



2010 Orchardgrass Report

Research Report 11-11

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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 orchardgrass 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	
MegaBite	3.00*	2.16*	1.67*	1.17*	2.83	7.98*
Ambrosia	2.26	1.58	1.17	1.03*	2.20	6.04
Endurance	2.49*	1.86*	1.70*	1.17*	2.87	7.22*
B07.IC1	2.34	1.87*	1.83*	1.03*	2.87	7.07*
Benchmark Plus	2.36	1.88*	1.70*	1.10*	2.80	7.04*
Barlemas	1.95	1.56	1.33	0.73	2.07	5.57
Shiloh II	2.38	1.97*	1.97*	1.10*	3.07*	7.42*
Olympia	2.32	2.13*	1.97*	1.33*	3.30*	7.76*
Persist	2.53*	2.18*	1.80*	1.20*	3.00*	7.71*
AMOG-4	2.70*	1.76*	1.70*	1.17*	2.87	7.33*
LSD P=.05	0.61	0.52	0.41	0.40	0.40	1.18
CV %	15	16	14	21	8	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 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	2010			3 Year Total
			May 6	Dec 2	Total	
Megabite	4.00*	2.47*	2.07*	0.17	2.23*	8.70*
Ambrosia	3.02	2.09	2.07*	0.23*	2.30*	7.41
Endurance	3.53*	2.55*	1.70	0.23*	1.93	8.01*
B07.IC1	3.29	2.38*	2.00*	0.33*	2.33*	8.00*
Benchmark Plus	3.28	2.50*	2.10*	0.23*	2.33*	8.11*
Barlemas	3.01	2.07	1.93*	0.27*	2.20*	7.28
Shiloh II	3.48*	2.08	2.23*	0.20	2.43*	8.00*
Olympia	3.24	2.40*	1.87*	0.17	2.03*	7.67
Persist	3.74*	2.60*	2.10*	0.17	2.27*	8.61*
AMOG-4	3.29	2.46*	1.67	0.33*	2.00*	7.76
LSD P=.05	0.59	0.39	0.50	0.12	0.50	0.82
CV %	10	10	15	31	13	6
* 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 Greeneville.

Variety	Yield ton DM/acre				
	2009 Total	2010			2 Year Total
		Apr 28	Oct 26	Total	
MegaBite	6.44*	1.09*	1.53*	2.62*	9.07*
BO7.IC1	6.24*	1.35*	1.25*	2.61*	8.85*
Benchmark Plus	5.78*	1.14*	1.41*	2.55*	8.33*
Warrior II	6.17*	0.82	1.31*	2.13*	8.31*
Olympia	5.37*	1.26*	1.20*	2.46*	7.83*
Persist	6.55*	1.16*	1.40*	2.56*	9.11*
B-7.0103	5.90*	1.09*	1.28*	2.37*	8.27*
Shiloh II	5.31*	0.98*	1.58*	2.56*	7.87*
Profit	5.62*	1.11*	1.29*	2.40*	8.02*
LSD P=.05	1.26	0.42	0.45	0.67	1.67
CV %	12.23	22	19	16	11
* yielded statistically the same as the top-yielding variety					
Nitrogen Application: 60 lb/acre at green-up, 30 lb/acre after first cut, and 60 lb/acre in September					
Planted September 30, 2008					

Table 4: Yield of orchardgrass 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	
MegaBite	1.91*	0.87	1.91*	2.78*	4.69*
BO7.IC1	1.76	1.07*	1.60	2.66*	4.42*
Benchmark Plus	1.78	1.10*	1.52	2.62*	4.40*
Warrior II	2.09*	1.03*	1.68	2.71*	4.80*
Olympia	2.20*	1.10*	1.72	2.82*	5.02*
Persist	2.31*	1.17*	1.63	2.79*	5.11*
B-7.0103	1.80	1.03*	1.63	2.67*	4.47*
NFOG 101	0.78	0.93*	1.25	2.18	2.97
Shiloh II	1.66	1.13*	1.49	2.63*	4.29
Profit	2.05*	0.73	1.62	2.36	4.40*
LSD P=.05	0.435	0.25	0.18	0.36	0.709
CV %	13.82	14	7	8	9.27
* yielded statistically the same as the top-yielding variety					
Nitrogen Application: 60 lb/acre at green-up, 30 lb/acre after first cut, and 60 lb/acre in September					
Planted September 22, 2008					

Table 5: Yield of orchardgrass varieties at the Research and Education Center at Greenville.

Variety	Yield ton DM/acre		
	2010		
	May 14	Nov 26	Total
Orca	1.02	1.15*	2.18
LCF-21	1.21	1.39*	2.60*
B-9.1476	0.58	1.06*	1.64
Benchmark Plus	1.29	1.27*	2.55*
B-7.0103	1.32	1.34*	2.66*
Harvestar	1.40*	1.18*	2.58*
Olympia	1.70*	1.32*	3.02*
Barexcel	1.08	0.85	1.92
Barlemas	0.87	1.03	1.90
Persist	1.21	1.04	2.25
LSD P=.05	0.34	0.34	0.58
CV %	17	17	15
* yielded statistically the same as the top-yielding variety			
Nitrogen Application: 60 lb/acre at green-up, 30 lb/acre after first cut, and 60 lb/acre in September			
Planted September 30, 2009			

Table 6: Variety Information

Variety	Supplier	Commercially Available
Benchmark Plus	Allied Seed	Yes
Ambrosia	American Grass Seed Produce	Yes
AMOG-4	AMPAC Seed	No
Profit	AMPAC Seed	Yes
Barlemas	Barenbrug	Yes
Barexcel	Barenbrug	Yes
B07.IC1	Blue Moon Farm LLC	No
B-7.0103	Caudill Seed	Yes
Harvestar	Columbia Seeds	Yes
Endurance	DLF International Seeds	Yes
LCF-21	Lewis Seed Company	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
Orca	PickseedUSA Inc	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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