

2022 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 7	Aug 10	Sep 9	Total
Bonus	Teffgrass	Mountain View Seeds	Yes	1.42	1.31	0.56	3.30
Impact	Crabgrass	Barenbrug USA	Yes	1.16	1.29	0.66	3.11
Mojo	Crabgrass	Barenbrug USA	Yes	1.23	1.45	0.74*	3.43
Moxie	Teffgrass	Barenbrug USA	Yes	1.24	1.43	0.82*	3.48
RedRiver	Crabgrass	Dalrymple Farms	Yes	1.21	1.22	0.66	3.08
CV				8	7	14	6
LSD (P<0.05)				nd ¹	nd	0.14	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 May 23, 2022							

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)			
				Jul 7	Aug 10	Sep 9	Total
Greengrazer V	Sorghum x Sudangrass	GreenPoint Ag.	Yes	2.67*	1.42*	0.65	4.73*
FSG 214 BMR6	Sorghum x Sudangrass	GreenPoint Ag.	Yes	2.60*	1.42*	0.71	4.73*
<i>Experimental Varieties</i>							
20194	Sorghum x Sudangrass	GreenPoint Ag.	No	2.07	0.83	0.59	3.48
CV				13	28	10	17
LSD (P<0.05)				0.50	0.49	nd ¹	1.03
* 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 May 23, 2022							

Table 3: Mean forage nutritive values by harvest.

Species	Constituents ¹	Harvest		
		Jul 7	Aug 10	Sep 9
Crabgrass	CP	21.7	22.1	15.1
	ADF	27.7	26.6	32.5
	NDF	52.9	51.0	61.0
	TDN	69.6	70.7	64.6
Teffgrass	CP	22.1	21.1	20.2
	ADF	30.3	29.4	29.6
	NDF	55.2	53.9	55.0
	TDN	66.9	67.9	67.6
Sorghum x Sudangrass	CP	13.5	14.2	10.6
	ADF	36.7	34.8	37.6
	NDF	59.2	58.1	60.1
	TDN	60.1	62.2	59.2

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, 2022).

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