

2018 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 26	Jul 30	Aug 24	Total
AS6401 BMR6	Sorghum x Sudangrass	Advanta Seeds	Yes	1.58	3.24*	2.23	7.05*
AS6402 BMR6 B. Dwarf	Sorghum x Sudangrass	Advanta Seeds	Yes	1.35	2.12	1.92	6.81*
AS6504 BMR6 PPS	Sorghum x Sudangrass	Advanta Seeds	Yes	1.60	2.32	1.75	6.42*
FSG 214 BMR	Sorghum x Sudangrass	Tennessee Farmers Cooperative	Yes	2.38*	2.21	1.70	6.15*
Green Grazer V	Sorghum x Sudangrass	Tennessee Farmers Cooperative	Yes	1.28	2.51	1.59	5.66
AS9301 BMR6	Sudangrass	Advanta Seeds	Yes	2.01	2.83*	1.51	6.35*
AS9302 BMR6 B. Dwarf	Sudangrass	Advanta Seeds	Yes	2.70*	2.38	1.73	6.25*
<i>Experimental Varieties</i>							
ADV XS007 BMR6	Sorghum x Sudangrass	Advanta Seeds	No	1.75	2.57	1.82	5.39
ADV XS008 BMR6 B. Dwarf	Sorghum x Sudangrass	Advanta Seeds	No	2.36*	2.27	1.78	5.39
CV				26	14	12	10
LSD (P<0.05)				0.59	0.55	nd ¹	0.99
* yielded statistically the same as the top-yielding variety							
¹ not significantly different in yield from the highest numerical yielding variety in the column							
Nitrogen application: 60 lb/acre at planting, 60 lb/acre after first harvest							
Planted May 9, 2018							

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 26	Jul 30	Aug 24	Total
Quick-N-Big	Crabgrass	Dalrymple Farms	Yes	2.52	1.75*	2.00	6.26*
Quick-N-Big Spreader	Crabgrass	Dalrymple Farms	Yes	2.46	1.10	1.38	4.94
Red River	Crabgrass	Dalrymple Farms	Yes	1.77	2.11*	1.39	5.27
<i>Experimental Varieties</i>							
NFCG-07	Crabgrass	Barenbrug USA	No	2.39	1.92*	1.43	5.73*
CV				15	26	19	10
LSD (P<0.05)				nd ¹	0.39	nd	0.78
* yielded statistically the same as the top-yielding variety							
¹ not significantly different in yield from the highest numerical yielding variety in the column							
Nitrogen application: 60 lb/acre at planting, 60 lb/acre after first harvest							
Planted May 9, 2018							

Table 3: Mean forage nutritive values by harvest.

Species	Constituents ¹ (%)	Harvest Date		
		Jun 26	Jul 30	Aug 24
Sorghum x Sudangrass	CP	13.2	11.1	10.7
	ADF	30.0	34.3	39.1
	NDF	53.6	63.0	63.5
	TDN	67.2	62.7	57.6
Sudangrass	CP	12.1	11.5	10.9
	ADF	29.3	34.7	38.3
	NDF	55.8	61.8	66.1
	TDN	67.9	62.3	58.5

¹ Nutritive values represented at 100% DM Basis for CP, crude protein; ADF, acid detergent fiber; NDF, neutral detergent fiber; TDN, total digestible nutrients; (Analysis performed using Near Infrared Spectrometer [NIRS] Technology) Target stage of growth for harvest was late boot. Grass Hay Equation (NIRS Consortium, 2017).

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

Species	Constituents ¹ (%)	Harvest Date		
		Jun 26	Jul 30	Aug 24
Crabgrass	CP	17.8	17.0	16.1
	ADF	30.5	35.8	37.2
	NDF	58.1	53.5	64.4
	TDN	66.7	61.1	59.7

¹ Nutritive values represented at 100% DM Basis for CP, crude protein; ADF, acid detergent fiber; NDF, neutral detergent fiber; TDN, total digestible nutrients; (Analysis performed using Near Infrared Spectrometer [NIRS] Technology) Target stage of growth for harvest was late boot. Grass Hay Equation (NIRS Consortium, 2017).

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

