

2023 COOL-SEASON ANNUAL GRASS VARIETY TRIAL

The forage cultivar evaluation program is a partnership between The 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 three 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 annual ryegrass varieties at the Highland Rim AgResearch and Education Center in Springfield, TN.

Variety	Species	Supplier	Commercially Available	Yield (ton DM/acre)			Combined Total	
				2023				
				MAR 29	MAY 3	JUN 2		
Ador	Annual Ryegrass	Tennessee Farmers CO-OP	Yes	0.78	2.54	1.22	4.54	
Baqueano	Annual Ryegrass	Smith Seed Service	Yes	1.36*	2.73	1.15	5.24*	
Bruiser	Annual Ryegrass	Ampac Seed Company	Yes	1.41*	2.87	1.39	5.67*	
Centurion	Annual Ryegrass	Mountain View Seeds	Yes	1.60*	2.63	1.27	5.50*	
Dexter	Annual Ryegrass	Smith Seed Service	Yes	1.07	2.64	1.17	4.88	
DynaPlus	Annual Ryegrass	Columbia Seeds LLC	Yes	1.52*	2.71	1.31	5.34*	
FLX 1995 (Rival Brand)	Annual Ryegrass	Ampac Seed Company	Yes	1.30	2.30	1.18	4.78	
Fria	Annual Ryegrass	Tennessee Farmers CO-OP	Yes	1.33	2.06	1.29	4.68	
FrostProof	Annual Ryegrass	Smith Seed Service	Yes	1.18	2.75	1.29	5.22	
GrazeKeeper	Annual Ryegrass	Smith Seed Service	Yes	1.21	2.75	1.13	5.09	
Green Dragon	Annual Ryegrass	Smith Seed Service	Yes	1.27	2.42	1.35	5.03	
Gulf	Annual Ryegrass	Smith Seed Service	Yes	0.78	2.76	1.33	4.88	
Halsey	Annual Ryegrass	Smith Seed Service	Yes	0.92	2.64	1.19	4.76	
Jackson	Annual Ryegrass	The Wax Company	Yes	1.38*	2.55	1.48	5.42*	
Kodiak	Annual Ryegrass	DLF Pickseed	Yes	1.43*	2.83	1.64	5.90*	
Lonestar	Annual Ryegrass	GO Seed	Yes	1.46*	2.33	1.35	5.13	
LSC-B1191	Annual Ryegrass	Lewis Seed Co.	Yes	1.27	2.62	1.55	5.44*	
Mantis	Annual Ryegrass	Smith Seed Service	Yes	1.19	2.47	1.02	4.69	
McKinley	Annual Ryegrass	DLF Pickseed	Yes	1.25	2.45	1.13	4.84	
Nelson	Annual Ryegrass	The Wax Company	Yes	1.42*	2.30	1.51	5.24*	
Oryx	Annual Ryegrass	Columbia Seeds LLC	Yes	1.15	2.58	1.29	5.01	
Passerel Plus ER7	Annual Ryegrass	Pennington Seed Inc.	Yes	1.59*	2.83	1.41	5.83*	
Rapido	Annual Ryegrass	Smith Seed Service	Yes	1.16	2.48	1.34	4.98	
Tetrastar	Annual Ryegrass	GO Seed	Yes	1.32	2.34	1.31	4.97	
Wax Marshall	Annual Ryegrass	The Wax Company	Yes	1.48*	2.65	1.38	5.51*	
Winterhawk	Annual Ryegrass	DLF Pickseed	Yes	1.27	2.72	1.52	5.50*	
<i>Experimental Varieties</i>								
GO-MOT	Annual Ryegrass	GO Seed	No	1.42*	2.91	1.14	5.47*	
ME-4	Annual Ryegrass	The Wax Company	No	1.58*	2.99	1.33	5.90*	
ME-94	Annual Ryegrass	The Wax Company	No	1.53*	2.93	1.38	5.84*	
PPG-LWD 113	Annual Ryegrass	Ampac Seed Company	No	1.39*	2.67	1.22	5.27*	
PPG-LWT 117	Annual Ryegrass	Ampac Seed Company	No	1.42*	2.65	1.31	5.37*	
SELWD19-12	Annual Ryegrass	Smith Seed Service	No	1.57*	2.52	1.22	5.31*	
SELWD19-7	Annual Ryegrass	Smith Seed Service	No	1.15	2.30	1.29	4.74	
SELWDTSEM1	Annual Ryegrass	Smith Seed Service	No	1.47*	2.78	1.23	5.48*	
SELWTDWL-1	Annual Ryegrass	Smith Seed Service	No	1.33	2.86	1.37	5.57*	
THS2X18BK	Annual Ryegrass	Smith Seed Service	No	1.09	2.65	1.37	5.12	
WMWL	Annual Ryegrass	The Wax Company	No	1.32	2.65	1.32	5.29*	
WMWL-2	Annual Ryegrass	The Wax Company	No	1.50*	2.69	1.37	5.56*	
				CV	15	8	10	7
				LSD (P<0.05)	0.24	nd ¹	nd	0.68

* yielded statistically the same as the top-yielding variety

¹ no-significant differences among the varieties

Planted October 14, 2022- 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 ¹ (%)	Harvest Date		
		2023		
		MAR 29	MAY 3	JUN 2
Annual Ryegrass	CP	23.1	15.1	11.7
	ADF	25.7	27.4	33.9
	NDF	48.0	50.1	60.1
	TDN	71.7	69.9	63.1

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 mid to late boot. Grass Hay Calibration (NIRS Consortium, 2023).

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