

2019 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 Plateau AgResearch and Education Center near Crossville, TN.

Variety	Species	Supplier	Commercially Available	Yield (ton DM/acre)		
				Jul 30	Sep 6	Total
Corvallis	Teffgrass	Smith Seed Services	Yes	1.41	1.46	2.88
Dal's Big River	Crabgrass	Dalrymple Farms	Yes	1.58	1.56	3.14
Dessie	Teffgrass	Tennessee Farmers Co-Op	Yes	1.57	1.54	3.09
Quick-N-Big	Crabgrass	Dalrymple Farms	Yes	1.66	1.48	3.13
<i>Experimental Varieties</i>						
BAR MOCG	Crabgrass	Barenbrug	No	1.72	1.68	3.42
BAR MOTF	Teffgrass	Barenbrug	No	1.58	1.57	3.15
				CV	7	5
				LSD (P<0.05)	nd ¹	nd
* yielded statistically the same as the top-yielding variety						
¹ no-significant differences among the varieties						
Nitrogen application: 60 lb/acre at planting, 60 lb/acre after first harvest						
Planted June 15, 2019						

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

Variety	Species	Supplier	Commercially Available	Yield (ton DM/acre)		
				Aug 16	Sep 23	Total
FSG 214 BMR	Sorghum x Sundan	Tennessee Farmers Co-Op	Yes	2.00*	1.54	3.53*
Green Grazer V	Sorghum x Sundan	Tennessee Farmers Co-Op	Yes	1.41	1.40	2.81
				CV	24	6
				LSD (P<0.05)	0.50	nd ¹
* yielded statistically the same as the top-yielding variety						
¹ no-significant differences among the varieties						
Nitrogen application: 60 lb/acre at planting, 60 lb/acre after first harvest						
Planted June 15, 2019						

Table 3: Mean forage nutritive values by harvest.

Species	Constituents ¹	Harvest	
		First	Second
Crabgrass	CP	12.6	11.1
	ADF	32.6	36.7
	NDF	54.4	59.9
	TDN	64.5	60.2
Teffgrass	CP	16.7	13.5
	ADF	28.4	36.7
	NDF	51.1	59.7
	TDN	68.9	60.2
Sorghum x Sudangrass	CP	12.6	8.5
	ADF	34.2	37.2
	NDF	60.1	62.4
	TDN	62.8	59.6
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, 2018).			

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