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2008 Orchardgrass Report



G.L. Olson, S.R. Smith, T.D. Phillips, G.D. Lacefield, and D.C. Ditsch, UK Department of Plant and Soil Sciences

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, bunchtype 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 9 shows a summary of all orchardgrass varieties tested in Kentucky for the last nine 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) and the level of germination and 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 (2006 and 2007), Quicksand (2005), and Princeton (2006). The soils at Lexington (Maury), Quicksand (Nolin), and Princeton (Crider) are welldrained 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 topdressed 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 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 Quicksand, Lexington, and Princeton are presented in Tables 1 through 3.

Ratings for maturity and stand and dry matter yields (tons/A) are reported in Tables 4 through 7. Yields are given by cutting date 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 variet-

		20	06			20	07			20	08	
	Tempe	erature	Ra	infall	Tempe	rature	Rai	infall	Tempe	rature	Rainfall	
	°F	DEP	IN	DEP	°F	DEP	IN	DEP	°F	DEP	IN	DEP
JAN	42	+11	4.77	+1.91	37	+6	2.93	+0.07	33	+2	4.60	+1.74
FEB	36	+1	2.13	-1.08	27	-8	1.83	-1.38	36	+1	5.37	+2.16
MAR	44	0	3.05	-1.35	52	+8	1.97	-2.43	45	+1	6.28	+1.88
APR	59	+4	3.52	-0.36	53	-2	3.87	-0.01	55	0	5.72	+1.84
MAY	62	-2	2.99	-1.48	68	+4	1.45	-3.02	62	-2	4.88	+0.41
JUN	70	-2	1.82	-1.84	74	+2	1.77	-1.89	74	+2	3.30	-0.36
JUL	76	0	5.13	+0.13	74	-2	6.90	+1.90	76	0	2.54	-2.46
AUG	76	+1	3.23	-0.70	80	+5	2.56	-1.37	75	0	1.08	-2.85
SEP	64	-4	9.27	+6.07	72	+4	1.15	-2.05	72	+4	1.21	-1.99
OCT	54	-3	4.88	+2.31	63	+6	5.28	+2.71	57	0	1.35	-1.22
NOV	47	+2	1.78	-1.61	46	+1	2.86	-0.53	43	-2	2.28	-1.11
DEC	42	+6	2.45	-1.53	40	+4	5.29	+1.31				
Total			45.02	+0.47			37.86	-6.69			38.61	-1.96

DEP is departure from the long-term average. 2008 data is for eleven months through November.



ies 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 8 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 8, an open block 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. 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

JAN 46 +12 5.38 +1.58 40 +6 4.89 +1.09 37 +3 2.40 -1. FEB 38 0 2.66 -1.77 34 -4 2.99 -1.44 39 +1 6.76 +2. MAR 51 +4 4.22 -0.72 58 +11 1.85 -3.09 48 +1 7.55 +2. APR 63 +4 4.02 -0.78 58 -1 3.95 -0.85 58 -1 6.56 +1.														
		20	06			20	07			20	08			
	Tempe	rature	Ra	infall	Tempe	erature	Ra	infall	Tempe	rature	Ra	infall		
	°F	DEP	IN	DEP	°F	DEP	IN	DEP	°F	DEP	IN	DEP		
JAN	46	+12	5.38	+1.58	40	+6	4.89	+1.09	37	+3	2.40	-1.40		
FEB	38	0	2.66	-1.77	34	-4	2.99	-1.44	39	+1	6.76	+2.33		
MAR	51	+4	4.22	-0.72	58	+11	1.85	-3.09	48	+1	7.55	+2.61		
APR	63	+4	4.02	-0.78	58	-1	3.95	-0.85	58	-1	6.56	+1.76		
MAY	66	-1	5.42	+0.46	71	+4	2.29	-2.67	65	-2	6.19	+1.23		
JUN	75	0	3.39	-0.46	76	+1	4.32	+0.47	78	+3	1.24	-2.61		
JUL	79	+1	3.79	-0.50	77	-1	1.77	-2.52	79	+1	5.12	+0.83		
AUG	80	+3	2.58	-1.43	85	+8	0.87	-3.14	77	0	0.69	-3.32		
SEP	67	-4	9.80	+6.47	75	+4	3.52	+0.19	74	+3	0.61	-2.72		
OCT	57	-2	4.5	+1.45	65	+6	5.84	+2.79	60	+1	2.21	-0.84		
NOV	49	+2	4.31	-0.32	49	+2	2.31	-2.32	46	-1	2.59	-2.04		
DEC	44	+5	4.76	-0.28	42	+3	10.83	+5.79						
Total			54.82	+3.69			47.92	-3.21			41.96	-4.13		
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DEP is departure from the long-term average.

2008 data is for eleven months through November.

evaluating productivity of orchardgrass varieties (Tables 4 through 7).

Table 9 is a summary of yield data from 1998 to 2008 of commercial varieties that have been entered in the 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 9, 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 9 to determine which yearly report to refer to.

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.

Table 3	. Tempera	ture and	l rainfall	at Quicks	and, Kei	ntucky in	2005, 20	006, 2007	and 200)8.						
		20	05			20	06			20	07			20	08	
	Tempe	erature	Ra	infall	Tempe	rature	Ra	infall	Tempe	rature	Ra	infall	Tempe	rature	Ra	infall
	°F	DEP	IN	DEP	°F	DEP	IN	DEP	°F	DEP	IN	DEP	°F	DEP	IN	DEP
JAN	40	+9	4.45	+1.16	44	+13	4.48	+1.19	38	+7	2.70	-0.59	34	+3	2.07	-1.22
FEB	42	+9	3.01	-0.59	37	+4	1.56	-2.04	31	-2	0.61	-2.99	38	+5	3.52	-0.08
MAR	44	+3	2.86	-1.48	47	+6	1.74	-2.60	54	+13	2.70	-1.64	46	+5	3.62	-0.72
APR	58	+5	6.63	+2.53	60	+7	2.95	-1.15	55	+2	1.71	-2.39	56	+3	3.99	-0.11
MAY	63	+1	2.05	-2.43	63	+1	3.45	-1.03	69	+7	1.82	-2.66	63	+1	3.69	-1.79
JUN	75	+5	2.39	-1.43	71	+1	3.00	-0.82	75	+5	1.95	-1.87	75	+5	3.96	+0.14
JUL	78	+4	2.58	-2.67	77	+3	3.85	-1.40	76	+2	4.00	-1.25	76	+2	4.96	-0.29
AUG	79	+6	3.51	-0.50	78	+5	3.55	046	82	+9	2.41	-1.60	74	+1	1.16	-2.85
SEP	72	+6	0.27	-3.25	65	-1	5.56	+2.04	73	+7	2.49	-1.03	72	+6	0.15	-3.37
OCT	59	+5	0.68	-2.23	55	+1	6.00	+3.09	63	+9	3.80	+0.89	58	+4	1.02	-1.89
NOV	49	+7	1.30	-2.58	48	+6	2.32	-1.56	47	+5	1.80	-2.08	44	+2	2.14	-1.74
DEC	34	+1	2.39	-1.75	43	+10	1.55	-2.59	42	+8	4.44	+0.30				
Total			32.12	-15.22			40.07	-7.27			30.43	-16.91			29.28	-13.92

DEP is departure from the long-term average. 2008 data is for eleven months through November.

Table 4. Dry matter yields and stand persistence of orchardgrass varieties sown September 31, 2006 at Quicksand, Kentucky. **Percent Stand** Yield (tons/acre) 2006 2006 2008 2007 2008 2007 3-yr Apr 18 Nov 3 Oct 17 Apr 12 May 5 Jun 27 Total Variety Apr 10 Nov 5 **Total** Total Nov 14 Total **Commercial Varieties-Available for Farm Use** 3.27 Prairie 96 98 96 6.24 3.44 1.05 0.34 12.95* Takena II 89 91 94 90 93 93 6.10 3.39 1.42 1.18 0.40 3.00 12.50* 94 94 94 93 94 95 5.60 1.70 0.43 12.49* Century 3.62 1.14 3.28 Benchmark Plus 94 92 93 91 94 96 6.02 2.96 1.76 0.97 0.41 3.14 12.11* 93 93 5.74 Persist 88 91 95 96 2.80 2.10 1.10 0.29 3.49 12.03* Udder 89 91 92 89 86 91 5.71 3.70 1.15 0.97 0.31 2.43 11.85* Harvestar 81 90 93 90 90 91 5.98 3.05 1.10 1.39 0.30 2.79 11.82 94 95 93 93 5.79 0.70 2.90 11.79* 96 93 3.10 1.94 0.26 Bounty lcon 88 90 93 93 93 95 5.68 3.49 1.23 1.10 0.23 2.56 11.73* 11.51* Haymaster 84 88 91 88 90 93 5.49 3.26 1.48 1.06 0.21 2.75 95 94 95 94 95 94 5.65 2.43 1.32 1.02 0.25 2.59 10.66* Tekapo Mean 90.2 91.9 93.9 3.20 0.31 2.93 93.5 91.7 92.4 5.82 1.55 1.06 11.95 CV,% 10.4 5.9 4.5 4.8 5.0 15.9 18.4 26.8 27.4 37.2 22.0 15.2 3.0 LSD,0.05 13.6 7.9 6.0 6.3 6.6 4.0 1.34 0.85 0.60 0.42 0.17 0.93 2.63 Not significantly different from the highest numerical value in the column, based on the 0.05 LSD.*

matter yie	elds, seec	lling vig	or, matu	rity and	stand po	ersisten	ce of orcl	nardgras	s varieti	es sown	March 2	0, 2006	at Lexing	ton, Ke	ntucky.
	Matu	rity ²			Percen	t Stand					Yiel	d (tons/a	cre)		
	2007	2008	20	06	20	07	20	08	2006	2007		20	08		3-year
2006	May 10	May 6	May 12	Oct 17	Mar 26	Oct 11	Mar 27	Oct 21	Total	Total	May 6	Jun 24	Aug 13	Total	Total
/arieties-/	Available	for Farr	n Use												
3.5	55.0	47.5	91	95	94	89	88	85	3.27	3.22	1.07	0.53	0.23	1.83	8.32*
3.5	55.5	51.5	94	96	95	93	93	93	3.11	2.95	1.27	0.51	0.29	2.06	8.13*
3.0	57.5	55.5	93	96	97	94	95	95	2.79	3.22	1.48	0.37	0.25	2.10	8.10*
3.8	58.0	55.0	95	96	94	95	95	93	2.80	3.07	1.50	0.42	0.28	2.20	8.07*
3.0	57.0	55.5	93	96	95	94	96	96	2.87	3.05	1.47	0.38	0.25	2.09	8.01*
3.5	48.0	48.0	90	96	96	91	88	89	2.82	3.05	1.11	0.53	0.33	1.98	7.85*
3.5	57.0	52.5	95	95	95	94	94	93	2.65	2.92	1.22	0.41	0.27	1.90	7.47*
4.3	56.5	54.5	96	98	97	97	96	94	2.66	2.72	1.39	0.42	0.23	2.05	7.42*
3.3	34.8	36.0	95	95	95	86	86	88	3.00	2.71	0.83	0.65	0.22	1.70	7.41*
2.8	53.5	46.3	88	93	90	89	86	89	2.70	2.70	0.98	0.62	0.28	1.89	7.28*
3.8	57.0	52.5	98	99	96	95	93	91	2.69	2.20	1.01	0.44	0.28	1.73	6.63
l Varieties											•	,			
3.3	56.5	56.0	98	98	97	95	93	95	3.04	3.08	1.43	0.46	0.32	2.21	8.34*
3.5	42.5	33.0	100	99	94	93	88	90	2.91	2.65	1.84	0.60	0.26	2.70	8.27*
3.8	55.0	51.0	96	98	95	95	95	96	2.89	2.67	1.14	0.49	0.25	1.88	7.44*
3.5	-	_	98	98	13	21	9	13	2.70	0.64	0.01	0.16	0.11	0.28	3.62
			•			•		•			•				
3.5	53.1	49.6	94.5	96.4	89.4	87.9	86.2	86.4	2.86	2.72	1.18	0.47	0.26	1.91	7.49
26.0	11.3	5.1	4.8	2.7	3.1	5.4	4.8	4.6	12.8	11.1	54.4	13.0	36.3	34.8	12.0
1.3	8.6	3.6	6.5	3.7	3.9	6.8	6.0	5.7	0.52	0.43	0.92	0.09	0.13	0.95	1.28
	Seedling Vigor¹ May 12, 2006 /arieties-/ 3.5 3.5 3.0 3.8 3.0 3.5 4.3 3.5 4.3 3.5 4.3 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3	Seedling Vigor1 May 12, 2006 Matu 2007 May 10 /arieties-Available 3.5 55.0 3.5 55.5 3.0 57.5 3.0 57.0 3.5 58.0 3.0 57.0 48.0 3.5 57.0 4.3 56.5 57.0 43.3 56.5 3.3 34.8 2.8 53.5 3.5 57.0 I Varieties 3.3 56.5 3.5 42.5 3.8 55.0 3.5 - 3.5 55.0	Seedling Vigor1 May 12, 2006 Maturity2 Zooof May 10 May 6 Arrieties-Available for Farr 3.5 55.0 47.5 3.5 55.5 51.5 3.0 57.5 55.5 3.0 57.0 55.5 3.0 57.0 55.5 3.5 48.0 48.0 3.5 57.0 52.5 4.3 56.5 54.5 3.3 34.8 36.0 2.8 53.5 46.3 3.8 57.0 52.5 I Varieties 3.3 56.5 56.0 3.5 42.5 33.0 3.5 42.5 33.0 3.5 - - 3.5 53.1 49.6 26.0 11.3 5.1 1.3 8.6 3.6	Seedling Vigor¹ May 12, 2006 Maturity² 2008 20 May 10 May 6 May 12 May 10 May 6 May 12 Jan. S.	Seedling Vigor¹ May 12, 2006 Maturity² 2008 2006 May 10 May 6 May 12 Oct 17 /arieties-Available for Farm Use 3.5 55.0 47.5 91 95 3.5 55.5 51.5 94 96 3.0 57.5 55.5 93 96 3.0 57.0 55.5 93 96 3.0 57.0 55.5 93 96 3.5 48.0 48.0 90 96 3.5 57.0 52.5 95 95 4.3 56.5 54.5 96 98 3.3 34.8 36.0 95 95 2.8 53.5 46.3 88 93 3.8 57.0 52.5 98 99 I Varieties 3.3 56.5 56.0 98 98 3.5 42.5 33.0	Seedling Vigor¹ May 12, 2007 Maturity² 2008 2006 20 May 12, 2006 May 10 May 6 May 12 Oct 17 Mar 26 /arieties-Available for Farm Use 3.5 55.0 47.5 91 95 94 3.5 55.5 51.5 94 96 95 3.0 57.5 55.5 93 96 97 3.8 58.0 55.0 95 96 94 3.0 57.0 55.5 93 96 95 3.5 48.0 48.0 90 96 96 3.5 57.0 52.5 95 95 95 4.3 56.5 54.5 96 98 97 3.3 34.8 36.0 95 95 95 2.8 53.5 46.3 88 93 90 3.8 57.0 52.5 98 99 96 I Varieties	Seedling Vigor¹ May 12, 2006 Maturity² Percent Stand Jame of the property of	Seedling Vigor¹ May 12, 2006 Maturity² Percent Stand Percent Stand 2007 2008 2007 2007 2007 20 20 720 May 12, 2007 May 12, 2007 May 20 Tot 17 Mar 26 Oct 11 Mar 27 Varieties-Available for Farm Use 3.5 55.0 47.5 91 95 94 89 88 3.5 55.0 47.5 91 95 94 89 88 3.5 55.5 51.5 94 96 95 93 93 3.0 57.5 55.5 93 96 97 94 95 3.8 58.0 55.0 95 96 94 95 95 3.0 57.0 55.5 93 96 95 94 96 3.5 48.0 48.0 90 96 96 91 88 3.5 57.0 52.5 95 95 95 94 94	Seedling Vigor¹ May 12, 2006 Maturity² Percent Stand 2006 May 10 May 6 May 12 Oct 17 Mar 26 Oct 11 Mar 27 Oct 21 /arieties-Available for Farm Use 3.5 55.0 47.5 91 95 94 89 88 85 3.5 55.5 51.5 94 96 95 93 93 93 3.0 57.5 55.5 93 96 97 94 95 95 3.8 58.0 55.0 95 96 94 95 95 93 3.0 57.0 55.5 93 96 97 94 95 95 3.5 48.0 48.0 90 96 95 94 96 96 3.5 57.0 52.5 95 95 95 94 94 93 4.3 56.5 54.5 96 98 97 <	Seedling Vigor¹ May 12, 2006 Maturity² Percent Stand 2008 2006 2006 2007 2008 2006 2007 2008 2006 2007 2008 2006 2007 2008 2006 2007 2008 2006 2006 2008 2006 2007 2008 2006 2007 2008 2006 2006 2008 2006 2006 2008 2006 2006 2008 2006 2006 2008 2006 2006 2006 2008 2008 2006 2006 2008	Seedling Vigor¹ May 12, 2007 2008 2006 2007 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1.48 0.37 0.25 2.10 3.8 58.0 55.0 95 96 94 95 95 3.22 1.48 0.37 0.25 2.09</td></td>	Seedling Vigor1 Nay 12, 2007 2008 200-7 200-7 200-8 2006 2007 2008 200-7 200-8 2006 2007 May 6 May 10 May 10 May 10 May 12 Oct 17 Mar 26 Oct 11 Mar 27 Oct 21 Total May 6 Jun 24 Aug 13 /arieties-Available for Farm Use 3.5 55.0 47.5 91 95 94 89 88 85 3.27 3.22 1.07 0.53 0.23 3.0 55.5 55.5 55.5 94 96 95 93 93 3.11 2.95 1.07 0.53 0.29 3.0 57.5 55.5 95 96 97 94 95 95 2.79 3.22 1.48 0.37 0.25 3.8 58.0 55.0 95 96 94 95 95 93 2.80 3.07 1.50 0.42 0.28 3.8 58.0 55.0 95 </td <td>Vigor1 May 12 May 12 May 6 2006 2008 2006 2008 2006 2008 2006 2008 2006 Jun 24 Aug 13 Total Total Varieties-Available for Farm Use 3.5 55.0 47.5 91 95 94 89 88 85 3.27 3.22 1.07 0.53 0.23 1.83 3.5 55.5 51.5 94 96 95 93 93 3.11 2.95 1.27 0.51 0.29 2.06 3.0 57.5 55.5 93 96 97 94 95 95 2.79 3.22 1.48 0.37 0.25 2.10 3.0 57.5 55.5 93 96 97 94 95 95 2.79 3.22 1.48 0.37 0.25 2.10 3.8 58.0 55.0 95 96 94 95 95 3.22 1.48 0.37 0.25 2.09</td>	Vigor1 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¹Vigor 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.

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 on the web at www.uky.edu/Ag/Forage:

AGR-1—Lime and Fertilizer Recommendations

- AGR-18—Grain and Forage Crop Guide for Kentucky
- AGR-26—Renovating Hay and Pasture Fields
- AGR-58—Orchardgrass
- AGR-64—Establishing Forage Crops
- AGR-175—Forage Identification and Use Guide

Authors

- G.L. Olson, Research Specialist, Forages S.R. Smith, Extension Associate Professor, Forages
- T.D. Phillips, Associate Professor, Tall Fescue Breeding
- G.D. Lacefield, Extension Professor, Forages
- D.C. Ditsch, Extension Associate Professor, Feed Production

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.

	Seedling	Mati	ırity ²		Pe	rcent sta	nd				Yield (to	ns/acre)		
	Vigor ¹ Oct 30,	2007	2008	2006	20	07	20	08	2007		20	08		2-year
Variety	2006	May 8	May 21	Oct 30	Apr 3	Oct 18	Apr 17	Oct 30	Total	May 21	Jun 26	Jul 29	Total	Total
Commercial Varie	ties-Available	for Farn	Use							•				
Harvestar	4.5	31.5	45.0	98	100	98	98	96	2.57	1.13	0.85	0.24	2.23	4.79*
Benchmark Plus	4.8	49.3	62.0	100	100	98	99	95	2.35	1.41	0.70	0.23	2.34	4.69*
Endurance	4.5	31.5	62.8	99	100	98	100	97	2.22	1.35	0.72	0.22	2.28	4.50*
Prairie	5.0	44.5	61.5	100	100	98	99	97	2.19	1.35	0.67	0.20	2.21	4.41*
Tucker	5.0	34.8	61.5	100	100	98	98	97	2.11	1.25	0.62	0.25	2.13	4.24
Tekapo	3.3	36.5	61.5	100	100	100	98	96	2.00	1.30	0.65	0.21	2.16	4.16
Ambrosia	4.5	34.5	53.8	100	100	98	97	95	2.00	0.92	0.70	0.19	1.81	3.81
Experimental Vari	eties													
OG 0204G	4.5	33.3	55.0	99	100	99	99	97	2.44	1.20	0.83	0.26	2.29	4.73*
IS-OG 39	4.8	40.5	62.0	97	99	98	99	95	2.44	1.37	0.67	0.19	2.23	4.67*
NFOG101	2.8	50.5	61.5	100	99	99	97	93	1.45	0.84	0.32	0.19	1.35	2.80
Mean	4.4	38.7	58.7	99.2	99.6	98.2	98.3	95.8	2.18	1.21	0.67	0.22	2.10	4.28
CV,%	11.6	15.6	4.8	1.5	1.1	1.5	2.0	2.5	10.3	13.2	13.8	21.1	7.2	6.5
LSD.0.05	0.7	8.8	4.1	2.1	1.5	2.1	2.9	3.4	0.32	0.23	0.13	0.07	0.22	0.40

	Seedling		Po	ercent Star	nd		Yield (to	ns/acre)	
	Vigor ¹ Oct 25,	Maturity ² 2008	2007	20	08		20	80	
Variety	2007	May 12	Oct 25	Mar 26	Oct21	May 12	Jun 30	Aug 13	Total
Commercial \	/arieties-Ava	ilable for Fa	rm Use						
Benchmark Plus	4.0	56.5	100	100	100	1.33	0.79	0.24	2.36*
Paiute 2	3.0	57.5	99	99	100	1.28	0.73	0.25	2.26*
Christoss	4.3	30.0	100	100	100	1.07	0.86	0.28	2.21*
Profit	3.5	51.8	100	100	100	1.07	0.83	0.29	2.20*
Persist	4.0	57.0	100	100	100	1.17	0.76	0.25	2.18*
Vailliant	2.8	34.8	100	100	100	1.01	0.86	0.28	2.15*
Prairie	4.0	57.0	98	100	100	1.16	0.72	0.26	2.14*
Harvestar	3.8	46.3	100	99	100	1.13	0.75	0.23	2.11*
Checkmate	3.3	53.0	99	100	100	1.10	0.72	0.26	2.08*
Tekapo	4.5	55.0	100	100	100	0.93	0.66	0.19	1.78
Experimenta	Varieties	•	•	•	•	•			
9007238	2.5	55.0	98	98	99	0.42	0.40	0.23	1.06
Mean	3.6	50.3	99.4	99.4	99.7	1.06	0.74	0.25	2.05
CV,%	17.7	9.5	1.4	1.0	0.5	14.4	10.2	27.0	10.5
LSD,0.05	0.9	6.9	2.0	1.4	0.8	0.22	0.11	0.10	0.31

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.

*Not significantly different from the highest numerical value in the column, based on the 0.05 LSD.

 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.
 *Not significantly different from the highest numerical value in the column, based on the 0.05 LSD.

		Princ	eton		Lexin	gton		Q	uicksan	ıd
		200)6 ¹		2006		2007		2005	
Variety	Proprietor/KY Distibutor	07 ²	08	06	07	08	08	06	07	08
Commercial Var	ieties-Available for Farm Use			•					•	
Ambrosia	American Grass Seed Producers	x ³	х							
Benchmark Plus	FFR/Southern States	*	*	х	х	*	*	*	*	*
Bounty	Allied Seed			*	*	*		*	*	*
Century	Seed Research of Oregon			х	*	*		*	*	*
Checkmate	Seed Research of Oregon						*			
Christoss	ProSeeds Marketing						*			
Endurance	DLF International Seeds	*	*							
Harvestar	Columbia Seeds	*	*	*	х	Х	*	*	*	*
Haymaster	FFR/Southern States			х	х	*		*	*	*
lcon	Seed Research of Oregon			*	*	*		*	*	*
Paiute 2	DLF International Seeds						*			
Persist	Smith Seed Services			*	*	*	*	*	*	*
Prairie	Turner Seed Company	х	*	*	*	*	*	*	*	*
Profit	Ampac Seed Company						*			
Takena II	Smith Seed Services			*	*	*		*	*	*
Tekapo	Ampac Seed Company	х	*	х	х	х	х	*	х	*
Tucker	Oregro Seeds, Inc.	х	*							
Udder	Improved Forages, Inc			*	*	*		*	*	х
Vailliant	Proseeds Marketing						*			
Experimental Va	rieties									
9007238	USDA/NRCS						х			
AGRDG101	AgResearch USA			х	х	Х				
ECF27	Radix Research, Inc									
IS-OG39	DLF International Seeds	*	*	*	х	*				
NFOG101	Noble Foundation, Inc.	х	Х							
OG 0204G	Seed Research of Oregon	*	*							
RAD-ECF26	Radix Research, Inc			*	*	*				
RAD-LCF21	Lewis Seed Co.			*	х	*				

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

			Lexin	gton			P	rinceto	n			Quicl	ksand		
		1999 ^{1,2}	2001	2003	2006	1998	2000	2002	2004	2006	1999	2001	2003	2005	Mean ³
Variety	Proprietor	2-yr ⁴	2-yr	3-yr	3-yr	2-yr	2-yr	3-yr	3-yr	2-yr	2-yr	2-yr	3-yr	3-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.									87					-
Athos	DLF International Seeds		98									105			102(2)
Benchmark	FFR/Sou. St.	103			Ì	101	97	113			106				104(5)
Benchmark Plus	FFR/Sou. St.				96			107		107			107	101	104(5)
Boone	Public					103	104								104(2)
Bronc	Grassland West						98								_
Bounty	Allied Seed				105									99	102(2)
Century	Seed Research of Oregon				97									105	101(2)
Command	Seed Research of Oregon								87						
Crown	Donley Seed	101				105		101			97				101(4)
Crown Royale	Donley Seed											110			
Crown Royale Plus	Donley Seed							108					97		103(2)
Eastwood	Ampac Seed		86									86			86(2)
Endurance	DLF International Seeds									103					-
Extend	Allied Seed								100						 _
Hallmark	James VanLeeuwen		102	102				103	98			101	96		100(6)
Harvestar	Columbia seeds			1.02	96					110				99	102(3)
Haymaster	FFR/Sou. St.				95									96	96(2)
Haymate	FFR/Sou. St.	106			75	93	100	106			108	104	103	- 50	103(7)
Icon	Seed Research of Oregon	1.00			106									98	102(2)
Intensiv	Barenbrug			102											-
LG-31	DLF International Seeds			102					92						
Mammoth	DLF International Seeds		102									104			103(2)
Megabite	Turf-Seed	94	105								101	104			100(3)
Niva	DLF International Seeds	77	103					81			101				100(3)
Persist	Smith Seed			123	105			01	101				108	101	108(5)
Potomac	Public	104		123	103			98	101		99		100	101	100(3)
Prairie	Turner Seed	104	101		104		95	104		101	99	102	105	108	100(3)
Renegade	Grassland West		101		104		95	104		101		102	103	100	-
Shiloh	Proseeds Marketing					109	93								
Shiloh II	Proseeds Marketing Proseeds Marketing					109			117						_
Spanish Pink	DLF International Seeds					82			117						_
Spanish Red	DLF International Seeds DLF International Seeds	101		-		02					94				ļ
<u> </u>		101	107					100			94	100			98(2)
Takena	Smith Seed		107	110	102			100	100			108	100	105	105(3)
Tekena II	Smith Seed	00		110	102				109	0.5	0.4	02	106	105	106(5)
Tekapo	Ampac Seed	88			86					95	94	92	105	89	93(7)
Tucker	Oregro Seeds			100	100		100	100		97			100	00	- 102(6)
Udder	Improved Forages			100	108		102	102					106	99	103(6)
Vision	Cropmark Seeds			63									67		65(2)



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.