

2016 WARM-SEASON ANNUAL GRASS VARIETY TRIAL

The forage cultivar evaluation program is a partnership between University of Tennessee Extension and UT AgResearch to aid producers in the selection of the best cultivars for their farm. The crop was grown using management practices considered to be the best for the crop, including fertilization according to soil test results. This study was conducted using a randomized complete block design with four replications. Least significant difference (LSD) values at the 5 percent level are shown at the bottom of each table with the coefficient of variation (CV). Within any table, yield of any two varieties being compared must differ by at least this amount to be considered different.

Table 1: Yield of warm-season annual grass varieties at the Greeneville AgResearch and Education Center in Greeneville, TN.

Variety	Species	Supplier	Commercially Available	Yield (ton DM/acre)			
				Jun 28	Jul 24	Sep 2	Total
Cowvittles II	Forage Sorghum	Farm Science Genetics	Yes	2.00*	2.44	0.60	5.04
EXP 10216	Forage Sorghum	Gayland Ward Seed	Yes	1.43*	1.52	0.58	3.53
EXP-10216 BMR	Forage Sorghum	Farm Science Genetics	Yes	2.09*	2.62	0.51	5.21
FSG 114 BMR6	Forage Sorghum	Farm Science Genetics	Yes	1.39	2.67	0.55	4.60
FSG 115 Dwarf BMR6	Forage Sorghum	Farm Science Genetics	Yes	1.03	2.75	0.51	4.29
GW 2120	Forage Sorghum	Gayland Ward Seed	Yes	1.16	2.02	0.67	3.86
GW 400 BMR	Forage Sorghum	Gayland Ward Seed	Yes	1.55*	3.38	0.55	5.47
GW 600 BMR	Forage Sorghum	Gayland Ward Seed	Yes	0.95	2.26	0.59	3.80
Silo Pro BMR	Forage Sorghum	Gayland Ward Seed	Yes	1.07	2.32	0.48	3.87
FSG 300	Pearl Millet	Farm Science Genetics	Yes	1.07	2.06	0.50	3.62
FSG 315 Dwarf BMR	Pearl Millet	Farm Science Genetics	Yes	0.88	2.06	0.57	3.50
FSG 214 BMR6	Sorghum x Sudangrass	Farm Science Genetics	Yes	1.43*	3.56	0.52	5.51
FSG 215 BMR6	Sorghum x Sudangrass	Farm Science Genetics	Yes	1.04	2.21	0.57	3.81
Greengrazer V	Sorghum x Sudangrass	Farm Science Genetics	Yes	1.30	2.84	0.52	4.65
Nutra King BMR	Sorghum x Sudangrass	Gayland Ward Seed	Yes	1.72*	3.28	0.66	5.65
Super Sugar	Sorghum x Sudangrass	Gayland Ward Seed	Yes	1.31	2.88	0.68	4.86
Super Sugar DM	Sorghum x Sudangrass	Gayland Ward Seed	Yes	1.36	2.74	0.51	4.61
Sweet Forever BMR	Sorghum x Sudangrass	Gayland Ward Seed	Yes	1.32	2.55	0.51	4.38
Sweet Six BMR	Sorghum x Sudangrass	Gayland Ward Seed	Yes	1.61*	3.36	0.61	5.57
SWI-16	Sorghum x Sudangrass	Pennington Seed	No	1.30	2.90	0.68	4.88
SBA446	Sudangrass	Saddle Butte Ag Inc.	No	1.40	2.56	0.76	4.71
CV				24	20	13	16
LSD (P<0.05)				0.66	ns ¹	ns	ns
* yielded statistically the same as the top-yielding variety							
¹ non-significant at the 0.05 level							
Nitrogen application: 60 lb/acre at planting, 60 lb/acre after first harvest							
Planted May 11, 2016							

Table 2: Yield of warm-season annual grass varieties at the Greeneville AgResearch and Education Center in Greeneville, TN- Continued.

Variety	Species	Supplier	Commercially Available	Yield (ton DM/acre)				
				Jun 28	Jul 24	Aug 14	Sep 2	Total
BAR CW0604	Teffgrass	Barenbrug	No	0.74*	1.04	0.36	0.24	2.37
Corvallis	Teffgrass	James VanLeeuwen	Yes	0.84*	1.26	0.58	0.20	2.88
Dessie	Teffgrass	Farm Science Genetics	Yes	0.54*	1.15	0.46	0.14	2.28
NFCG07-1	Crabgrass	Barenbrug	No	0.42	1.41*	0.46	0.16	2.45
Quick-N-Big	Crabgrass	Dalrymple Farms	Yes	0.35	1.62*	0.23	0.20	2.44
Red River	Crabgrass	Dalrymple Farms	Yes	0.32	1.29*	0.43	0.25	2.27
CV				22	16	28	12	9
LSD (P<0.05)				0.32	0.35	ns ¹	ns	ns
* yielded statistically the same as the top-yielding variety								
¹ non-significant at the 0.05 level								
Nitrogen application: 60 lb/acre at planting, 60 lb/acre after first harvest								
Planted May 11, 2016								

Table 3: Mean forage nutritive values by harvest.

Species	Constituents ¹ (%)	Harvest Date		
		Jun 28	Jul 24	Sep 2
Forage Sorghum	CP	15.2	13.0	9.3
	ADF	34.1	35.6	38.0
	NDF	59.8	61.2	64.1
	TDN	69.7	68.0	65.1
Pearl Millet	CP	15.2	13.0	7.5
	ADF	34.1	36.7	32.1
	NDF	59.8	61.4	58.6
	TDN	69.7	67.3	61.2
Sorghum x Sudangrass	CP	12.2	11.4	7.4
	ADF	35.3	35.9	33.2
	NDF	62.5	61.6	60.0
	TDN	68.0	69.3	59.4
Sudangrass	CP	11.6	9.9	7.1
	ADF	36.5	37.2	32.5
	NDF	61.6	61.1	59.6
	TDN	67.4	68.7	62.4

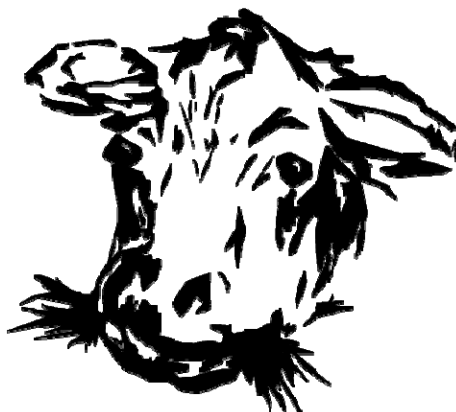
¹ Nutritive values represented at 100% DM Basis for CP, crude protein; ADF, acid detergent fiber; NDF, neutral detergent fiber; TDN, total digestible nutrients; RFQ, relative forage quality (Analysis performed using Near Infrared Spectrometer [NIRS] Technology) Target stage of growth for harvest was late boot. Grass Hay Equation (NIRS Consortium, 2016).

Table 4: Mean forage nutritive values by harvest- Continued.

Species	Constituents ¹ (%)	Harvest Date			
		Jun 28	Jul 24	Aug 14	Sep 2
Teffgrass	CP	15.3	15.0	13.2	9.6
	ADF	31.2	34.4	37.2	36.5
	NDF	59.9	61.5	62.2	59.7
	TDN	73.9	67.4	65.8	68.4
Crabgrass	CP	15.0	14.8	11.4	9.9
	ADF	34.3	34.3	35.9	37.2
	NDF	61.8	61.3	62.5	61.1
	TDN	66.5	67.8	66.5	68.7

¹ Nutritive values represented at 100% DM Basis for CP, crude protein; ADF, acid detergent fiber; NDF, neutral detergent fiber; TDN, total digestible nutrients; RFQ, relative forage quality (Analysis performed using Near Infrared Spectrometer [NIRS] Technology) Target stage of growth for harvest was late boot. Grass Hay Equation (NIRS Consortium, 2016).

This and other useful information can be found at your local Extension office, or on our website.



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