

2022-2024 ORCHARDGRASS 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 orchardgrass varieties at the Highland Rim AgResearch and Education Center, Springfield, TN.

Variety	Supplier	Commercially Available	Yield (ton DM/acre)					3-Year Total
			2022	2023	2024			
			Total	Total	May 16	Jul 11	Total	
Albert	Oregro Seed	Yes	1.60	4.53*	1.46	1.08*	2.54	8.67*
Ammo	Barenbrug USA	Yes	1.49	4.20	1.58	0.77	2.34	8.03
Bighorn	Mountain View Seeds	Yes	1.47	4.39*	1.36	0.86	2.21	8.07
Devour	Mountain View Seeds	Yes	1.59	4.59*	1.17	0.84	2.01	8.17
Endurance	DLF Pickseed	Yes	1.68	4.40*	1.83	1.08*	2.91*	8.98*
FSG 506 OG	Tennessee Farmers Co-Op	Yes	1.56	4.80*	1.66	1.00*	2.66	9.02*
HLR	Barenbrug USA	Yes	1.45	4.56*	1.67	0.86	2.53	8.43
Inavale	DLF Pickseed	Yes	1.66	4.68*	1.69	0.79	2.49	8.81*
INTENSIV	Barenbrug USA	Yes	1.57	4.66*	1.59	0.82	2.41	8.64
Olathe	DLF Pickseed	Yes	1.52	4.61*	1.47	0.80	2.27	8.40
Persist	Smith Seed Service	Yes	1.39	4.82*	1.91	1.12*	3.04*	9.24*
Persist II	Smith Seed Service	Yes	1.64	4.82*	1.96	1.31*	3.26*	9.73*
Potomac	Smith Seed Service	Yes	1.51	4.49*	1.68	0.73	2.41	8.40
Rushmore II	Mountain View Seeds	Yes	1.66	4.23	1.77	0.84	2.61	8.50
Swante	Smith Seed Service	Yes	1.62	5.03*	1.69	1.16*	2.85*	9.48*
Tucker	Oregro Seed	Yes	1.66	3.62	1.56	0.77	2.32	7.59
<i>Experimental Varieties</i>								
BAR DGLF94	Barenbrug USA	No	1.45	4.46*	1.34	0.81	2.16	8.07
BAR DGLF95	Barenbrug USA	No	1.52	4.26	1.32	0.86	2.18	7.96
		CV	6	7	13	18	13	7
		P-Value	0.98	0.04	0.17	0.04	0.00	0.01
		LSD (P<0.05)	nd ¹	0.64	nd	0.34	0.58	1.06
* yielded statistically the same as the top-yielding variety								
¹ no-significant differences among the varieties								
Fertilization: Soil amended when required for Lime, P, and K. Nitrogen Application: 60 lb/acre at green-up, 30 lb/acre after first cut, and 30 lb/acre in September.								
Please note that in 2022 drought affected yield and only one harvest was possible. Extreme drought at the end of Summer 2024 did not allow for a Fall harvest.								
Planted: September 14, 2021								

Table 2: Average forage nutritive value by harvest.

Species	Constituents ¹ (%)	Harvest Date				Trial Average
		2022	2023	2024		
		Average	Average	May 16	Jul 11	
Orchardgrass	CP	15.9	14.0	16.3	13.1	14.8
	ADF	35.5	36.0	34.5	37.8	35.9
	NDF	53.1	58.1	52.9	63.1	56.8
	TDN	61.4	60.9	63.4	57.0	60.7

¹ Nutritive value 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). Average value reported across all varieties by harvest. Target stage of growth for harvest was mid to late boot. Grass Hay Calibration (NIRS Consortium).

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