2009 Cool-Season Perennial Grass Report

Research Report 10-10

Dr. Gary Bates, Forage Specialist
Joe Beeler, Research Associate
Department of Plant Sciences

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.

	Yield ton DM/acre			
	2008	2009		
Variety	Total	May 12	Nov 4	Total
Derby timothy	4.34*	1.70*	0.00	1.70*
Spring Green festolium	3.83*	0.53	0.94*	1.47*
HB-124 KY bluegrass	1.56	0.41	0.88*	1.29*
Remington perennial ryegrass	3.28	0.39	0.87*	1.25*
Piccolo timothy	1.29	0.62	0.00	0.62
LSD P=.05	0.81	0.23	0.51	0.69
CV %	15	16	50	29
* 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.

	Yield ton DM/acre				
	2008	2009			
Variety	Total	Apr 15	May 27	Nov 5	Total
Derby timothy	3.54	0.76*	1.50*	0.00	2.26*
Spring Green festolium	4.42*	0.43*	1.66*	0.00	2.09*
Remington perennial ryegrass	4.68*	0.20	1.35	0.00	1.55
HB-124 KY bluegrass	1.55	0.30	0.77	0.20*	1.27
Piccolo timothy	2.07	0.41*	0.00	0.00	0.41
LSD P=.05	0.62	0.42	0.31	0.05	0.60
CV %	10	53	15	64	21
* 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.

	Yield ton DM/acre			
	2009			
Variety	Apr 28	Jun 16	Nov 3	Total
Bonus festolium	2.20*	2.37*	0.82*	5.38*
Spring Green festolium	1.83	2.19*	0.69*	4.70*
Boost perennial ryegrass	1.86	1.76*	0.65*	4.27
APH 1002 timothy	1.78	1.02	0.71*	3.51
LSD P=.05	0.24	0.78	0.25	0.84
CV %	7	21	18	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 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		
	Apr 16	Jun 23	Total
Bonus festolium	1.62*	0.83*	2.45*
Boost perennial ryegrass	0.71	1.48*	2.19*
APH 1002 timothy	0.64*	1.42*	2.05*
Spring Green festolium	0.50	1.42*	1.92*
LSD P=.05	0.17	0.27	0.62
CV %	12	11	14
* 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 on the University of Tennessee Forages Web site.

http://forages.tennessee.edu