



2010 Cool-Season Perennial Grass Report

Research Report 11-9

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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 data in the following tables were determined using plot design and experimental techniques. This study was conducted using a randomized complete block design with 3 replications. The crop was grown using management practices considered to be the best for the crop, including fertilization according to soil test results.

Least significant difference LSD values at the 5 percent level are shown at the bottom of each table. Within any table, yields of any two varieties being compared must differ by at least this amount to be considered different. Also, coefficient of variation CV % values are shown at the bottom of each table. This value is a measure of the consistency of yields found within each study, with lower CVs indicating less variability.

Table 1: Yield of cool-season perennial grass varieties at the Plateau Research and Education Center in Crossville.

Variety	Yield ton DM/acre					
	2008 Total	2009 Total	2010			3 Year Total
			May 5	Oct 20	Total	
Derby timothy	4.34*	1.70*	1.97*	1.43*	3.40	9.44*
Spring Green festolium	3.83*	1.47*	1.27	1.23*	2.50*	7.79*
HB-124 KY bluegrass	1.56	1.29*	0.57	1.57*	2.13	4.98
Remington perennial ryegrass	3.28	1.25*	0.77	1.20*	1.97	6.50
Piccolo timothy	1.29	0.62	1.13	1.37*	2.50*	4.41
LSD P=.05	0.81	0.69	0.54	0.50	0.91	2.00
CV %	15	29	25	20	19	16
* yielded statistically the same as the top-yielding variety						
Nitrogen Application: 60 lb/acre at green-up, 30 lb/acre after first cut, 60 lb/acre in September						
Planted September 20, 2007						

Table 2: Yield of cool-season perennial grass varieties at the Middle Tennessee Research and Education Center in Spring Hill.

Variety	Yield ton DM/acre					
	2008 Total	2009 Total	2010			3 Year Total
			May 6	Dec 2	Total	
Derby timothy	3.54	2.26*	1.30*	0.00	1.30	7.10*
Spring Green festolium	4.42*	2.09*	0.00	0.00	0.00	6.51*
Remington perennial ryegrass	4.68*	1.55	0.00	0.00	0.00	6.23*
HB-124 KY bluegrass	1.55	1.28	1.73*	0.13*	1.87*	4.70
Piccolo timothy	2.07	0.41	0.00	0.00	0.00	2.48
LSD P=.05	0.61	0.61	0.44	0.05	0.42	1.01
CV %	10	21	39	97	35	10
* yielded statistically the same as the top-yielding variety						
Nitrogen Application: 60 lb/acre at green-up, 30 lb/acre after first cut, 60 lb/acre in September						
Planted September 19, 2007						

Table 3: Yield of cool-season perennial grass varieties at the Research and Education Center at Greeneville.

Variety	Yield ton DM/acre				
	2009 Total	2010			2 Year Total
		Apr 28	Oct 26	Total	
Bonus festolium	5.38*	0.80*	0.37	1.18*	6.56*
Spring Green festolium	4.70*	0.38	0.52	0.89	5.60*
Boost perennial ryegrass	4.27	0.36	0.61*	0.97	5.24
APH 1002 timothy	3.51	0.87*	0.59*	1.47*	4.98
LSD P=.05	0.84	0.21	0.19	0.32	0.99
CV %	9.65	20	18	15	9
* yielded statistically the same as the top-yielding variety					
Nitrogen Application: 60 lb/acre at green-up, 30 lb/acre after first cut, 60 lb/acre in September					
Planted September 22, 2008					

Table 4: Yield of cool-season perennial grass varieties at the Research and Education Center at Milan.

Variety	Yield ton DM/acre				
	2009 Total	2010		2 Year Total	
		Apr 20	Jun 8		Total
Bonus festolium	2.45*	0.00	0.00	0.00	2.45
Boost perennial ryegrass	2.19*	0.00	0.00	0.00	2.19
APH 1002 timothy	2.05*	1.33*	1.76*	3.10	5.15*
Spring Green festolium	1.92*	0.00	0.00	0.00	1.92
LSD P=.05	0.62	0.18	0.21	0.24	0.69
CV %	14.37	19	17	11	10.51
* yielded statistically the same as the top-yielding variety					
Nitrogen Application: 60 lb/acre at green-up, 30 lb/acre after first cut, 60 lb/acre in September					
Planted September 29, 2008					

Table 5: Variety Information

Variety	Supplier	Commercially Available
Bonus festolium	Allied Seed	Yes
Derby timothy	Allied Seed	Yes
Boost perennial ryegrass	Allied Seed	Yes
Remington perennial ryegrass	Barenbrug	Yes
APH 1002 timothy	Pro Seeds	No
Spring Green festolium	Rose Agri-Seed	Yes
HB-124 KY bluegrass	The Scott's Company	No
Piccolo timothy	Turner Seed/ Pro Seeds	Yes

**This and other useful information can be found at your local extension office, or at our website.
<http://forages.tennessee.edu>**

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