

# 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](http://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.

## 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 (Cridler), and Quicksand (Nolin) are well-drained silt

loams and are well suited to orchardgrass production. Seedlings 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 1. Temperature and rainfall at Lexington, Kentucky in 2010 and 2011.**

	2010				2011 <sup>2</sup>			
	Temp.		Rainfall		Temp.		Rainfall	
	°F	DEP <sup>1</sup>	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

<sup>1</sup> DEP is departure from the long-term average.  
<sup>2</sup> 2011 data is for the ten months through October

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

	2009				2010				2011 <sup>2</sup>			
	Temp.		Rainfall		Temp.		Rainfall		Temp.		Rainfall	
	°F	DEP <sup>1</sup>	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

<sup>1</sup> DEP is departure from the long-term average.  
<sup>2</sup> 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 <sup>2</sup>			
	Temp.		Rainfall		Temp.		Rainfall	
	°F	DEP <sup>1</sup>	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

<sup>1</sup> DEP is departure from the long-term average.

<sup>2</sup> 2011 data is for the ten months through October

Code	Description	Remarks
<b>Leaf development</b>		
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	
<b>Sheath elongation</b>		
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	
<b>Tillering (alternative to sheath elongation)</b>		
21	Main shoot only	Applicable to primary growth of seedlings or 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	
<b>Stem elongation</b>		
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	
<b>Booting</b>		
45	Boot swollen	
<b>Inflorescence emergence</b>		
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	
<b>Anthesis</b>		
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.
<b>Seed ripening</b>		
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 quantity when 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 <sup>1</sup> Oct 30, 2008	Maturity <sup>2</sup>			Percent Stand								Yield (tons/acre)					
		2009 May 11	2010 May 18	2011 May 10	2008 Oct 30	2009		2010		2011		2009 Total	2010 Total	2011				3-year Total
						Apr 17	Nov 4	Mar 18	Nov 19	Apr 8	Oct 25			May 10	Jun 14	Aug 16	Total	
<b>Commercial Varieties-Available for Farm Use</b>																		
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*
Megabyte	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
<b>Experimental Varieties</b>																		
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

<sup>1</sup> Vigor score based on scale of 1 to 5 with 5 being the most vigorous seedling growth.

<sup>2</sup> 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 <sup>1</sup> Oct 13, 2009	Maturity <sup>2</sup>		Percent Stand						Yield (tons/acre)					
		2010 May 6	2011 May 5	2009 Oct 13	2010		2011		2010 Total	2011				2-year Total	
					Apr 13	Oct 18	Mar 20	Oct 27		May 5	Jun 17	Aug 11	Oct 21		Total
<b>Commercial Varieties-Available for Farm Use</b>															
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
<b>Experimental Varieties</b>															
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

<sup>1</sup> Vigor score based on scale of 1 to 5 with 5 being the most vigorous seedling growth.

<sup>2</sup> 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 <sup>1</sup> Nov 19, 2010	Percent Stand			Yield (tons/acre)				
		2010 Nov 19	2011		2011				
			Apr 8	Oct 24	May 10	Jun 14	Aug 16	Oct 24	Total
<b>Commercial Varieties-Available for Farm Use</b>									
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*
<b>Experimental Varieties</b>									
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

<sup>1</sup> 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 <sup>1</sup> Nov 11, 2010	Maturity <sup>2</sup> 2011 May 11	Percent Stand			Yield (tons/acre)				
			2010 Nov 11	2011		2011				
				Mar 29	Nov 8	May 11	Jun 9	Jul 28	Oct 7	Total
<b>Commercial Varieties-Available for Farm Use</b>										
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
<b>Experimental Varieties</b>										
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

<sup>1</sup> Vigor score based on scale of 1 to 5 with 5 being the most vigorous seedling growth.  
<sup>2</sup> 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](http://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.**

Variety	Proprietor/KY Distributor	Princeton				Lexington		Quicksand
		2008 <sup>1</sup>		2010	2009		2010	
		09 <sup>2</sup>	10	11	11	10	11	11
<b>Commercial Varieties-Available for Farm Use</b>								
Benchmark Plus	FFR/Southern States	x <sup>3</sup>	*	*	*	*	*	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
<b>Experimental Varieties</b>								
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				*			*
<sup>1</sup> Establishment year. <sup>2</sup> Harvest year. <sup>3</sup> 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.								

Variety	Proprietor	Lexington																Princeton				Quicksand				Mean <sup>3</sup> (#trials)	
		1999 <sup>1,2</sup> 2-yr <sup>4</sup>		2001	2003		2006	2007		2009	1998		2000	2002		2004	2006		2008	1999		2001	2003		2005		
		2-yr	3-yr	2-yr	3-yr	4-yr	3-yr	3-yr	2-yr	2-yr	2-yr	2-yr	2-yr	3-yr	3-yr	3-yr	3-yr	3-yr	3-yr	2-yr	2-yr	2-yr	3-yr	3-yr	4-yr		
Abertop	Pennington																										
Albert	Univ. of Wis.			103																							
Amba	DLF International Seeds			96																							
Ambassador	DLF International Seeds																										
Ambrosia	American Grass Seed Prod.																90										
Athos	DLF International Seeds																										
Benchmark	FFR/Sou. St.	103																									
Benchmark Plus	FFR/Sou. St.					100		108	104																		
Boone	Public																										
Bronc	Grassland West																										
Bounty	Allied Seed																										
Century	Seed Research of Oregon																										
Checkmate	Seed Research of Oregon																										
Christoss	Proseeds Marketing																										
Command	Seed Research of Oregon																										
Crown	Donley Seed	101																									
Crown Royale	Donley Seed																										
Crown Royale Plus	Donley Seed																										
Eastwood	Ampac Seed																										
Elsie	Rose-AgriSeed																										
Endurance	DLF International Seeds																										
Extend	Allied Seed																										
Hallmark	James VanLeeuwen																										
Harvestar	Columbia Seeds																										
Haymaster	FFR/Sou. St.																										
Haymate	FFR/Sou. St.	106																									
Icon	Seed Research of Oregon																										
Intensiv	Barenbrug																										
Lazuly	Proseeds Marketing																										

**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).**

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

<sup>1</sup> Year trial was established.

<sup>2</sup> 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](http://www.uky.edu/Ag/Forage)>.

<sup>3</sup> Mean only presented when respective variety was included in two or more trials.

<sup>4</sup> Number of years of data.



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