

## 2016 COOL-SEASON ANNUAL RYEGRASS 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 three replications. Least significant difference (LSD) values at the 5 percent level are shown at the bottom of each table. 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 cool-season annual ryegrass varieties at the Highland Rim Research and Education Center in Springfield, TN.**

Variety	Supplier	Commercially Available	Yield (ton DM/acre)			
			Dec 9	Apr 4	May 6	Total
Attain	Smith Seed Services	Yes	1.02	1.63*	1.84	4.47*
Fria	Tennessee Farmers Co-Op	Yes	0.99	1.46*	1.70	4.06*
Jackson	The Wax Company	Yes	0.96	1.70*	1.84	4.30*
Jumbo	Barenbrug USA	Yes	1.06*	1.14	2.12	4.05*
KoSpeed	Smith Seed Services	Yes	0.78	1.33*	1.53	4.22*
KoWinearly	Smith Seed Services	Yes	0.65	1.52*	1.78	3.69
Lonestar	Grassland Oregon	Yes	0.66	0.90	1.74	3.34
Marshall	The Wax Company	Yes	1.02	1.28	1.93	4.28*
Maximus	Barenbrug USA	Yes	1.05*	0.99	1.76	3.98*
Meroa	Smith Seed Services	Yes	0.91	0.93	1.79	3.71
Nelson	The Wax Company	Yes	0.97	1.15	1.75	3.91
Passerel Plus	Pennington Seed	Yes	0.99	1.08	1.85	3.91
PS12	Pennington Seed	Yes	1.02	1.17	1.97	4.16*
PS15	Pennington Seed	Yes	1.04*	1.17	1.74	4.19*
Winterhawk	Oregro Seeds, Inc.	Yes	0.85	1.21	1.49	3.80
BAR LM 09124	Barenbrug USA	No	0.63	0.83	2.10	3.56
BAR LM 09129	Barenbrug USA	No	0.65	1.13	1.84	3.62
BAR LM 09137	Barenbrug USA	No	0.56	1.14	2.24	3.94*
BAR LM 10200	Barenbrug USA	No	0.59	1.18	1.77	3.54
BAR LM 10202	Barenbrug USA	No	0.53	1.28	2.35	4.17*
BAR LM 14167-1	Barenbrug USA	No	0.85	1.48*	2.06	4.39*
BAR LM 14167-2	Barenbrug USA	No	0.65	0.98	2.00	3.63
BAR LM 14167-3	Barenbrug USA	No	0.80	1.32*	1.92	3.61
BAR LM 14167-4	Barenbrug USA	No	0.87	1.48*	2.02	4.26*
BAR LM 15425	Barenbrug USA	No	0.73	1.34*	1.94	4.08*
BAR LM 15426	Barenbrug USA	No	0.68	1.24	1.95	3.87
BAR LM 15427	Barenbrug USA	No	0.70	1.19	1.80	3.84
BAR LM 15476	Barenbrug USA	No	0.79	1.65*	1.62	4.24*
GA101M	University of Georgia	No	0.92	1.23	1.93	3.84
GALM1401	University of Georgia	No	0.90	1.37*	1.64	4.20*
GO-15-LN2	Grassland Oregon	No	0.56	1.07	1.65	3.27
M2CVS	The Wax Company	No	1.01	1.29	1.97	4.04*
ME4	The Wax Company	No	1.20*	1.26	1.84	4.23*
ME-94	The Wax Company	No	1.01	1.45*	1.87	4.30*
O7-WW	Oregro Seeds, Inc.	No	0.91	1.32*	1.83	3.97*
PPG-LMT 102	Smith Seed Services	No	0.60	0.75	1.97	3.20
LSD (P<0.05)			0.17	0.39	ns <sup>1</sup>	0.54
* yielded statistically the same as the top-yielding variety						
<sup>1</sup> non-significant at the 0.05 level						
Nitrogen application: 45 lb/acre at planting, 60 lb/acre at green-up, 30 lb/acre after first harvest						
Planted September 9, 2015						

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

Harvest	Constituents <sup>1</sup>				
	% CP	% ADF	% NDF	% TDN	RFQ
December 9, 2015	25.2	22.7	35.4	76.7	140.1
April 4, 2016	17.6	29.5	57.3	72.1	122.7
May 6, 2016	13.8	32.4	55.3	72.3	128.2

<sup>1</sup> CP, crude protein; ADF, acid detergent fiber; NDF, neutral detergent fiber; TDN, total digestible nutrients; RFQ, relative forage quality (Analysis performed using Near Infrared Spectrometer [NIRS] Technology) Target stage of growth for harvest was late boot. Grass Hay Equation (NIRS Consortium, 2012).

This and other useful information can be found at your local Extension office, or on our website.

