7 ± 1.8
7	ADV XF405IG	Advanta	FS	Med	No	No	Yes	No	81	8/27/2021	9/29/2021	6.7	0	70.7	10.0	28.5 ± 1.5
8	ADV XS005	Advanta	SS	PS	Yes	Yes	No	No	99	9/14/2021	9/30/2021	9.6	0	77.2	8.0	22.9 ± 2.1
9	ADV XS060	Advanta	SS	PS	No	No	No	No	.	.	9/30/2021	10.4	0	75.6	10.2	29.3 ± 2.0
10	AF 7102	Advanta	FS	Med-Early	No	Yes	Yes	No	67	8/12/2021	9/16/2021	7.1	3	71.0	7.6	21.7 ± 0.7
11	AF 7401	Advanta	FS	Med-Late	No	Yes	Yes	No	80	8/25/2021	9/29/2021	6.5	0	71.8	8.5	24.4 ± 2.2
12	AS 5501	Advanta	SS	PS	No	No	No	No	79	8/25/2021	9/30/2021	11.2	0	74.1	10.5	29.9 ± 3.3
13	Browning 300	Browning Seed	FS	Late	No	No	No	No	66	8/12/2021	9/30/2021	6.6	0	63.7	7.8	22.3 ± 3.0
14	Bundle King	Browning Seed	FS	Med	No	No	No	No	69	8/15/2021	9/10/2021	7.8	0	73.9	6.5	18.5 ± 1.9
15	Cadan 99B WMR	Browning Seed	SS	Med	No	No	No	No	64	8/10/2021	9/10/2021	8.9	2	68.8	7.4	21.0 ± 1.5
16	Headless Wonder	Browning Seed	SS	PS	No	No	No	No	75	8/20/2021	9/30/2021	7.9	0	75.5	9.2	26.3 ± 3.3
17	Headless Wonder BMR	Browning Seed	SS	PS	No	No	No	No	69	8/14/2021	9/30/2021	10.3	13	65.6	7.6	21.7 ± 1.5
18	Silage Master	Browning Seed	FS	Late	No	No	No	No	80	8/26/2021	9/16/2021	8.6	5	76.3	8.8	25.0 ± 4.0
19	Sweet Sioux BMR	Browning Seed	SS	Med	No	Yes	No	No	64	8/9/2021	9/10/2021	8.3	48	73.7	6.4	18.3 ± 1.0
20	Sweet Sioux WMR	Browning Seed	SS	Med	No	No	No	No	65	8/10/2021	9/10/2021	7.6	3	69.3	7.2	20.5 ± 1.1
21	Tridan	Browning Seed	SS	Med-Early	No	No	No	No	65	8/11/2021	9/10/2021	7.3	3	69.9	7.1	20.3 ± 0.6
22	Wondergreen SX66	Browning Seed	SS	Early	No	No	No	No	61	8/6/2021	9/10/2021	7.6	7	68.4	6.7	19.2 ± 1.2
23	3501	Croplan	FS	Med	No	No	No	No	72	8/18/2021	9/16/2021	8.3	0	76.4	7.8	22.4 ± 1.6
24	5 Star	Dyna-Gro Seeds	FS	Med-Early	No	No	No	No	71	8/16/2021	9/16/2021	9.0	0	71.0	8.3	23.7 ± 1.8
25	Danny Boy II BMR	Dyna-Gro Seeds	FS	PS	Yes	Yes	No	No	.	.	9/30/2021	10.3	3	80.6	8.8	21.2 ± 1.5
26	Dual Forage SCA II	Dyna-Gro Seeds	FS	Med-Late	Yes	No	No	No	62	8/7/2021	9/10/2021	6.0	0	69.7	6.9	19.7 ± 1.9
27	Dynagraze II	Dyna-Gro Seeds	SS	Early	No	No	No	No	61	8/6/2021	9/10/2021	8.3	12	72.3	7.0	19.9 ± 2.1
28	Dynagraze II BMR	Dyna-Gro Seeds	SS	Med-Early	No	Yes	No	No	65	8/11/2021	9/16/2021	8.6	68	70.3	8.1	23.2 ± 1.0
29	F70FS91 BMR	Dyna-Gro Seeds	FS	Early	No	Yes	No	No	60	8/6/2021	9/10/2021	8.2	8	66.0	7.1	20.3 ± 0.5
30	F71FS72 BMR	Dyna-Gro Seeds	FS	Early	No	Yes	No	No	64	8/10/2021	9/10/2021	7.2	0	71.5	8.0	22.8 ± 3.1
31	F72FS05	Dyna-Gro Seeds	FS	Med-Early	Yes	No	No	No	79	8/25/2021	9/16/2021	7.4	0	75.2	8.1	23.2 ± 3.4
32	F72FS25 BMR	Dyna-Gro Seeds	FS	Med	No	Yes	Yes	No	80	8/25/2021	9/29/2021	6.6	0	73.4	9.3	26.5 ± 1.9
33	F74FS23 BMR	Dyna-Gro Seeds	FS	Med-Late	No	Yes	No	No	71	8/17/2021	9/29/2021	7.6	82	66.2	9.6	27.6 ± 2.7
34	F74FS72 BMR	Dyna-Gro Seeds	FS	Med-Late	No	Yes	Yes	No	81	8/27/2021	9/29/2021	6.4	0	70.9	9.4	26.9 ± 2.2
35	F75FS13	Dyna-Gro Seeds	FS	Med	No	No	No	No	62	8/8/2021	9/10/2021	8.9	0	74.4	7.0	19.9 ± 1.1
36	Fullgraze II	Dyna-Gro Seeds	SS	Late	No	No	No	No	85	8/30/2021	9/30/2021	13.2	0	68.7	10.6	30.3 ± 0.7
37	Fullgraze II BMR	Dyna-Gro Seeds	SS	PS	No	Yes	No	No	90	9/5/2021	9/30/2021	13.1	7	74.1	9.7	27.6 ± 1.1
38	FX21815	Dyna-Gro Seeds	FS	Med-Early	No	No	No	No	63	8/9/2021	9/16/2021	4.9	0	67.2	7.1	20.4 ± 0.7
39	FX21842	Dyna-Gro Seeds	FS	Med-Late	Yes	No	No	No	77	8/23/2021	9/29/2021	8.3	0	70.1	9.7	27.7 ± 0.9
40	FX21865	Dyna-Gro Seeds	FS	Med-Late	No	No	No	No	74	8/20/2021	9/29/2021	6.0	0	68.8	8.5	24.3 ± 2.7
41	Super Sile 20	Dyna-Gro Seeds	FS	Med-Late	No	No	No	No	86	9/1/2021	9/30/2021	10.6	68	69.4	10.0	28.6 ± 3.5
42	Super Sile 30	Dyna-Gro Seeds	FS	Med	No	No	No	No	79	8/25/2021	9/29/2021	8.7	33	65.2	11.0	31.4 ± 1.9
43	Super Sweet 10	Dyna-Gro Seeds	SS	Early	No	No	No	No	58	8/3/2021	9/10/2021	8.1	10	72.9	7.1	20.4 ± 1.1
44	Sweet Ton MS	Dyna-Gro Seeds	FS	Med-Late	No	No	No	Yes	67	8/12/2021	9/29/2021	8.5	0	67.9	8.4	24.0 ± 1.6

Table 1. 2021 Texas A&M Agrilife Bushland Forage Sorghum Silage Trial mean yield, days to half-bloom (HB), average plant height, lodging, and harvest moisture. Male Sterile hybrids were pollinated by neighboring hybrids in the trial. FS=forage sorghum, SS=Sorghum Sudan, GS=Grain sorghum, PS=Photoperiod Sensitive

Hybrid Characteristics									Days to Half-Bloom (HB), Harvest Date, Height, Lodging, Moisture, and Yield							
Entry	HYBRID	Company	Type	Advertised Maturity	SCA Tolerance	BMR	Brach - ytic	Male Sterile	Days to HB†	Half Bloom Date	Harvest Date	Harvest Height (ft)	% Lodge	% Moisture at Harvest	Yield (tons/ac) DM Basis	Yield (tons/ac) 65% Moisture
45	OPAL	MOJO Seed Ent.	FS	Med-Late	Yes	No	No	No	78	8/23/2021	9/16/2021	7.5	0	74.6	7.1	20.2 ± 1.2
46	PEARL (X715)	MOJO Seed Ent.	FS	Med	Yes	No	Yes	No	71	8/16/2021	9/16/2021	7.8	0	73.2	7.6	21.6 ± 2.9
47	X-2168	MOJO Seed Ent.	FS	Late	No	No	No	No	88	9/3/2021	9/30/2021	11.5	23	75.9	9.6	27.5 ± 3.3
48	X-21715	MOJO Seed Ent.	FS	Med	Yes	No	Yes	No	71	8/16/2021	9/29/2021	7.0	0	65.1	9.1	26.0 ± 1.8
49	845F	Pioneer	FS	Med-Early	Yes	No	No	No	64	8/9/2021	9/10/2021	6.7	0	71.6	7.2	20.5 ± 1.4
50	9500W	Richardson Seeds	FS	Early	Yes	No	Yes	No	64	8/10/2021	9/10/2021	7.2	0	72.2	7.8	22.2 ± 1.7
51	Bundle King BMR	Richardson Seeds	FS	Late	Yes	Yes	No	Yes	87	9/1/2021	9/30/2021	10.9	47	73.1	9.4	22.2 ± 2.6
52	F251	Richardson Seeds	FS	Early	Yes	No	No	No	64	8/10/2021	9/16/2021	8.0	8	69.7	8.3	23.8 ± 3.1
53	F260X	Richardson Seeds	FS	Med-Late	Yes	No	No	No	85	8/30/2021	9/30/2021	7.8	0	72.2	9.6	27.5 ± 3.3
54	F382	Richardson Seeds	FS	Early	Yes	Yes	No	No	65	8/11/2021	9/10/2021	8.4	0	71.9	7.1	20.2 ± 0.7
55	F431	Richardson Seeds	FS	Early	Yes	Yes	Yes	No	65	8/11/2021	9/10/2021	6.5	0	71.8	7.2	20.5 ± 0.7
56	S473	Richardson Seeds	SS	PS	Yes	Yes	No	No	80	8/26/2021	9/30/2021	10.2	0	75.7	9.8	28.0 ± 1.5
57	Silo 700D	Richardson Seeds	FS	Med	No	No	No	No	73	8/19/2021	9/29/2021	7.6	3	68.4	9.4	26.9 ± 0.6
58	Silo 700D BMR	Richardson Seeds	FS	Med-Late	No	Yes	No	No	80	8/26/2021	9/30/2021	7.9	33	70.4	9.6	27.5 ± 3.1
59	SS40X	Richardson Seeds	SU	Late	Yes	No	No	Yes	87	9/1/2021	9/30/2021	9.9	7	69.8	8.8	25.0 ± 2.4
60	Sweeter N Honey BMR	Richardson Seeds	SS	Med-Early	Mod.	Yes	No	No	70	8/16/2021	9/16/2021	8.9	33	74.3	7.0	20.0 ± 2.3
61	Sweeter N Honey II	Richardson Seeds	SS	Late	Yes	No	No	No	87	9/1/2021	9/30/2021	11.3	10	72.2	9.4	26.8 ± 1.0
62	Sweeter N Honey II BMR	Richardson Seeds	SS	Late	Yes	Yes	No	No	91	9/5/2021	9/30/2021	10.7	7	76.1	10.4	29.6 ± 2.0
63	X50665	Scott Seed	FS	Late	No	Yes	Yes	No	76	8/22/2021	9/29/2021	5.8	0	69.3	8.9	25.6 ± 3.4
64	X52053	Scott Seed	FS	Med-Late	No	No	No	No	68	8/14/2021	9/29/2021	6.5	0	68.7	8.4	23.9 ± 1.7
65	X52242	Scott Seed	FS	Late	Yes	No	No	No	81	8/27/2021	9/30/2021	8.3	7	69.1	10.5	30.1 ± 0.7
66	X56023	Scott Seed	FS	Late	No	Yes	No	No	77	8/23/2021	9/30/2021	9.1	97	72.7	8.6	24.6 ± 1.4
67	NK300	Sorghum Partners	FS	Med-Early	No	No	No	No	71	8/17/2021	9/29/2021	7.0	2	65.7	10.2	29.2 ± 3.8
68	SP2774	Sorghum Partners	FS	Med-Early	No	Yes	No	No	71	8/16/2021	9/10/2021	10.0	0	76.3	7.3	20.9 ± 1.6
69	SP3904 BD BMR	Sorghum Partners	FS	Med	No	Yes	Yes	No	83	8/28/2021	9/29/2021	6.6	0	73.0	8.9	25.3 ± 1.6
70	SP3905 BD BMR	Sorghum Partners	FS	Early	No	Yes	Yes	No	65	8/11/2021	9/10/2021	6.9	0	73.4	7.2	20.5 ± 0.6
71	SS405	Sorghum Partners	FS	Med-Late	No	No	No	No	90	9/5/2021	9/29/2021	11.8	0	68.1	10.9	31.1 ± 1.9
74	SWFS0771	Sorghum Partners	FS	Med-Early	No	No	Yes	No	76	8/22/2021	9/16/2021	7.2	7	76.2	7.5	21.4 ± 1.1
75	SWFS8802	Sorghum Partners	FS	Med-Early	No	No	No	No	64	8/9/2021	9/16/2021	7.2	93	64.9	6.8	19.5 ± 2.2
81	2-Way AT	Warner Seeds	FS	Med-Late	Yes	No	No	No	77	8/22/2021	9/29/2021	8.2	5	71.6	8.8	25.1 ± 2.3
82	Sweet Bee	Warner Seeds	FS	Early	No	No	No	No	68	8/14/2021	9/10/2021	8.6	0	74.7	7.0	20.1 ± 0.9
83	W7051	Warner Seeds	GS	Med-Early	Yes	No	No	No	65	8/11/2021	9/10/2021	6.4	0	71.4	7.7	22.1 ± 2.0
84	W7706-W	Warner Seeds	GS	Med-Early	Yes	No	No	No	66	8/11/2021	9/10/2021	7.0	0	71.6	7.9	22.5 ± 0.9
85	31F65	Wilbur-Ellis	SS	Med	No	Yes	Yes	No	74	8/20/2021	9/29/2021	7.7	43	69.3	9.1	26.0 ± 1.0
86	33F70	Wilbur-Ellis	FS	Late	No	Yes	Yes	No	77	8/23/2021	9/30/2021	5.9	10	70.6	9.0	25.7 ± 3.2
87	34F95	Wilbur-Ellis	FS	Med	No	Yes	No	Yes	65	8/11/2021	9/29/2021	8.2	0	67.7	9.0	25.6 ± 1.2
88	38F80	Wilbur-Ellis	FS	Late	Yes	No	No	No	79	8/25/2021	9/30/2021	8.0	10	69.7	9.8	28.0 ± 2.9
76	84G62	TAMU CHECK	GS	Med-Late	No				62	8/8/2021	9/10/2021	4.8	0	69.7	6.9	19.7 ± 1.5
78	DKS 37-07	TAMU CHECK	GS	Med-Early	Yes				56	8/2/2021	9/10/2021	4.8	0	68.3	6.1	17.4 ± 0.8
77	DKC70-64	TAMU CHECK	Corn						.	.	9/29/2021	8.8	0	64.5	9.2	26.2 ± 1.5
79	P1548	TAMU CHECK	Corn						.	.	9/29/2021	8.0	0	69.4	7.9	22.6 ± 0.7
80	P1366Q	TAMU CHECK	Corn						.	.	9/29/2021	8.3	0	68.4	8.3	23.8 ± 0.2

† If no HB date reported for a sorghum hybrid, it did not reach HB prior to the last harvest date. *Mean and statistical evaluation does not include corn hybrids and sorghum checks. Forage characteristics and advertised maturity are provided by developer/company at the time of entry.

Mean	24.1
CV (%)	8.7

Table 2. 2021 Texas A&M Agrilife Bushland Forage Sorghum Silage Trial mean yield sorted by maximum yielding hybrid including days to half-bloom (HB), average plant height, lodging, and harvest moisture. Male Sterile hybrids were pollinated by neighboring hybrids in the trial. FS=forage sorghum, SS=Sorghum Sudan, GS=Grain sorghum, PS=Photoperiod Sensitive

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Entry	HYBRID	Company	Type	Advertised Maturity	SCA Tolerance	BMR	Brach - ytic	Male Sterile	Days to HB†	Half Bloom Date	Harvest Date	Harvest Height (ft)	% Lodge	% Moisture at Harvest	Yield (tons/ac) DM Basis	Yield (tons/ac) 65% Moisture
4	ADV F8322	Advanta	FS	Med	Yes	No	No	No	79	8/25/2021	9/29/2021	7.7	2	66.9	11.4	32.5 ± 1.5
42	Super Sile 30	Dyna-Gro Seeds	FS	Med	No	No	No	No	79	8/25/2021	9/29/2021	8.7	33	65.2	11.0	31.4 ± 1.9
71	SS405	Sorghum Partners	FS	Med-Late	No	No	No	No	90	9/5/2021	9/29/2021	11.8	0	68.1	10.9	31.1 ± 1.9
5	ADV S6504	Advanta	SS	PS	No	Yes	No	No	.	.	9/30/2021	10.3	0	75.8	10.7	30.5 ± 3.2
36	Fullgraze II	Dyna-Gro Seeds	SS	Late	No	No	No	No	85	8/30/2021	9/30/2021	13.2	0	68.7	10.6	30.3 ± 0.7
65	X52242	Scott Seed	FS	Late	Yes	No	No	No	81	8/27/2021	9/30/2021	8.3	7	69.1	10.5	30.1 ± 0.7
12	AS 5501	Advanta	SS	PS	No	No	No	No	79	8/25/2021	9/30/2021	11.2	0	74.1	10.5	29.9 ± 3.3
62	Sweeter N Honey II BMR	Richardson Seeds	SS	Late	Yes	Yes	No	No	91	9/5/2021	9/30/2021	10.7	7	76.1	10.4	29.6 ± 2.0
9	ADV XS060	Advanta	SS	PS	No	No	No	No	.	.	9/30/2021	10.4	0	75.6	10.2	29.3 ± 2.0
67	NK300	Sorghum Partners	FS	Med-Early	No	No	No	No	71	8/17/2021	9/29/2021	7.0	2	65.7	10.2	29.2 ± 3.8
41	Super Sile 20	Dyna-Gro Seeds	FS	Med-Late	No	No	No	No	86	9/1/2021	9/30/2021	10.6	68	69.4	10.0	28.6 ± 3.5
7	ADV XF405IG	Advanta	FS	Med	No	No	Yes	No	81	8/27/2021	9/29/2021	6.7	0	70.7	10.0	28.5 ± 1.5
88	38F80	Wilbur-Ellis	FS	Late	Yes	No	No	No	79	8/25/2021	9/30/2021	8.0	10	69.7	9.8	28.0 ± 2.9
56	S473	Richardson Seeds	SS	PS	Yes	Yes	No	No	80	8/26/2021	9/30/2021	10.2	0	75.7	9.8	28.0 ± 1.5
39	FX21842	Dyna-Gro Seeds	FS	Med-Late	Yes	No	No	No	77	8/23/2021	9/29/2021	8.3	0	70.1	9.7	27.7 ± 0.9
37	Fullgraze II BMR	Dyna-Gro Seeds	SS	PS	No	Yes	No	No	90	9/5/2021	9/30/2021	13.1	7	74.1	9.7	27.6 ± 1.1
33	F74FS23 BMR	Dyna-Gro Seeds	FS	Med-Late	No	Yes	No	No	71	8/17/2021	9/29/2021	7.6	82	66.2	9.6	27.6 ± 2.7
47	X-2168	MOJO Seed Ent.	FS	Late	No	No	No	No	88	9/3/2021	9/30/2021	11.5	23	75.9	9.6	27.5 ± 3.3
58	Silo 700D BMR	Richardson Seeds	FS	Med-Late	No	Yes	No	No	80	8/26/2021	9/30/2021	7.9	33	70.4	9.6	27.5 ± 3.1
53	F260X	Richardson Seeds	FS	Med-Late	Yes	No	No	No	85	8/30/2021	9/30/2021	7.8	0	72.2	9.6	27.5 ± 3.3
57	Silo 700D	Richardson Seeds	FS	Med	No	No	No	No	73	8/19/2021	9/29/2021	7.6	3	68.4	9.4	26.9 ± 0.6
34	F74FS72 BMR	Dyna-Gro Seeds	FS	Med-Late	No	Yes	Yes	No	81	8/27/2021	9/29/2021	6.4	0	70.9	9.4	26.9 ± 2.2
61	Sweeter N Honey II	Richardson Seeds	SS	Late	Yes	No	No	No	87	9/1/2021	9/30/2021	11.3	10	72.2	9.4	26.8 ± 1.0
32	F72FS25 BMR	Dyna-Gro Seeds	FS	Med	No	Yes	Yes	No	80	8/25/2021	9/29/2021	6.6	0	73.4	9.3	26.5 ± 1.9
16	Headless Wonder	Browning Seed	SS	PS	No	No	No	No	75	8/20/2021	9/30/2021	7.9	0	75.5	9.2	26.3 ± 3.3
77	DKC70-64	TAMU CHECK	Corn						.	.	9/29/2021	8.8	0	64.5	9.2	26.2 ± 1.5
85	31F65	Wilbur-Ellis	SS	Med	No	Yes	Yes	No	74	8/20/2021	9/29/2021	7.7	43	69.3	9.1	26.0 ± 1.0
48	X-21715	MOJO Seed Ent.	FS	Med	Yes	No	Yes	No	71	8/16/2021	9/29/2021	7.0	0	65.1	9.1	26.0 ± 1.8
86	33F70	Wilbur-Ellis	FS	Late	No	Yes	Yes	No	77	8/23/2021	9/30/2021	5.9	10	70.6	9.0	25.7 ± 3.2
87	34F95	Wilbur-Ellis	FS	Med	No	Yes	No	Yes	65	8/11/2021	9/29/2021	8.2	0	67.7	9.0	25.6 ± 1.2
63	X50665	Scott Seed	FS	Late	No	Yes	Yes	No	76	8/22/2021	9/29/2021	5.8	0	69.3	8.9	25.6 ± 3.4
69	SP3904 BD BMR	Sorghum Partners	FS	Med	No	Yes	Yes	No	83	8/28/2021	9/29/2021	6.6	0	73.0	8.9	25.3 ± 1.6
81	2-Way AT	Warner Seeds	FS	Med-Late	Yes	No	No	No	77	8/22/2021	9/29/2021	8.2	5	71.6	8.8	25.1 ± 2.3
59	SS40X	Richardson Seeds	SU	Late	Yes	No	No	Yes	87	9/1/2021	9/30/2021	9.9	7	69.8	8.8	25.0 ± 2.4
18	Silage Master	Browning Seed	FS	Late	No	No	No	No	80	8/26/2021	9/16/2021	8.6	5	76.3	8.8	25.0 ± 4.0
6	ADV S6520	Advanta	SS	PS	Yes	Yes	No	No	69	8/15/2021	9/30/2021	9.2	3	73.6	8.6	24.7 ± 1.8
66	X56023	Scott Seed	FS	Late	No	Yes	No	No	77	8/23/2021	9/30/2021	9.1	97	72.7	8.6	24.6 ± 1.4
11	AF 7401	Advanta	FS	Med-Late	No	Yes	Yes	No	80	8/25/2021	9/29/2021	6.5	0	71.8	8.5	24.4 ± 2.2
40	FX21865	Dyna-Gro Seeds	FS	Med-Late	No	No	No	No	74	8/20/2021	9/29/2021	6.0	0	68.8	8.5	24.3 ± 2.7
44	Sweet Ton MS	Dyna-Gro Seeds	FS	Med-Late	No	No	No	Yes	67	8/12/2021	9/29/2021	8.5	0	67.9	8.4	24.0 ± 1.6
64	X52053	Scott Seed	FS	Med-Late	No	No	No	No	68	8/14/2021	9/29/2021	6.5	0	68.7	8.4	23.9 ± 1.7
52	F251	Richardson Seeds	FS	Early		No	No	No	64	8/10/2021	9/16/2021	8.0	8	69.7	8.3	23.8 ± 3.1
80	P1366Q	TAMU CHECK	Corn						.	.	9/29/2021	8.3	0	68.4	8.3	23.8 ± 0.2
24	5 Star	Dyna-Gro Seeds	FS	Med-Early	No	No	No	No	71	8/16/2021	9/16/2021	9.0	0	71.0	8.3	23.7 ± 1.8
28	Dynagraz II BMR	Dyna-Gro Seeds	SS	Med-Early	No	Yes	No	No	65	8/11/2021	9/16/2021	8.6	68	70.3	8.1	23.2 ± 1.0

Table 2. 2021 Texas A&M AgrLife Bushland Forage Sorghum Silage Trial mean yield sorted by maximum yielding hybrid including days to half-bloom (HB), average plant height, lodging, and harvest moisture. Male Sterile hybrids were pollinated by neighboring hybrids in the trial. FS=forage sorghum, SS=Sorghum Sudan, GS=Grain sorghum, PS=Photoperiod Sensitive

Hybrid Characteristics									Days to Half-Bloom (HB), Harvest Date, Height, Lodging, Moisture, and Yield							
Entry	HYBRID	Company	Type	Advertised Maturity	SCA Tolerance	BMR	Brach - ytic	Male Sterile	Days to HB†	Half Bloom Date	Harvest Date	Harvest Height (ft)	% Lodge	% Moisture at Harvest	Yield (tons/ac) DM Basis	Yield (tons/ac) 65% Moisture
31	F72FS05	Dyna-Gro Seeds	FS	Med-Early	Yes	No	No	No	79	8/25/2021	9/16/2021	7.4	0	75.2	8.1	23.2 ± 3.4
8	ADV XS005	Advanta	SS	PS	Yes	Yes	No	No	99	9/14/2021	9/30/2021	9.6	0	77.2	8.0	22.9 ± 2.1
30	F71FS72 BMR	Dyna-Gro Seeds	FS	Early	No	Yes	No	No	64	8/10/2021	9/10/2021	7.2	0	71.5	8.0	22.8 ± 3.1
79	P1548	TAMU CHECK	Corn						.	.	9/29/2021	8.0	0	69.4	7.9	22.6 ± 0.7
84	W7706-W	Warner Seeds	GS	Med-Early	Yes	No	No	No	66	8/11/2021	9/10/2021	7.0	0	71.6	7.9	22.5 ± 0.9
23	3501	Croplan	FS	Med	No	No	No	No	72	8/18/2021	9/16/2021	8.3	0	76.4	7.8	22.4 ± 1.6
13	Browning 300	Browning Seed	FS	Late	No	No	No	No	66	8/12/2021	9/30/2021	6.6	0	63.7	7.8	22.3 ± 3.0
50	9500W	Richardson Seeds	FS	Early	Yes	No	Yes	No	64	8/10/2021	9/10/2021	7.2	0	72.2	7.8	22.2 ± 1.7
51	Bundle King BMR	Richardson Seeds	FS	Late	Yes	Yes	No	Yes	87	9/1/2021	9/30/2021	10.9	47	73.1	9.4	22.2 ± 2.6
83	W7051	Warner Seeds	GS	Med-Early	Yes	No	No	No	65	8/11/2021	9/10/2021	6.4	0	71.4	7.7	22.1 ± 2.0
17	Headless Wonder BMR	Browning Seed	SS	PS	No	No	No	No	69	8/14/2021	9/30/2021	10.3	13	65.6	7.6	21.7 ± 1.5
10	AF 7102	Advanta	FS	Med-Early	No	Yes	Yes	No	67	8/12/2021	9/16/2021	7.1	3	71.0	7.6	21.7 ± 0.7
46	PEARL (X715)	MOJO Seed Ent.	FS	Med	Yes	No	Yes	No	71	8/16/2021	9/16/2021	7.8	0	73.2	7.6	21.6 ± 2.9
74	SWFS0771	Sorghum Partners	FS	Med-Early	No	No	Yes	No	76	8/22/2021	9/16/2021	7.2	7	76.2	7.5	21.4 ± 1.1
25	Danny Boy II BMR	Dyna-Gro Seeds	FS	PS	No	Yes	No	No	.	.	9/30/2021	10.3	3	80.6	8.8	21.2 ± 1.5
3	ADV F7424	Advanta	FS	Med-Early	No	Yes	No	No	79	8/25/2021	9/16/2021	7.0	23	78.2	7.4	21.0 ± 1.2
15	Cadan 99B WMR	Browning Seed	SS	Med	No	No	No	No	64	8/10/2021	9/10/2021	8.9	2	68.8	7.4	21.0 ± 1.5
68	SP2774	Sorghum Partners	FS	Med-Early	No	Yes	No	No	71	8/16/2021	9/10/2021	10.0	0	76.3	7.3	20.9 ± 1.6
2	ADV F7216	Advanta	FS	Med-Early	No	Yes	No	No	65	8/10/2021	9/16/2021	8.4	22	63.0	7.3	20.9 ± 3.0
55	F431	Richardson Seeds	FS	Early	Yes	Yes	Yes	No	65	8/11/2021	9/10/2021	6.5	0	71.8	7.2	20.5 ± 0.7
20	Sweet Sioux WMR	Browning Seed	SS	Med	No	No	No	No	65	8/10/2021	9/10/2021	7.6	3	69.3	7.2	20.5 ± 1.1
49	845F	Pioneer	FS	Med-Early	Yes	No	No	No	64	8/9/2021	9/10/2021	6.7	0	71.6	7.2	20.5 ± 1.4
70	SP3905 BD BMR	Sorghum Partners	FS	Early	No	Yes	Yes	No	65	8/11/2021	9/10/2021	6.9	0	73.4	7.2	20.5 ± 0.6
38	FX21815	Dyna-Gro Seeds	FS	Med-Early	No	No	No	No	63	8/9/2021	9/16/2021	4.9	0	67.2	7.1	20.4 ± 0.7
43	Super Sweet 10	Dyna-Gro Seeds	SS	Early	No	No	No	No	58	8/3/2021	9/10/2021	8.1	10	72.9	7.1	20.4 ± 1.1
29	F70FS91 BMR	Dyna-Gro Seeds	FS	Early	No	Yes	No	No	60	8/6/2021	9/10/2021	8.2	8	66.0	7.1	20.3 ± 0.5
21	Tridan	Browning Seed	SS	Med-Early	No	No	No	No	65	8/11/2021	9/10/2021	7.3	3	69.9	7.1	20.3 ± 0.6
54	F382	Richardson Seeds	FS	Early	Yes	Yes	No	No	65	8/11/2021	9/10/2021	8.4	0	71.9	7.1	20.2 ± 0.7
45	OPAL	MOJO Seed Ent.	FS	Med-Late	Yes	No	No	No	78	8/23/2021	9/16/2021	7.5	0	74.6	7.1	20.2 ± 1.2
82	Sweet Bee	Warner Seeds	FS	Early	No	No	No	No	68	8/14/2021	9/10/2021	8.6	0	74.7	7.0	20.1 ± 0.9
60	Sweeter N Honey BMR	Richardson Seeds	SS	Med-Early	Mod.	Yes	No	No	70	8/16/2021	9/16/2021	8.9	33	74.3	7.0	20.0 ± 2.3
27	Dynagraze II	Dyna-Gro Seeds	SS	Early	No	No	No	No	61	8/6/2021	9/10/2021	8.3	12	72.3	7.0	19.9 ± 2.1
35	F75FS13	Dyna-Gro Seeds	FS	Med	No	No	No	No	62	8/8/2021	9/10/2021	8.9	0	74.4	7.0	19.9 ± 1.1
26	Dual Forage SCA II	Dyna-Gro Seeds	FS	Med-Late	Yes	No	No	No	62	8/7/2021	9/10/2021	6.0	0	69.7	6.9	19.7 ± 1.9
76	84G62	TAMU CHECK	GS	Med-Late	No				62	8/8/2021	9/10/2021	4.8	0	69.7	6.9	19.7 ± 1.5
75	SWFS8802	Sorghum Partners	FS	Med-Early	No	No	No	No	64	8/9/2021	9/16/2021	7.2	93	64.9	6.8	19.5 ± 2.2
1	ADV F7103	Advanta	FS	Early	No	Yes	Yes	No	61	8/6/2021	9/10/2021	8.5	5	67.7	6.8	19.3 ± 2.0
22	Wondergreen SX66	Browning Seed	SS	Early	No	No	No	No	61	8/6/2021	9/10/2021	7.6	7	68.4	6.7	19.2 ± 1.2
14	Bundle King	Browning Seed	FS	Med	No	No	No	No	69	8/15/2021	9/10/2021	7.8	0	73.9	6.5	18.5 ± 1.9
19	Sweet Sioux BMR	Browning Seed	SS	Med	No	Yes	No	No	64	8/9/2021	9/10/2021	8.3	48	73.7	6.4	18.3 ± 1.0
78	DKS 37-07	TAMU CHECK	GS	Med-Early	Yes				56	8/2/2021	9/10/2021	4.8	0	68.3	6.1	17.4 ± 0.8
† If no HB date reported for a sorghum hybrid, it did not reach HB prior to the last harvest date. *Mean and statistical evaluation does not include corn hybrids and sorghum checks. Forage characteristics and advertised maturity are provided by developer/company at the time of entry.															Mean	24.3
															CV (%)	8.7
															p-val	<0.0001
															LSD	3.4

Table 3. 2021 Summary of forage nutrient composition reported on a dry matter (DM) basis and calculated nutritional quality indices. FS=forage sorghum, SS=Sorghum Sudan, GS=Grain sorghum

Hybrid Characteristics								Nutrient Composition and Calculations (DM basis)													
Entry	HYBRID	Company	Type	Advertised maturity	SCA Tolerance	BMR	Brach - ytic	% CP	% ADF	% aNDF	% Lignin	% uNDFom48	% IVTDMD48	% NDFD48	% Starch	% WSC	RFQ	TDN	Milk/ton	Yield (tons/ac)	65% Moisture
1	ADV F7103	Advanta	FS	Early	No	Yes	Yes	9.4	24.3	36.5	3.5	15.8	82.9	55.5	26.5	5.9	190	68.6	3890	19.3 ± 2.0	
2	ADV F7216	Advanta	FS	Med-Early	No	Yes	No	8.6	24.1	37.1	3.1	14.8	84.0	58.4	25.6	7.3	197	68.7	3884	20.9 ± 3.0	
3	ADV F7424	Advanta	FS	Med-Early	No	Yes	No	7.7	27.2	43.9	3.0	15.4	83.4	64.0	18.6	7.0	166	67.7	3554	21.0 ± 1.2	
4	ADV F8322	Advanta	FS	Med	Yes	No	No	7.4	26.1	40.5	4.4	17.9	80.7	54.2	28.7	3.4	164	68.1	3724	32.5 ± 1.5	
5	ADV S6504	Advanta	SS	PS	No	Yes	No	5.7	33.7	50.1	2.0	19.8	78.7	59.4	0.3	21.6	127	65.8	3131	30.5 ± 3.2	
6	ADV S6520	Advanta	SS	PS	Yes	Yes	No	7.2	33.1	50.4	2.9	19.0	79.5	61.5	3.4	17.1	134	65.9	3262	24.7 ± 1.8	
7	ADV XF405IG	Advanta	FS	Med	No	No	Yes	7.4	27.8	44.3	4.5	19.2	79.3	55.4	26.3	3.3	149	67.6	3610	28.5 ± 1.5	
8	ADV XS005	Advanta	SS	PS	Yes	Yes	No	6.0	34.0	51.8	2.8	19.6	78.9	61.2	0.8	20.6	129	65.7	3221	22.9 ± 2.1	
9	ADV XS060	Advanta	SS	PS	No	No	No	5.6	37.3	56.2	3.3	22.6	75.6	58.8	0.1	18.3	110	64.6	2988	29.3 ± 2.0	
10	AF 7102	Advanta	FS	Med-Early	No	Yes	Yes	8.1	23.9	37.1	3.2	14.7	84.1	59.2	26.4	6.9	194	68.8	3872	21.7 ± 0.7	
11	AF 7401	Advanta	FS	Med-Late	No	Yes	Yes	8.1	26.0	41.8	3.3	16.0	82.8	60.7	24.0	5.0	168	68.1	3594	24.4 ± 2.2	
12	AS 5501	Advanta	SS	PS	No	No	No	5.7	37.1	54.9	3.4	22.5	75.7	58.0	0.1	18.7	112	64.7	3051	29.9 ± 3.3	
13	Browning 300	Browning Seed	FS	Late	No	No	No	8.9	22.8	35.4	4.1	16.1	82.6	53.1	29.7	4.8	195	69.1	3955	22.3 ± 3.0	
14	Bundle King	Browning Seed	FS	Med	No	No	No	8.4	26.2	42.1	3.5	17.7	80.9	56.7	23.2	6.9	160	68.1	3634	18.5 ± 1.9	
15	Cadan 99B WMR	Browning Seed	SS	Med	No	No	No	8.7	30.6	45.8	5.0	20.6	77.8	53.8	19.6	6.1	139	66.7	3558	21.0 ± 1.5	
16	Headless Wonder	Browning Seed	SS	PS	No	No	No	6.2	34.0	50.0	2.9	20.7	77.6	55.7	5.8	15.6	118	65.7	3027	26.3 ± 3.3	
17	Headless Wonder BMR	Browning Seed	SS	PS	No	No	No	5.8	36.9	54.6	4.8	24.7	73.3	53.4	10.7	10.4	106	64.8	3111	21.7 ± 1.5	
18	Silage Master	Browning Seed	FS	Late	No	No	No	7.3	29.1	46.1	3.4	18.7	79.8	58.2	12.6	12.8	147	67.2	3526	25.0 ± 4.0	
19	Sweet Sioux BMR	Browning Seed	SS	Med	No	Yes	No	9.3	27.2	41.3	3.2	17.0	81.6	57.2	19.0	9.1	161	67.8	3520	18.3 ± 1.0	
20	Sweet Sioux WMR	Browning Seed	SS	Med	No	No	No	8.8	28.3	42.8	4.3	18.9	79.6	54.7	21.8	5.8	153	67.4	3613	20.5 ± 1.1	
21	Tridan	Browning Seed	SS	Med-Early	No	No	No	8.8	28.6	44.3	4.2	19.1	79.4	55.6	21.8	5.4	147	67.3	3559	20.3 ± 0.6	
22	Wondergreen SX66	Browning Seed	SS	Early	No	No	No	9.2	29.6	46.2	4.0	19.4	79.0	56.3	18.5	6.4	140	67.0	3468	19.2 ± 1.2	
23	3501	Croplan	FS	Med	No	No	No	7.9	25.2	39.3	3.1	16.6	82.0	56.3	22.7	7.8	174	68.4	3764	22.4 ± 1.6	
24	5 Star	Dyna-Gro Seeds	FS	Med-Early	No	No	No	7.6	26.0	39.8	3.1	17.2	81.4	55.6	16.8	13.7	169	68.1	3715	23.7 ± 1.8	
25	Danny Boy II BMR	Dyna-Gro Seeds	FS	PS	No	Yes	No	5.8	34.8	49.8	1.9	20.7	77.7	57.4	0.1	20.8	123	65.4	3064	21.2 ± 1.5	
26	Dual Forage SCA II	Dyna-Gro Seeds	FS	Med-Late	Yes	No	No	9.5	23.7	36.0	3.8	16.0	82.7	54.3	32.9	0.8	191	68.8	3882	19.7 ± 1.9	
27	Dynagraze II	Dyna-Gro Seeds	SS	Early	No	No	No	9.0	28.1	43.0	3.8	18.0	80.6	56.0	18.5	8.8	152	67.5	3543	19.9 ± 2.1	
28	Dynagraze II BMR	Dyna-Gro Seeds	SS	Med-Early	No	Yes	No	7.5	30.0	47.1	4.0	18.0	80.6	60.7	16.3	8.5	149	66.9	3555	23.2 ± 1.0	
29	F70FS91 BMR	Dyna-Gro Seeds	FS	Early	No	Yes	No	9.1	25.5	38.1	3.4	16.2	82.5	56.1	24.8	6.5	182	68.3	3808	20.3 ± 0.5	
30	F71FS72 BMR	Dyna-Gro Seeds	FS	Early	No	Yes	No	8.3	24.1	37.2	3.2	14.9	84.0	59.0	26.3	6.4	193	68.7	3850	22.8 ± 3.1	
31	F72FS05	Dyna-Gro Seeds	FS	Med-Early	Yes	No	No	7.5	28.2	45.9	4.3	18.2	80.4	59.5	21.7	4.6	152	67.4	3631	23.2 ± 3.4	
32	F72FS25 BMR	Dyna-Gro Seeds	FS	Med	No	Yes	Yes	7.9	25.2	40.5	3.8	15.6	83.1	60.4	26.9	3.4	178	68.4	3770	26.5 ± 1.9	
33	F74FS23 BMR	Dyna-Gro Seeds	FS	Med-Late	No	Yes	No	7.3	21.8	32.9	3.0	14.5	84.4	54.7	30.2	8.2	212	69.4	3919	27.6 ± 2.7	
34	F74FS72 BMR	Dyna-Gro Seeds	FS	Med-Late	No	Yes	Yes	8.4	25.7	40.7	3.5	15.6	83.2	60.6	26.2	3.6	175	68.2	3693	26.9 ± 2.2	
35	F75FS13	Dyna-Gro Seeds	FS	Med	No	No	No	8.2	24.3	38.1	3.3	16.5	82.2	55.5	23.6	9.3	180	68.7	3826	19.9 ± 1.1	
36	Fullgraze II	Dyna-Gro Seeds	SS	Late	No	No	No	5.6	37.0	57.0	4.1	25.0	73.1	54.9	2.1	15.5	104	64.7	3136	30.3 ± 0.7	
37	Fullgraze II BMR	Dyna-Gro Seeds	SS	PS	No	Yes	No	5.8	35.3	54.1	3.2	22.5	75.8	57.1	1.3	18.3	114	65.3	3126	27.6 ± 1.1	
38	FX21815	Dyna-Gro Seeds	FS	Med-Early	No	No	No	9.6	23.6	36.5	3.7	15.3	83.5	56.7	30.4	2.3	193	68.9	3887	20.4 ± 0.7	
39	FX21842	Dyna-Gro Seeds	FS	Med-Late	Yes	No	No	8.4	26.2	40.6	3.9	16.9	81.8	57.3	25.8	3.2	171	68.1	3751	27.7 ± 0.9	
40	FX21865	Dyna-Gro Seeds	FS	Med-Late	No	No	No	8.0	24.7	39.2	3.5	15.7	83.0	58.5	28.5	3.6	181	68.5	3753	24.3 ± 2.7	
41	Super Sile 20	Dyna-Gro Seeds	FS	Med-Late	No	No	No	7.3	29.3	45.3	3.9	20.3	78.1	54.0	20.6	6.5	139	67.1	3460	28.6 ± 3.5	
42	Super Sile 30	Dyna-Gro Seeds	FS	Med	No	No	No	7.5	29.8	44.9	4.7	20.3	78.1	53.5	22.9	5.8	141	66.9	3550	31.4 ± 1.9	
43	Super Sweet 10	Dyna-Gro Seeds	SS	Early	No	No	No	9.3	27.6	41.7	4.0	18.5	80.1	53.8	21.7	7.4	154	67.6	3563	20.4 ± 1.1	
44	Sweet Ton MS	Dyna-Gro Seeds	FS	Med-Late	No	No	No	7.0	23.7	34.7	2.6	15.3	83.5	54.6	19.0	16.4	199	68.8	3916	24.0 ± 1.6	
45	OPAL	MOJO Seed Ent.	FS	Med-Late	Yes	No	No	9.0	24.7	39.5	3.5	16.7	82.0	56.4	27.3	3.5	174	68.5	3773	20.2 ± 1.2	
46	PEARL (X715)	MOJO Seed Ent.	FS	Med	Yes	No	Yes	8.7	24.7	38.1	3.8	16.1	82.6	56.4	29.7	1.9	184	68.5	3831	21.6 ± 2.9	
47	X-2168	MOJO Seed Ent.	FS	Late	No	No	No	5.7	28.6	43.1	2.4	19.0	79.5	54.4	9.8	18.0	150	67.3	3504	27.5 ± 3.3	
48	X-21715	MOJO Seed Ent.	FS	Med	Yes	No	Yes	8.2	23.1	35.0	3.4	15.5	83.2	54.3	31.3	4.6	198	69.0	3937	26.0 ± 1.8	
49	845F	Pioneer	FS	Med-Early	Yes	No	No	9.6	24.4	37.5	3.7	16.4	82.3	55.0	29.9	1.9	181	68.6	3806	20.5 ± 1.4	
50	9500W	Richardson Seeds	FS	Early	Yes	No	Yes	8.6	24.4	37.0	3.5	15.7	83.1	56.4	29.2	3.1	187	68.6	3807	22.2 ± 1.7	

