



2009 Orchardgrass Report

Research Report 10-12

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 orchardgrass varieties at the Plateau Research and Education Center in Crossville.

Variety	Yield (ton DM/acre)			
	2008 Total	2009		
		May 12	Nov 4	Total
Megabite	2.99*	0.92	1.23*	2.16*
Ambrosia	2.26	0.66	0.92*	1.58*
Endurance	2.49*	1.10*	0.76	1.86*
B07.IC1	2.33	0.98	0.89*	1.87*
Benchmark Plus	2.36	1.00	0.89*	1.88*
Barlemas	1.95	0.63	0.92*	1.56
Shiloh II	2.38*	1.02*	0.95*	1.97*
Olympia	2.32	1.19*	0.94*	2.13*
Persist	2.53*	1.19*	0.99*	2.18*
AMOG-4	2.70*	0.81	0.95*	1.76*
LSD (P=.05)	0.61	0.19	0.39	0.52
CV (%)	15	12	24	16
* yielded statistically the same as the top-yielding variety				
Nitrogen Application: 60 lb/acre at green-up, and 30 lb/acre after first cut, 60 lb/acre in September				
Planted September 20, 2007				

Table 2: Yield of orchardgrass varieties at the Middle Tennessee Research and Education Center in Spring Hill.

Variety	Yield (ton DM/acre)				
	2008 Total	2009			Total
		Apr 15	May 27	Nov 5	
Megabite	4.01*	0.90*	1.05*	0.52*	2.47*
Ambrosia	3.02	0.65	1.04*	0.41*	2.09
Endurance	3.53*	1.01*	1.08*	0.46*	2.54*
B07.IC1	3.29	0.78	1.17*	0.43*	2.38*
Benchmark Plus	3.28	0.92*	1.02*	0.56*	2.50*
Barlemas	3.01	0.60	1.14*	0.33	2.07
Shiloh II	3.48*	0.64	1.04*	0.40*	2.08
Olympia	3.24	0.95*	1.03*	0.42*	2.40*
Persist	3.74*	1.04*	1.04*	0.52*	2.60*
AMOG-4	3.29	0.90	1.12	0.44*	2.46*
LSD (P=.05)	0.59	0.19	0.19	0.18	0.39
CV (%)	10	13	10	23	10
* yielded statistically the same as the top-yielding variety					
Nitrogen Application: 60 lb/acre at green-up, and 30 lb/acre after first cut, 60 lb/acre in September					
Planted September 19, 2007					

Table 3: Yield of orchardgrass varieties at the Research and Education Center at Greenville.

Variety	Yield (ton DM/acre)				
	2009				
	Apr 28	Jun 16	Sep 1	Nov 3	Total
Megabite	1.31*	2.92*	0.94*	1.27	6.44*
B07.IC1	1.21*	2.38*	1.19*	1.46	6.24*
Benchmark Plus	1.24*	1.83	1.14*	1.57*	5.78*
Warrior II	1.27*	2.46*	1.05*	1.40	6.17*
Olympia	1.37*	1.88	0.76*	1.36	5.37*
Persist	1.14*	2.50*	1.08*	1.84*	6.55*
Survivor	1.07*	2.35*	1.13*	1.35	5.90*
Shiloh II	1.27*	1.51	1.13*	1.41	5.31*
Profit	1.07*	2.01	1.00*	1.54	5.62*
LSD (P=.05)	0.34	0.89	0.56	0.29	1.26
CV (%)	16	23	31	11	12
* yielded statistically the same as the top-yielding variety					
Nitrogen Application: 60 lb/acre at green-up, and 30 lb/acre after first cut, 60 lb/acre in September					
Planted September 22, 2008					

Table 4: Yield of orchardgrass varieties at the Research and Education Center at Milan.

Variety	Yield (ton DM/acre)		
	2009		
	Jun 23	Nov 19	Total
Megabite	0.78*	1.13*	1.91*
B07.IC1	0.75*	1.01*	1.76
Benchmark Plus	0.97*	0.81	1.78
Warrior II	1.07*	1.03*	2.09*
Olympia	0.96*	1.24*	2.20*
Persist	1.03*	1.28*	2.31*
Survivor	0.76*	1.04*	1.80
Shiloh II	0.93*	0.74	1.67*
Profit	1.07*	0.98*	2.05*
LSD (P=.05)	0.30	0.39	0.44
CV (%)	21	23	14
* yielded statistically the same as the top-yielding variety			
Nitrogen Application: 60 lb/acre at green-up, and 30 lb/acre after first cut, 60 lb/acre in September			
Planted September 29, 2008			

Table 5: Variety Information

Variety	Supplier	Commercially Available
Benchmark Plus	Allied Seed	Yes
Ambrosia	American Grass Seed Products	Yes
AMOG-4	AMPAC Seed	No
Profit	AMPAC Seed	Yes
Barlemas	Barenbrug	Yes
B07.IC1	Blue Moon Farm LLC	No
B-7.0103	Caudill Seed	Yes
Endurance	DLF International Seeds	Yes
Olympia	Pennington Seed	Yes
Warrior II	Pro Seeds	Yes
Megabite	Rose Agri-Seed	Yes
Persist	Smith Seed	Yes
Shiloh II	Turner Seed/Pro Seed	Yes

This and other useful information can be found on the University of Tennessee Forages Web site.

<http://forages.tennessee.edu>