

## 2024 COOL-SEASON ANNUAL GRASS VARIETY TRIAL

The forage cultivar evaluation program is a partnership between UT 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 at one location. 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 annual ryegrass varieties at the Plateau AgResearch and Education Center in Crossville, TN.**

Variety	Species	Supplier	Commercially Available	Yield (ton DM/acre)		
				2024		Combined Total
				APR 11	May 22	
Alisca	Annual Ryegrass	Allied Seed, LLC	Yes	1.94	1.66	3.61
Attain	Annual Ryegrass	Smith Seed Services	Yes	2.39	1.61	4.00
Baqueano	Annual Ryegrass	Smith Seed Services	Yes	2.51	1.76	4.27
Bruiser	Annual Ryegrass	AMPAC Seed Company	Yes	2.94*	1.93*	4.87*
Centurion	Annual Ryegrass	Mountain View Seeds	Yes	2.52	1.78	4.30
Cold Green	Annual Ryegrass	AMPAC Seed Company	Yes	2.56	1.97	4.53*
Dexter	Annual Ryegrass	Smith Seed Services	Yes	1.89	1.53	3.41
Diplomat	Annual Ryegrass	Allied Seed, LLC	Yes	2.61	1.82	4.44
EarlyBoss	Annual Ryegrass	Smith Seed Services	Yes	2.49	1.74	4.23
Ed	Annual Ryegrass	Smith Seed Services	Yes	2.52	1.86	4.38
FrostProof	Annual Ryegrass	Smith Seed Services	Yes	2.67	1.93*	4.60*
GrazeKeeper	Annual Ryegrass	Smith Seed Services	Yes	1.88	1.44	3.32
Grits Diploid	Annual Ryegrass	Lewis Seed Company	Yes	2.77*	1.94*	4.71*
Gulf	Annual Ryegrass	Smith Seed Services	Yes	2.73*	1.65	4.37
Jackson	Annual Ryegrass	The Wax Company	Yes	2.74*	1.84	4.58*
Kodiak	Annual Ryegrass	DLF Pickseed	Yes	2.82*	1.87	4.69*
Lonestar	Annual Ryegrass	GO Seed- Grassland Oregon	Yes	3.15*	1.87	5.02*
McKinley	Annual Ryegrass	DLF Pickseed	Yes	2.54	1.98*	4.51*
More	Annual Ryegrass	GO Seed- Grassland Oregon	Yes	2.35	1.74	4.08
Nelson	Annual Ryegrass	The Wax Company	Yes	2.63	1.69	4.32
Rapido	Annual Ryegrass	Smith Seed Services	Yes	2.71*	1.71	4.42
Rival	Annual Ryegrass	AMPAC Seed Company	Yes	2.39	1.93*	4.31
Sweet T	Annual Ryegrass	AMPAC Seed Company	Yes	2.39	1.86	4.24
Tetraprime II	Annual Ryegrass	Mountain View Seeds	Yes	1.91	1.75	3.66
Tetrastar	Annual Ryegrass	GO Seed- Grassland Oregon	Yes	2.58	1.58	4.16
Trinova	Annual Ryegrass	Smith Seed Services	Yes	2.74*	1.68	4.42
Verdure	Annual Ryegrass	Smith Seed Services	Yes	2.40	1.68	4.08
WAX Marshall	Annual Ryegrass	The Wax Company	Yes	2.77*	2.12*	4.89*
Winterhawk	Annual Ryegrass	DLF Pickseed	Yes	2.66	1.86	4.51*

**Table 1 (Continued): Yield of annual ryegrass varieties at the Plateau AgResearch and Education Center in Crossville, TN.**

<i>Experimental Varieties</i>						
LSC-B1191	Annual Ryegrass	Lewis Seed Company	No	2.72*	2.07*	4.80*
ME-4	Annual Ryegrass	The Wax Company	No	2.71*	2.21*	4.92*
ME-94	Annual Ryegrass	The Wax Company	No	2.67	1.86	4.53*
SELWD19-12	Annual Ryegrass	Smith Seed Services	No	2.70	2.02*	4.71*
SELWD20-9	Annual Ryegrass	Smith Seed Services	No	2.66	1.88	4.55*
SELWDMACK	Annual Ryegrass	Smith Seed Services	No	1.86	2.09*	3.94
SELWTDWL1	Annual Ryegrass	Smith Seed Services	No	2.32	1.71	4.03
SELWTJUCK	Annual Ryegrass	Smith Seed Services	No	2.59	1.63	4.22
WMWL	Annual Ryegrass	The Wax Company	No	2.28	1.97*	4.25
WMWL-2	Annual Ryegrass	The Wax Company	No	2.77*	2.06*	4.83*
CV%				12	9	9
P-Value				<0.0001	0.0003	<0.0001
LSD (P<0.05)				0.44	0.32	0.52
* yielded statistically the same as the top-yielding variety						
Planted October 18, 2023- Nitrogen application: 45 lb/acre at planting, 60 lb/acre at green-up, 30 lb/acre after first harvest						

**Table 2: Mean forage nutritive values by harvest.**

Species	Constituents <sup>1</sup> (%)	Harvest Date	
		2024	
		APR 11	May 22
Annual Ryegrass	CP	15.8	11.7
	ADF	30.5	39.2
	NDF	51.9	64.8
	TDN	66.7	57.6

<sup>1</sup> 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 mid to late boot. Grass Hay Calibration (NIRS Consortium, 2024).

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