PR-629

2011 Orchardgrass Report

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Introduction

Orchardgrass *(Dactylus glomerata)* is a high-quality, productive, cool-season grass that is well adapted to Kentucky conditions. This grass is used for pasture, hay, green chop, and silage, but it requires better management than tall fescue for greater yields, higher quality, and longer stand life. It produces an open, bunch-type sod, making it very compatible with alfalfa or red clover as a pasture and hay crop or as habitat for wildlife.

This report provides current yield data on orchardgrass varieties included in yield trials in Kentucky as well as guidelines for selecting orchardgrass varieties. Table 10 shows a summary of all orchardgrass varieties tested in Kentucky for the last 10-plus years. The UK Forage Extension web site at www.uky.edu/Ag/Forage contains electronic versions of all forage variety testing reports from Kentucky and surrounding states and from a large number of other forage publications.

Important Selection Considerations

Maturity. Orchardgrass varieties will range in maturity from early to late, based on the date of heading. In this report, early-maturing varieties will in general have higher first-cutting yields than later-maturing varieties because they are more mature at the date of first cutting. Orchardgrass typically matures earlier in the spring than red clover or alfalfa. Later-maturing varieties are preferred for use with red clover or alfalfa because they are at a more optimal stage of maturity when the legume is ready for cutting.

Local Adaptation and Seasonal Yield. Choose a variety that is adapted to Kentucky, as indicated by good performance across years and locations in replicated yield trials such as those presented in this publication. Also, look for varieties that are productive in the desired season of use.

Seed Quality. Buy premium-quality seed that is high in germination and purity and free from weed seed. Buy certified seed or proprietary seed of an improved variety. An improved variety is one that has performed well in independent trials. Other information on the label will include the test date (which must be within the past nine months), the level of germination, and the percentage of other crop and weed seed. Order seed well in advance of planting time to assure that it will be available when needed.

Table 1. Temperature and rainfall at Lexington, Kentucky in 2010 and 2011.

	2010				2011[2]			
	Temp.		Rainfall		Temp.		Rainfall	
	°F	DEP[1]	IN	DEP	°F	DEP	IN	DEP
JAN	29	-2	2.40	-0.46	29	-2	2.10	-0.76
FEB	29	-6	1.38	-1.83	39	+4	6.34	+3.13
MAR	47	+3	1.05	-3.35	47	+3	4.76	+0.36
APR	59	+4	2.74	-1.14	58	+3	12.36	+8.48
MAY	67	+3	7.84	+3.37	64	0	6.72	+2.25
JUN	76	+4	4.61	+0.95	74	+2	2.61	-1.05
JUL	78	+2	5.49	+0.49	80	+4	6.29	1.29
AUG	78	+3	1.54	-2.39	75	0	2.89	-1.04
SEP	71	+3	1.14	-2.06	66	-2	5.52	+2.32
OCT	59	+2	1.22	-1.35	55	-2	4.10	+1.53
NOV	47	+2	4.58	+1.19				
DEC	28	-8	2.15	-1.93				
Total			36.14	-8.41			53.69	+16.51

[1] DEP is departure from the long-term average.
[2] 2011 data is for the ten months through October

Description of the Tests

Data from four studies are reported. Orchardgrass varieties were sown at Lexington (2009), Princeton (2008 and 2010), and Quicksand (2010). The soils at Lexington (Maury), Princeton (Crider), and Quicksand (Nolin) are well-drained silt loams and are well suited to orchardgrass production. Seedings were made at the rate of 20 lb/A into a prepared seedbed with a disk drill. Plots were 5 by 20 feet in a randomized complete block design with four replications with a harvest plot area of 5 by 15 feet. Nitrogen was top-dressed at 60 lb/A of actual N in March, after the first cutting, and again in late summer, for a total of 180 lb/A per season. The tests were harvested using a sickle-type forage plot harvester to simulate a spring cut hay/summer grazing/fall stockpile management system. Fresh

Table 2. Temperature and rainfall at Princeton, Kentucky in 2009, 2010 and 2011.

	2009				2010				2011[2]			
	Temp.		Rainfall		Temp.		Rainfall		Temp.		Rainfall	
	°F	DEP[1]	IN	DEP	°F	DEP	IN	DEP	°F	DEP	IN	DEP
JAN	33	-1	0.94	-2.86	31	-3	3.06	-0.74	32	-2	2.35	-1.45
FEB	42	+4	3.28	-1.15	33	-5	1.54	-2.89	40	+2	5.71	+1.28
MAR	53	+6	2.89	-2.05	48	+1	3.24	-1.70	50	+3	5.54	+0.60
APR	58	-1	5.35	+0.55	62	3	3.3	-1.54	61	+2	16.15	+11.35
MAY	67	0	6.14	+1.18	69	+2	10.41	+5.45	66	-1	7.22	+2.26
JUN	77	+2	7.97	+4.12	79	4	4.82	0.97	77	+2	4.60	+0.75
JUL	74	-4	7.45	+3.16	80	2	2.73	-1.56	81	+3	2.98	-1.31
AUG	75	-2	2.44	-1.60	81	4	2.46	-1.55	77	0	3.95	-0.06
SEP	71	0	4.61	+1.28	72	1	0.94	-2.39	68	-3	3.86	+0.53
OCT	55	-4	9.08	+6.03	60	+1	0.97	-2.08	57	-2	1.35	-1.70
NOV	52	+5	1.50	-3.13	49	+2	3.98	-1.65				
DEC	36	-3	2.73	-2.31	32	-7	1.57	-3.47				
Total			54.31	+3.22			39.02	-12.11			53.71	+12.25

[1] DEP is departure from the long-term average.
[2] 2011 data is for the ten months through October

weight samples were taken at each harvest to calculate percent dry matter production. Management practices for establishment, fertility, weed control, and harvest timing were in accordance with University of Kentucky recommendations.

Results and Discussion

Weather data for Lexington, Princeton and Quicksand are presented in Tables 1, 2 and 3.

Ratings for maturity (see Table 4 for maturity scale), stand persistence, and dry matter yields (tons/A) are reported in Tables 5 through 8. Yields are given by cutting date for 2011 and as total annual production. Stated yields are adjusted for percent weeds; therefore, tonnage given is for crop only. Varieties are listed by descending total yield. Experimental varieties, listed separately at the bottom of the tables, are not available commercially.

Statistical analyses were performed on all data (including experimentals) to determine if the apparent differences are truly due to varietal differences or just to chance. In the tables, the varieties not significantly different from the top variety in that column are marked with one asterisk (*). To determine if two varieties are truly different, compare the difference between them to the Least Significant Difference (LSD) at the bottom of the column. If the difference is equal to or greater than the LSD, the varieties are truly different when grown under the conditions at the given locations. The Coefficient of Variation (CV), which is a measure of the variability of the data, is included for each column of means. Low variability is desirable, and increased variability within a study results in higher CVs and larger LSDs.

Table 9 summarizes information about distributors and yield performance across locations for all varieties currently included in tests discussed in this publication. Varieties are listed in alphabetical order, with the experimental varieties at the bottom. Remember that experimental varieties are not available for farm use; commercial varieties can be purchased through distributors. In Table 9, an open block

Table 3. Temperature and rainfall at Quicksand, Kentucky in 2010 and 2011.

	2010				2011[2]			
	Temp.		Rainfall		Temp.		Rainfall	
	°F	DEP[1]	IN	DEP	°F	DEP	IN	DEP
JAN	31	0	4.09	+0.80	32	+1	2.63	-0.66
FEB	32	-1	2.82	-0.77	42	+9	3.94	+0.34
MAR	47	+6	2.38	-1.96	48	+7	4.66	+0.32
APR	60	+7	2.64	-1.46	60	+7	11.65	+7.55
MAY	67	+5	6.00	+1.52	65	+3	6.49	+2.01
JUN	76	+6	4.26	+0.44	73	+3	3.73	-0.09
JUL	77	+3	3.06	-2.19	78	+4	4.92	-0.33
AUG	77	+4	3.77	-0.24	75	+2	4.09	+0.08
SEP	69	+3	0.63	-2.89	67	+1	3.52	0
OCT	57	+3	1.33	-1.58	55	+1	4.16	+1.25
NOV	47	+5	3.88	0				
DEC	29	-4	3.15	-0.99				
Total			38.02	-9.32			49.79	+10.47

[1] DEP is departure from the long-term average.
[2] 2011 data is for the ten months through October

Table 4. Descriptive scheme for the stages of development in perennial forage grasses

Code	Description	Remarks
	Leaf development	
11	First leaf unfolded	Applicable to regrowth of established (plants) and to primary growth of seedlings.
12	2 leaves unfolded	Further subdivision by means of leaf development index (see text).
13	3 leaves unfolded	
•	• • • • •	
19	9 or more leaves unfolded	
	Sheath elongation	
20	No elongated sheath	Denotes first phase of new spring growth after overwintering. This character is used instead of tillering which is difficult to record in established stands.
21	1 elongated sheath	
22	2 elongated sheaths	
23	3 elongated sheaths	
•	• • • • •	
29	9 or more elongated sheaths	
	Tillering (alternative to sheath elongation)	
21	Main shoot only	Applicable to primary growth of seedlingsor to single tiller transplants.
22	Main shoot and 1 tiller	
23	Main shoot and 2 tillers	
24	Main shoot and 3 tillers	
•	• • • • •	
29	Main shoot and 9 or more tillers	
	Stem elongation	
31	First node palpable	More precisely an accumulation of nodes. Fertile and sterile tillers distinguishable.
32	Second node palpable	
33	Third node palpable	
34	Fourth node palpable	
35	Fifth node palpable	
37	Flag leaf just visible	
39	Flag leaf ligule/collar just visible	
	Booting	
45	Boot swollen	
	Inflorescence emergence	
50	Upper 1 to 2 cm of inflorescence visible	
52	¼ of inflorescence emerged	
54	½ of inflorescence emerged	
56	¾ of inflorescence emerged	
58	Base of inflorescence just visible	
	Anthesis	
60	Preanthesis	Inflorescence-bearing internode is visible. No anthers are visible.
62	Beginning of anthesis	First anthers appear.
64	Maximum anthesis	Maximum pollen shedding.
66	End of anthesis	No more pollen shedding.
	Seed ripening	
75	Endosperm milky	Inflorescence green
85	Endosperm soft doughy	No seeds loosening when inflorescence is hit on palm.
87	Endosperm hard doughy	Inflorescence losing chlorophyll; a few seeds loosening when inflorescence hit on palm
91	Endosperm hard	Inflorescence-bearing internode losing chlorophyll; seeds loosening in quantitywhen inflorescence hit on palm.
93	Endosperm hard and dry	Final stage of seed development; most seeds shed.

Smith, J. Allan, and Virgil W. Hayes. 1981. p. 416-418. 14th International Grasslands Conference Proc. 1981. June 14-24, 1981, Lexington, Kentucky.

Table 5. Dry matter yields, seedling vigor, maturity and stand persistence of orchardgrass varieties sown September 29, 2008 at Princeton, Kentucky.

Variety	Seedling Vigor[1] Oct 30, 2008	Maturity[2] 2009 May 11	Maturity[2] 2010 May 18	Maturity[2] 2011 May 10	Percent Stand 2008 Oct 30	Percent Stand 2009 Apr 17	Percent Stand 2009 Nov 4	Percent Stand 2010 Mar 18	Percent Stand 2010 Nov 19	Percent Stand 2011 Apr 8	Percent Stand 2011 Oct 25	Yield (tons/acre) 2009 Total	Yield (tons/acre) 2010 Total	Yield (tons/acre) 2011 May 10	Yield (tons/acre) 2011 Jun 14	Yield (tons/acre) 2011 Aug 16	Yield (tons/acre) 2011 Total	3-year Total
Commercial Varieties-Available for Farm Use																		
Potomac	3.8	57.0	63.0	58.0	97	100	99	96	87	84	33	4.16	2.12	1.12	0.46	0.24	1.82	8.33*
Megabite	3.8	55.5	63.0	56.0	97	97	98	98	84	89	72	3.82	2.12	1.26	0.53	0.26	2.05	8.19*
Crown	3.3	55.5	63.3	56.7	95	99	98	95	80	78	43	4.41	2.10	0.97	0.54	0.18	1.68	8.11*
Benchmark Plus	3.8	56.5	63.3	58.0	96	99	98	95	88	88	58	4.01	2.12	1.12	0.40	0.27	1.79	8.07*
Prairie	3.8	51.8	62.8	58.0	98	99	97	97	81	74	40	4.31	1.56	1.06	0.55	0.25	1.86	8.02*
Prodigy	2.8	57.5	62.5	56.7	95	93	94	93	63	53	32	4.25	2.19	0.80	0.40	0.21	1.40	8.01*
Profit	3.5	50.3	62.3	56.0	96	97	96	95	82	78	35	4.14	1.98	0.98	0.49	0.27	1.75	7.97*
Tucker	3.8	50.3	62.3	56.7	97	98	97	93	78	73	32	4.21	2.06	0.89	0.51	0.23	1.63	7.88*
Elsie	2.8	52.8	62.5	57.3	95	97	96	97	83	83	40	4.05	1.88	1.03	0.49	0.24	1.76	7.56
Lazuly	4.5	38.3	61.8	56.0	96	81	80	84	40	23	8	4.62	1.82	0.34	0.27	0.09	0.70	7.49
Shawnee	2.0	34.8	52.0	37.0	93	84	89	88	57	18	7	3.71	1.95	0.24	0.28	0.16	0.68	6.65
Tekapo	2.8	48.3	63.8	56.0	95	68	83	86	72	51	35	3.34	1.89	0.53	0.45	0.26	1.24	6.63
Experimental Varieties																		
ADG 1002	3.5	50.3	62.0	54.0	96	99	100	97	85	80	40	4.31	2.21	1.02	0.59	0.23	1.85	8.64*
8SS	3.0	55.5	63.3	57.3	95	95	93	93	76	68	32	4.18	2.03	0.90	0.42	0.21	1.53	7.94*
B-8.0707	2.8	57.0	63.0	56.0	97	98	97	93	75	50	27	4.06	2.22	0.73	0.35	0.23	1.31	7.86*
ADG 1001	3.3	49.3	62.8	56.0	97	94	96	93	68	57	42	4.00	2.22	0.85	0.37	0.20	1.41	7.71*
Mean	3.3	51.3	62.1	55.7	95.8	93.4	94.3	93.2	75.2	65.6	36.0	4.10	2.03	0.86	0.44	0.22	1.53	7.82
CV,%	19.1	11.5	1.2	2.2	2.1	9.8	6.4	4.9	15.1	23.9	32.3	9.06	15.58	21.40	22.17	34.87	18.62	7.86
LSD,0.05	0.9	8.4	1.0	2.1	2.8	13.0	8.5	6.5	18.6	26.1	19.4	0.53	0.45	0.31	0.16	0.13	0.47	1.02

[1] Vigor score based on scale of 1 to 5 with 5 being the most vigorous seedling growth.
[2] Maturity rating scale: 37=flag leaf emergence, 45=boot swollen, 50=beginning of inflorescence emergence, 58=complete emergence of inflorescence, 62=beginning of pollen shed. See Table 4 for complete scale.
* Not significantly different from the highest numerical value in the column, based on the 0.05 LSD.

indicates that the variety was not in that particular test (labeled at the top of the column); an (x) in the block means that the variety was in the test but yielded significantly less than the top-yielding variety. A single asterisk (*) means that the variety was not significantly different from the top-yielding variety in that study, based on the 0.05 LSD. It is best to choose a variety that has performed well over several years and locations. Remember to consider the distribution of yield across the growing season when evaluating productivity of orchardgrass varieties (Tables 5 through 8).

Table 10 is a summary of yield data from 1998 to 2011 of commercial varieties that have been entered in the

Table 6. Dry matter yields, seedling vigor, maturity and stand persistence of orchardgrass varieties sown September 4, 2009 at Lexington, Kentucky.

Variety	Seedling Vigor[1] Oct 13, 2009	Maturity[2] 2010 May 6	Maturity[2] 2011 May 5	Percent Stand 2009 Oct 13	Percent Stand 2010 Apr 13	Percent Stand 2010 Oct 18	Percent Stand 2011 Mar 20	Percent Stand 2011 Oct 27	Yield (tons/acre) 2010 Total	Yield (tons/acre) 2011 May 5	Yield (tons/acre) 2011 Jun 17	Yield (tons/acre) 2011 Aug 11	Yield (tons/acre) 2011 Oct 21	Yield (tons/acre) 2011 Total	2-year Total
Commercial Varieties-Available for Farm Use															
Prairie	4.0	56.0	55.5	100	100	98	97	99	3.19	1.44	0.98	0.64	1.18	4.25	7.43*
Persist	3.5	57.5	53.8	99	100	99	98	98	3.00	1.59	0.91	0.65	1.10	4.26	7.26*
Benchmark Plus	3.8	57.0	54.5	100	100	98	75	99	3.04	1.42	0.96	0.60	0.96	3.94	6.98*
Potomac	3.9	57.5	52.3	99	100	77	98	97	3.12	1.32	0.89	0.57	1.05	3.83	6.95*
Prodigy	1.6	57.0	55.0	88	95	95	96	96	2.75	1.53	0.99	0.64	0.95	4.11	6.86*
Crown	2.6	56.0	54.5	98	99	97	97	99	2.78	1.38	0.91	0.53	0.97	3.79	6.57
Profit	3.0	53.0	51.8	95	98	97	98	98	2.61	1.21	0.93	0.58	0.99	3.71	6.32
Tekapo	2.1	51.0	51.3	89	90	97	97	98	2.09	1.02	0.82	0.56	0.72	3.12	5.21
Experimental Varieties															
IS-OG51	3.8	56.5	49.5	98	100	99	97	97	2.69	1.30	1.01	0.67	1.02	4.00	6.68*
B-9-NIC4	2.8	57.0	51.3	95	98	96	96	97	2.57	1.42	0.92	0.62	0.97	3.93	6.50
Mean	3.1	55.9	52.9	96.1	97.8	95.4	94.8	97.8	2.78	1.36	0.93	0.61	0.99	3.89	6.68
CV,%	30.7	2.2	8.2	6.3	3.3	14.7	14.9	2.3	8.98	15.40	9.98	13.89	14.87	10.26	8.12
LSD,0.05	1.4	1.8	6.3	8.7	4.6	20.4	20.5	3.3	0.36	0.30	0.14	0.12	0.21	0.58	0.79

[1] Vigor score based on scale of 1 to 5 with 5 being the most vigorous seedling growth.
[2] Maturity rating scale: 37=flag leaf emergence, 45=boot swollen, 50=beginning of inflorescence emergence, 58=complete emergence of inflorescence, 62=beginning of pollen shed. See Table 4 for complete scale.
* Not significantly different from the highest numerical value in the column, based on the 0.05 LSD.

Kentucky trials. The data is listed as a percentage of the mean of the commercial varieties entered in each specific trial. In other words, the mean for each trial is 100 percent—varieties with percentages over 100 yielded better than average, and varieties with percentages less than 100 yielded lower than average. Direct, statistical comparisons of varieties cannot be made using the summary Table 10, but these comparisons do help to identify varieties for further consideration. Varieties that have performed better than average over many years and at several locations have very stable performance; others may have performed very well in wet years or on particular soil types. These details may influence variety choice, and the information can be found in the yearly reports. See footnote in Table 10 to determine which yearly report to refer to.

Table 7. Dry matter yields, seedling vigor and stand persistence of orchardgrass varieties sown September 16, 2010 at Princeton, Kentucky.

Variety	Seedling Vigor[1] Nov 19, 2010	Percent Stand			Yield (tons/acre)				
		2010	2011		2011				
		Nov 19	Apr 8	Oct 24	May 10	Jun 14	Aug 16	Oct 24	Total
Commercial Varieties-Available for Farm Use									
Tucker	3.9	99	100	100	0.57	0.80	0.89	0.65	2.91*
Profit	3.6	99	100	100	0.63	0.79	0.77	0.71	2.91*
Potomac	3.6	99	100	100	0.59	0.66	0.92	0.74	2.90*
Extend	4.8	100	100	100	0.78	0.64	0.74	0.71	2.87*
RAD-LCF25	3.6	99	98	76	0.55	0.74	0.87	0.67	2.83*
Persist	2.0	94	94	99	0.36	0.62	1.07	0.75	2.81*
Benchmark Plus	3.9	99	99	99	0.50	0.62	0.95	0.72	2.78*
Tekapo	4.0	99	98	100	0.44	0.71	0.74	0.72	2.62*
Prairie	3.6	99	99	100	0.54	0.58	0.85	0.63	2.60*
Experimental Varieties									
OG 0404	4.6	99	100	77	0.69	0.65	0.92	0.67	2.93*
Dg83R01	3.3	98	95	98	0.47	0.68	0.94	0.57	2.66*
IS-OG53	1.0	5	8	79	0.20	0.67	1.03	0.68	2.59*
Dg12R01	4.8	100	100	78	0.57	0.72	0.70	0.58	2.57*
B-9.1476	2.6	97	91	95	0.33	0.63	0.98	0.54	2.48
Mean	3.6	91.7	91.4	92.7	0.51	0.68	0.88	0.67	2.75
CV,%	23.5	3.1	2.5	22.4	17.98	13.34	14.92	13.02	9.82
LSD,0.05	1.3	4.0	3.3	29.8	0.13	0.13	0.19	0.12	0.39

[1] Vigor score based on scale of 1 to 5 with 5 being the most vigorous seedling growth
* Not significantly different from the highest numerical value in the column, based on the 0.05 LSD.

Table 8. Dry matter yields, seedling vigor, maturity and stand persistence of orchardgrass varieties sown September 24, 2010 at Quicksand, Kentucky.

Variety	Seedling Vigor[1] Nov 11, 2010	Maturity[2] 2011 May 11	Percent Stand			Yield (tons/acre)				
			2010	2011		2011				
			Nov 11	Mar 29	Nov 8	May 11	Jun 9	Jul 28	Oct 7	Total
Commercial Varieties-Available for Farm Use										
Profit	3.5	50.3	100	100	100	1.61	0.98	1.31	1.01	4.91*
Prairie	3.3	57.5	98	100	99	1.38	1.00	1.33	1.16	4.87*
Extend	3.8	51.5	100	100	100	1.65	0.93	1.00	0.88	4.46*
RAD-LCF25	2.6	40.3	99	98	96	1.18	0.83	0.99	1.17	4.17*
Potomac	4.3	49.8	100	100	100	1.15	0.72	1.05	0.81	3.73
Benchmark Plus	2.5	59.5	99	100	100	1.17	0.78	0.85	0.86	3.67
Persist	1.3	59.5	91	93	96	0.94	0.72	1.05	0.96	3.67
Tucker	2.4	39.0	99	99	98	1.07	0.83	0.88	0.77	3.56
Tekapo	2.6	51.0	98	98	96	1.00	0.72	0.81	0.71	3.24
Experimental Varieties										
OG 0404	4.5	57.5	100	100	100	1.60	1.06	1.28	0.93	4.88*
Dg83R01	2.3	37.0	100	98	86	1.33	0.86	1.05	0.96	4.20*
IS-OG51	3.0	52.8	100	100	100	1.15	0.78	1.14	0.81	3.88
B-9.1476	2.0	37.0	96	97	86	1.01	0.68	1.10	0.92	3.71
B-9-NIC4	2.5	55.5	100	100	100	1.13	0.81	0.89	0.87	3.70
Dg12R01	4.4	39.0	99	100	100	1.29	0.80	0.86	0.58	3.53
IS-OG53	0.5	37.0	43	28	58	0.64	0.59	1.25	0.76	3.24
Mean	2.8	48.4	95.0	94.3	94.5	1.21	0.82	1.05	0.88	3.96
CV,%	22.4	8.3	3.6	3.2	9.5	19.03	16.53	19.01	26.55	13.11
LSD,0.05	0.9	5.7	4.8	4.3	12.8	0.33	0.19	0.29	0.33	0.74

[1] Vigor score based on scale of 1 to 5 with 5 being the most vigorous seedling growth.
[2] Maturity rating scale: 37=flag leaf emergence, 45=boot swollen, 50=beginning of inflorescence emergence, 58=complete emergence of inflorescence, 62=beginning of pollen shed. See Table 4 for complete scale.
* Not significantly different from the highest numerical value in the column, based on the 0.05 LSD.

Summary

Selecting a good orchardgrass variety is an important first step in establishing a productive stand of grass. Proper management, beginning with seedbed preparation and continuing throughout the life of the stand, is necessary for even the highest-yielding variety to produce to its genetic potential.

The following is a list of University of Kentucky Cooperative Extension publications related to orchardgrass management. They are available from your county Extension office and are listed in the "Publications" section of the UK Forage website, www.uky.edu/Ag/Forage:

- *Lime and Fertilizer Recommendations* (AGR-1)
- *Grain and Forage Crop Guide for Kentucky* (AGR-18)
- *Renovating Hay and Pasture Fields* (AGR-26)
- *Orchardgrass* (AGR-58)
- *Establishing Forage Crops* (AGR-64)
- *Forage Identification and Use Guide* (AGR-175)
- *Rotational Grazing (ID-143)*

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Table 9. Performance of orchardgrass varieties across years and locations.

		Princeton				Lexington		Quicksand
		2008[1]			2010	2009		2010
Variety	Proprietor/KY Distibutor	09[2]	10	11	11	10	11	11
Commercial Varieties-Available for Farm Use								
Benchmark Plus	FFR/Southern States	x[3]	*	*	*	*	*	x
Crown	Donley Seed	*	*	*		x	*	
Elsie	Rose-AgriSeed	x	*	*				
Extend	Farm Service Genetics/Allied				*			*
Lazuly	ProSeeds Marketing	*	*	x				
Megabite	Rose-AgriSeed	x	*	*				
Persist	Smith Seed Services				*	*	*	x
Potomac	Public	*	*	*	*	*	*	x
Prairie	Turner Seed Company	*	x	*	*	*	*	*
Prodigy	Caudill Seed	*	*	x		x	*	
Profit	Ampac Seed Company	*	*	*	*	x	*	*
RAD-LXCF25	Radix Research				*			*
Shawnee	Rose-AgriSeed	x	*	x				
Tekapo	Ampac Seed Company	x	*	x	*	x	x	x
Tucker	Oregro Seeds, Inc.	*	*	*	*			x
Experimental Varieties								
8SS	Rose-AgriSeed	*	*	x				
ADG 1001	ProSeeds Marketing	x	*	x				
ADG 1002	ProSeeds Marketing	*	*	*				
B-8.0707	Blue Moon Farms	x	*	x				
B-9.1476	Blue Moon Farms				x			x
B-9-NIC4	Blue Moon Farms					x	*	x
Dg12R01	Barenbrug				*			x
DG83R01	Barenbrug				*			*
IS-OG51	DLF International Seeds					x	*	x
IS-OG53	DLF International Seeds				*			x
OG 0404	FFR/Southern States				*			*

[1] Establishment year.
[2] Harvest year.
[3] x in the box indicates the variety was in the test but yielded significantly less than the top ranked variety in the test. Open box indicates the variety was not in the test.
* Not significantly different from the highest yielding variety in the test.

Table 10. Summary of Kentucky Orchardgrass Yield Trials 1999-2011 (yield shown as a percentage of the mean of the commercial varieties in the trial).

		Lexington						Princeton						Quicksand				
		1999[1,2]	2001	2003	2006	2007	2009	1998	2000	2002	2004	2006	2008	1999	2001	2003	2005	Mean[3]
Variety	Proprietor	2-yr[4]	2-yr	3-yr	4-yr	3-yr	2-yr	2-yr	2-yr	3-yr	3-yr	3-yr	3-yr	2-yr	2-yr	3-yr	4-yr	(#trials)
Abertop	Pennington									71								–
Albert	Univ. of Wis.		103												106			105(2)
Amba	DLF International Seeds		96												80			88(2)
Ambassador	DLF International Seeds										95							–
Ambrosia	American Grass Seed Prod.											90						–
Athos	DLF International Seeds		98												105			102(2)
Benchmark	FFR/Sou. St.	103						101	97	113				106				104(5)
Benchmark Plus	FFR/Sou. St.				100	108	104			107		107	104			107	102	105(8)
Boone	Public							103	104									104(2)
Bronc	Grassland West								98									–
Bounty	Allied Seed				101												98	100(2)
Century	Seed Research of Oregon				98												104	101(2)
Checkmate	Seed Research of Oregon					102												–
Christoss	Proseeds Marketing					92												–
Command	Seed Research of Oregon										87							–
Crown	Donley Seed	101					98	105		101			105	97				101(6)
Crown Royale	Donley Seed														110			–
Crown Royale Plus	Donley Seed									108						97		103(2)
Eastwood	Ampac Seed		86												86			86(2)
Elsie	Rose-AgriSeed												98					–
Endurance	DLF International Seeds											104						–
Extend	Allied Seed										100							–
Hallmark	James VanLeeuwen		102	102						103	98				101	96		100(6)
Harvestar	Columbia Seeds				91	97						106					100	99(4)
Haymaster	FFR/Sou. St.				94												97	96(2)
Haymate	FFR/Sou. St.	106						93	100	106				108	104	103		103(7)
Icon	Seed Research of Oregon				105												98	102(2)
Intensiv	Barenbrug			102														–
Lazuly	Proseeds Marketing												97					–

Table 10. Summary of Kentucky Orchardgrass Yield Trials 1999-2011 (yield shown as a percentage of the mean of the commercial varieties in the trial).

		Lexington						Princeton						Quicksand				Mean[3]
		1999[1,2]	2001	2003	2006	2007	2009	1998	2000	2002	2004	2006	2008	1999	2001	2003	2005	
Variety	Proprietor	2-yr[4]	2-yr	3-yr	4-yr	3-yr	2-yr	2-yr	2-yr	3-yr	3-yr	3-yr	3-yr	2-yr	2-yr	3-yr	4-yr	(#trials)
LG-31	DLF International Seeds										92							–
Mammoth	DLF International Seeds		102												104			103(2)
Megabite	Turf-Seed	94	105										106	101				102(4)
Niva	DLF International Seeds									81								–
Paiute	DLF International Seeds					108												–
Persist	Smith Seed			123	105	106	108				101					108	101	107(7)
Potomac	Public	104					104			98			108	99				103(5)
Prairie	Turner Seed		101		107	101	111		95	104		100	104		102	105	107	103(11)
Prodigy	Caudill Seed						102						103					103(2)
Profit	Ampac Seed					107	94						103					101(3)
Renegade	Grassland West								95									–
Shawnee	Rose-AgriSeed												86					–
Shiloh	Proseeds Marketing							109										–
Shiloh II	Proseeds Marketing										117							–
Spanish Pink	DLF International Seeds							82										–
Spanish Red	DLF International Seeds	101												94				98(2)
Takena	Smith Seed		107							100					108			105(3)
Tekena II	Smith Seed			110	102						109					106	104	106(5)
Tekapo	Ampac Seed	88			91	81	78					98	86	94	92	105	91	90(10)
Tucker	Oregro Seeds											96	102					99(2)
Udder	Improved Forages			100	107				102	102						106	99	103(6)
Vailliant	Proseeds Marketing					96												–
Vision	Cropmark Seeds			63												67		65(2)

[1] Year trial was established.
[2] Use this summary table as a guide in making variety decisions, but refer to specific yearly reports to determine statistical differences in forage yield between varieties. To find actual yields, look in the yearly report for the final year of each specific trial. For example, the Lexington trial planted in 1999 was harvested 2 years, so the final report would be "2001 Orchardgrass Report" archived in the KY Forage website at <www.uky.edu/Ag/Forage>.
[3] Mean only presented when respective variety was included in two or more trials.
[4] Number of years of data.

12-2011