



# 2016 Timothy and Kentucky Bluegrass Report

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## Introduction

Timothy (*Phleum pratense*) is the fourth most widely sown cool-season perennial grass used in Kentucky for forage—after tall fescue, orchardgrass, and Kentucky bluegrass. It is a late-maturing bunchgrass that is primarily harvested as hay, particularly for horses. It also can be used for grazing or wildlife habitat.

Management is similar to that for other cool-season grasses. Harvesting at the mid- to late-boot stage is needed to assure good yields and high forage quality. The quality of timothy declines more rapidly after heading than other cool-season grasses. In Kentucky, timothy behaves like a short-lived perennial, with stands usually lasting two to three years.

Kentucky bluegrass (*Poa pratensis*) is a high-quality, highly palatable, long-lived pasture plant with limited use for hay. It tolerates close, frequent grazing better than most grasses. It has low yields and low summer production and becomes dormant and brown during hot, dry summers. Kentucky bluegrass is slow to establish.

This report provides maturity and yield data on timothy and Kentucky bluegrass varieties included in yield trials in Kentucky. Tables 10 and 11 show summaries of all timothy and Kentucky bluegrass varieties tested in Kentucky for the last 15 years. The UK Forage Extension website, at [www.uky.edu/Ag/Forage](http://www.uky.edu/Ag/Forage), contains forage variety testing reports

from Kentucky and surrounding states and a large number of other forage publications.

## Considerations in Selection

### Local adaptation and seasonal yield.

Choose a variety that is adapted to Kentucky, as indicated by good performance across 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, whether for hay or grazing. Later-maturing varieties are desirable when timothy is grown in pure stands for hay; early maturing varieties provide a better fit when timothy is grown in mixtures with legumes.

**Seed quality.** Buy premium-quality seed that is high in germination and purity and free from weed seed. Buy certified seed or proprietary varieties of seed of an improved variety. An improved variety is one that has performed well in independent trials such as those reported in this publication.

## Description of the Test

Data from five studies are reported. Timothy varieties and Kentucky bluegrass varieties were sown at Lexington

in 2013, 2014, and 2015 as part of the University of Kentucky Forage Variety Testing Program. The soil at Lexington (Maury) is a well-drained silt loam and is well-suited for timothy and bluegrass production. Seedlings were made at the rate of 8 pounds per acre for timothy and 15 pounds per acre for Kentucky bluegrass into a prepared seedbed with a disk drill. Plots were 5 feet by 20 feet in a randomized complete block design with four replications with a harvested plot area of 5 feet by 15 feet. Nitrogen was applied at 60 pounds per acre of actual nitrogen in March, May, and August for a total of 180 pounds/acre/year. The test was harvested using a sickle-type forage plot harvester leaving a 3-inch stubble to simulate a hay management system. The first cutting was harvested when spring growth of most varieties had reached the mid- to late-boot stage. Subsequent harvests were taken when forage growth was adequate for harvest. Fresh weight samples were taken at each harvest to calculate dry-matter production. Establishment, fertility (P, K, and lime based on regular soil tests), weed control, and harvest were managed according to University of Kentucky Cooperative Extension Service recommendations.

**Table 1. Temperature and rainfall at Lexington, Kentucky, in 2013, 2014, 2015, and 2016.**

	2013				2014				2015				2016 <sup>2</sup>			
	Temp		Rainfall		Temp		Rainfall		Temp		Rainfall		Temp		Rainfall	
	°F	DEP <sup>1</sup>	IN	DEP	°F	DEP	IN	DEP	°F	DEP	IN	DEP	°F	DEP	IN	DEP
JAN	38	+7	4.50	+1.64	25	-6	2.28	-5.8	32	+1	2.17	-0.69	32	+1	0.80	-2.06
FEB	36	+1	1.78	-1.43	30	-5	5.47	+2.26	26	14	3.08	-0.13	38	+3	6.09	+2.88
MAR	39	-5	5.47	+1.07	39	-5	3.08	-1.32	45	+1	7.34	+2.94	52	+8	4.07	-0.33
APR	55	0	4.46	+0.58	58	+3	5.27	-1.89	57	+2	13.19	+9.31	57	+2	3.97	+0.09
MAY	65	+1	5.23	+0.76	66	+2	5.72	+1.25	69	+5	3.02	-1.45	64	0	9.17	+4.70
JUN	72	0	7.32	+3.66	75	+3	2.93	-0.73	75	+3	8.20	+4.54	76	+4	5.09	+1.43
JUL	72	-4	9.33	+4.33	74	-2	3.18	-1.82	77	+1	10.22	+5.22	79	+3	7.43	+2.43
AUG	72	-3	3.68	-0.25	76	+1	6.53	+2.60	74	-1	3.49	-0.44	79	+4	4.37	+0.44
SEP	67	-1	2.21	-0.99	69	+1	3.63	+4.3	72	+4	3.49	+0.29	74	+6	2.18	-1.02
OCT	55	-2	7.02	+4.45	57	0	5.55	+2.98	59	+2	2.78	+0.21	64	+7	0.37	-2.20
NOV	41	-4	3.06	-0.33	41	-4	2.79	-0.60	51	+6	3.72	+0.33				
DEC	36	0	4.19	+0.21	40	+4	2.47	-1.51	49	+13	8.42	+4.44				
Total			58.25	+13.70			49.4	+4.85			69.12	+24.57			43.54	+6.36

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

<sup>2</sup> 2016 data is for the ten months through October.

## Results and Discussion

Weather data for Lexington are presented in Table 1.

Maturity ratings (see Table 2 for maturity scale) and dry-matter yields are reported in tables 3 through 7. Yields are given by harvest date for 2016 and as total annual production. Stated yields are adjusted for percent weeds; therefore, value listed is for crop only. Varieties are listed by descending total production. Experimental varieties, listed separately at the bottom of the tables, are not available commercially.

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

Tables 8 and 9 summarize information about distributors and yield performance for Kentucky bluegrass and timothy varieties included in tests in this report. Varieties are listed in alphabetical order, with the experimental varieties at the bottom. Remember that experimental varieties are not available for farm use. In tables 8 and 9, an open block indicates the variety was not in that particular test (labeled at the top of the column); an “x” in the block means the variety was in the test but yielded significantly less than the top-yielding variety. A single asterisk (\*) means the variety was not significantly different from the highest-yielding variety, based on the 0.05 LSD. It is best to choose a variety that has performed well over several years and locations.

Tables 10 and 11 are summaries of yield data of commercial varieties for Kentucky bluegrass (1996-2016) and timothy (2000-2016) that have been entered in the Kentucky trials. The data

**Table 2. Descriptive scheme for the stages of development in perennial forage grasses.**

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.

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

are 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 higher than average and varieties with percentages less than 100 yielded lower than average. Direct, statistical comparisons of varieties cannot be made using the summary

tables 10 and 11, 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 stable performance; others may have performed well in wet years or on particular soil types. These details may influence variety choice, and the information can be found

**Table 3. Dry matter yields, seedling vigor, maturity, plant height, and stand persistence of Kentucky bluegrass varieties sown September 5, 2013, at Lexington, Kentucky.**

Variety	Seedling Vigor <sup>1</sup> Oct 14, 2013	Maturity <sup>2</sup>			Plant Height (in) Apr 28, 2016	Percent Stand								Yield (tons/acre)					3-year Total
		2014	2015	2016		2013	2014		2015		2016		2014	2015	2016				
		May 13	May 4	Apr 28		Oct 14	Apr 2	Oct 27	Apr 3	Oct 29	Mar 23	Oct 17	Total	Total	Apr 28	Jun 15	Total		
<b>Commercial Varieties-Available for Farm Use</b>																			
Ginger	4.3	58.0	60.0	60.0	16.0	96	92	96	98	98	98	98	1.36	2.38	1.06	0.92	1.97	5.71*	
Barderby	4.4	60.0	60.0	58.5	15.3	98	96	99	99	99	99	100	1.79	1.96	0.79	0.91	1.71	5.46*	
Park (certified)	5.0	56.0	56.0	59.5	12.8	100	100	100	100	100	100	100	1.33	2.18	0.76	0.79	1.55	5.07*	
Kenblue	2.8	59.0	60.0	59.5	13.0	55	75	96	96	97	98	99	1.18	2.24	0.84	0.80	1.64	5.06*	
<b>Experimental Varieties</b>																			
RAD-1446	3.0	51.5	54.5	35.3	7.0	80	94	98	98	99	99	99	1.97	2.07	0.64	0.98	1.62	5.66*	
RAD-1443	3.9	53.0	35.8	47.8	6.0	94	94	98	99	99	99	99	1.68	1.76	0.56	1.05	1.61	5.04*	
RAD-2371	3.0	60.5	60.0	58.0	12.0	91	92	96	96	98	100	100	1.26	2.22	0.74	0.82	1.56	5.04*	
RAD-2040	3.3	59.0	60.0	56.5	10.8	92	91	97	98	98	100	100	1.33	2.35	0.70	0.60	1.30	4.99*	
Mean	3.7	57.1	55.8	54.4	11.6	88	92	97	98	98	99	99	1.49	2.15	0.76	0.86	1.62	5.25	
CV,%	23.3	2.3	8.9	11.4	12.9	16	9	3	3	2	2	2	13.62	17.65	48.52	39.74	33.62	13.78	
LSD,0.05	1.3	2.0	7.3	9.1	2.2	20	12	5	4	3	3	2	0.30	0.56	0.54	0.50	0.80	1.06	

<sup>1</sup> Vigor score based on a 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 2 for complete scale.

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

**Table 4. Dry matter yields, seedling vigor, maturity, plant height, and stand persistence of Kentucky bluegrass varieties sown September 4, 2014, at Lexington, Kentucky.**

Variety	Seedling Vigor <sup>1</sup> Oct 9, 2014	Maturity <sup>2</sup>		Plant Height (in) Apr 28, 2016	Percent Stand					Yield (tons/acre)					2-year Total	
		2015	2016		2014	2015		2016		2015	2016					
		May 4	Apr 28		Oct 9	Apr 2	Oct 29	Mar 21	Oct 17	Total	Apr 28	Jun 15	Aug 11	Total		
<b>Commercial Varieties-Available for Farm Use</b>																
Barderby	4.8	59.0	56.5	11.5	100	100	100	100	100	100	3.09	1.05	1.40	0.66	3.11	6.19*
Park (certified)	5.0	55.0	53.0	7.3	100	100	100	100	100	100	3.42	0.99	1.18	0.58	2.75	6.17*
Kenblue	2.8	60.0	59.0	17.0	99	99	100	100	100	100	2.85	1.26	0.99	0.60	2.85	5.70*
Ginger	4.5	60.0	59.5	17.0	100	100	100	100	100	100	2.80	1.42	0.85	0.53	2.79	5.59*
<b>Experimental Varieties</b>																
GO-F13	4.0	60.0	56.0	13.0	99	99	100	100	100	100	3.35	1.26	1.06	0.60	2.91	6.26*
GO-13NF	2.3	53.0	56.5	13.8	96	99	100	100	100	100	2.26	1.35	1.08	0.70	3.13	5.39*
Mean	3.9	57.8	56.8	13.3	99	100	100	100	100	100	2.96	1.23	1.09	0.61	2.92	5.88
CV,%	16.0	1.7	2.0	9.5	2	1	0	0	0	0	16.19	24.31	29.64	41.08	17.10	1.37
LSD,0.05	0.9	1.5	1.7	1.9	3	1	0	0	0	0	0.72	0.45	0.49	0.38	0.75	1.01

<sup>1</sup> Vigor score based on a 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 2 for complete scale.

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

**Table 5. Dry matter yields, seedling vigor, maturity and stand persistence of timothy varieties sown September 5, 2013 at Lexington, Kentucky.**

Variety	Seedling Vigor <sup>1</sup> Oct 14, 2013	Maturity <sup>2</sup>				Percent Stand								Yield (tons/acre)				3-year Total
		2014	2015	2016	2013	2014		2015		2016		2014	2015	2016				
		May 12	Jun 16	May 12	May 13	Oct 14	Apr 2	Oct 27	Apr 3	Oct 29	Mar 23	Oct 17	Total	Total	May 14	Total		
<b>Commercial Varieties-Available for Farm Use</b>																		
Derby	3.8	51.5	29.0	51.5	55.5	98	98	99	99	97	97	89	3.95	3.34	2.21	2.21	9.50*	
Zenyatta	4.4	51.0	29.0	50.5	54.5	96	98	99	99	98	97	90	3.66	3.31	1.78	1.78	8.74*	
Clair	2.4	52.0	29.0	53.0	55.0	73	82	93	96	91	91	81	3.32	3.40	1.49	1.49	8.22*	
Summergraze	5.0	37.0	58.5	40.5	48.0	99	99	99	100	97	97	80	3.22	3.02	1.93	1.93	8.18*	
Comtal	4.3	37.0	59.5	40.5	45.0	98	97	97	98	97	98	88	3.25	2.97	1.63	1.63	7.85	
Climax	4.0	39.0	59.0	39.0	45.0	96	94	97	96	95	95	84	3.10	2.45	1.39	1.39	6.95	
<b>Experimental Varieties</b>																		
KYEarly	3.4	54.0	29.0	54.0	56.0	93	95	96	98	97	97	89	3.69	4.39	2.09	2.09	10.17*	
PHP6C	3.1	51.5	29.0	50.0	51.5	84	87	94	95	95	94	90	3.37	3.44	1.85	1.85	8.66*	
Mean	3.8	46.6	40.3	47.4	51.3	92	93	97	97	96	96	86	3.45	3.29	1.80	1.80	8.53	
CV,%	23.4	3.5	1.6	4.1	2.9	10	8	4	3	3	3	9	12.55	19.34	29.96	29.96	16.08	
LSD,0.05	1.3	2.4	0.9	2.9	2.2	14	10	5	4	5	5	11	0.64	0.94	0.79	0.79	2.02	

<sup>1</sup> Vigor score based on a 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 2 for complete scale.

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

**Table 6. Dry matter yields, seedling vigor, maturity, and stand persistence of timothy varieties sown September 5, 2014, at Lexington, Kentucky.**

Variety	Seedling Vigor <sup>1</sup> Oct 9, 2014	Maturity <sup>2</sup>		Percent Stand					Yield (tons/acre)				2-year Total
		2015	2016	2014	2015		2016		2015	2016		Total	
		May 12	May 13	Oct 9	Apr 3	Oct 29	Mar 21	Oct 17	Total	May 13	Jun 29		
<b>Commercial Varieties-Available for Farm Use</b>													
Derby	3.8	49.8	54.5	96	96	97	97	85	4.61	3.36	1.25	4.61	9.22*
Climax	3.5	46.3	54.5	96	97	97	97	90	4.59	3.13	1.19	4.33	8.92*
Clair	1.0	49.3	55.0	48	75	86	91	89	4.13	3.06	0.85	3.91	8.04
Barfleo	3.4	45.0	45.0	97	96	97	96	79	4.42	2.68	0.75	3.43	7.85
Tenho	3.4	45.0	45.0	96	95	96	96	81	4.21	2.67	0.89	3.57	7.77
Varis	3.8	45.0	45.0	96	96	96	96	86	3.96	3.23	0.52	3.75	7.70
<b>Experimental Varieties</b>													
B-14.1159C	3.8	46.3	50.0	95	96	97	97	90	4.80	3.87	1.24	5.11	9.91*
B-14.1160R	3.4	45.0	53.5	96	96	97	98	91	4.99	3.65	0.77	4.42	9.41*
GO-120X	2.9	45.0	46.3	96	96	96	96	81	4.54	3.36	0.89	4.25	8.79*
TmSX11	2.4	45.0	49.3	91	92	92	94	90	4.38	3.16	0.95	4.11	8.49*
GO-LMTE	2.6	45.0	46.3	96	96	97	98	91	4.41	3.14	0.70	3.84	8.25
B-14.1158M	3.3	45.0	45.0	95	96	97	97	91	4.63	2.67	0.86	3.53	8.15
Mean	3.1	46.0	49.1	91.0	94	95	96	87	4.47	3.17	0.91	4.07	8.54
CV,%	20.3	3.8	3.5	7.0	6	4	3	11	14.24	15.49	30.88	14.96	11.99
LSD,0.05	0.9	2.5	2.5	9.0	8	6	4	13	0.92	0.71	0.40	0.88	1.47

<sup>1</sup> Vigor score based on a 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 2 for complete scale.

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

in the yearly reports. See footnotes in tables 10 and 11 to determine to which yearly report to refer.

## Summary

Selecting a good timothy or Kentucky bluegrass 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 timothy and Kentucky bluegrass 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)
- Establishing Forage Crops (AGR-64)
- Timothy (AGR-84)
- Kentucky Bluegrass as a Forage Crop (AGR-134)
- Forage Identification and Use Guide (AGR-175)
- Establishing Horse Pastures (ID-147)

**Table 7. Dry matter yields, seedling vigor, maturity, and stand persistence of timothy varieties sown September 4, 2015, at Lexington, Kentucky.**

Variety	Seedling Vigor <sup>1</sup> Oct 15, 2015	Maturity <sup>2</sup> 2016 May 11	Percent Stand			Yield		
			2015	2016		2016		
			Oct 15	Mar 18	Oct 17	May 12	Jun 29	Total
<b>Commercial Varieties-Available for Farm Use</b>								
Derby	5.0	55.0	100	100	95	3.53	0.98	4.52*
Clair	1.5	54.5	69	77	91	2.62	1.05	3.67
Climax	4.6	49.3	100	100	92	2.50	0.60	3.10
Barfleo	3.8	48.5	99	99	91	2.34	0.59	2.93
<b>Experimental Varieties</b>								
TM 0801	4.6	56.5	97	99	96	3.46	0.89	4.35*
KYPP0901	4.4	47.5	95	98	91	2.25	0.44	2.69
Mean	4.0	51.9	93	95	73	2.78	0.76	3.54
CV,%	11.1	5.2	12	11	5	12.38	35.90	15.23
LSSD,0.05	0.7	4.1	17	15	8	0.52	0.45	0.81

<sup>1</sup> Vigor score based on a 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 2 for complete scale.

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

## Authors

G.L. Olson is a research specialist and S.R. Smith is an Extension professor of Forages. T.D. Phillips is an associate professor of Tall Fescue Breeding.

**Table 8. Performance of Kentucky bluegrass varieties across years at Lexington.**

Variety	Proprietor/KY Distributor	2013 <sup>1</sup>			2014	
		14 <sup>2</sup>	15	16	15	16
<b>Commercial Varieties-Available for Farm Use</b>						
Barderby	Barenbrug USA	*	*	*	*	*
Ginger	ProSeeds Marketing	x <sup>3</sup>	*	*	*	*
Kenblue	Public	x	*	*	*	*
Park (certified)	Public	x	*	*	*	*
<b>Experimental Varieties</b>						
GO-F13	Grassland Oregon				*	*
GO-13NF	Grassland Oregon				x	*
RAD-1443	Radix Research/Seeds Inc	*	x	*		
RAD-1446	Radix Research/Seeds Inc	*	*	*		
RAD-2040	Radix Research	x	*	*		
RAD-2371	Radix Research	x	*	*		

<sup>1</sup> Establishment year.

<sup>2</sup> Harvest year.

<sup>3</sup> "x" in the block indicates the variety was in the test but yielded significantly less than the top yielding variety in the test. Open boxes indicate the variety was not in the test.

\*Not significantly different from the highest yielding variety in the test.

**Table 9. Performance of timothy varieties across years at Lexington.**

Variety	Proprietor/KY Distributor	2013 <sup>1</sup>			2014		2015
		14 <sup>2</sup>	15	16	15	16	
<b>Commercial Varieties-Available for Farm Use</b>							
Barfleo	Barenbrug USA				*	*	x <sup>3</sup>
Clair	Ky Agric. Exp. Station	*	x	*	*	x	x
Climax	Canada Agr. Res. Station	x	x	x	*	*	x
Contral	Caudill Seed	x	x	*			
Derby	Southern States	*	x	*	*	*	*
Summergraze	Brett Young	x	x	*			
Tenho	Barenbrug USA				*	x	
Varis	Mountain View seeds				x	x	
Zenyatta	DLF International	*	x	*			
<b>Experimental Varieties</b>							
B-14.1158M	Blue Moon Farms				*	x	
B-14.1159C	Blue Moon Farms				*	*	
B-14.1160R	Blue Moon Farms				*	*	
GO-LMTE	Grassland Oregon				*	x	
GO-120X	Grassland Oregon				*	*	
KY Early	Ky Agric. Exp. Station	*	*	*			
KYPP0901	Ky Agric. Exp. Station						x
PHP6C	DLF International	*	x	*			
TMSX11	Brett Young				*	x	
TM 0801	Allied Seed						*

<sup>1</sup> Establishment year.

<sup>2</sup> Harvest year.

<sup>3</sup> "x" in the block indicates the variety was in the test but yielded significantly less than the top yielding variety in the test. Open boxes indicate the variety was not in the test.

\*Not significantly different from the highest yielding variety in the test.

**Table 10. Summary of Kentucky Bluegrass Yield Trials at Lexington 1996-2016 (yield shown as a percentage of the mean of the commercial varieties in the trial).**

Variety	Proprietor/KY Distributor	96 <sup>1,2</sup>	03	04	06	07	08	09	10	11	12	13	14	Mean <sup>3</sup> (#trials)
		3yr <sup>4</sup>	2yr	3yr	4yr	3yr	3yr	3yr	3yr	3yr	3yr	3yr	2yr	
Adam 1	Radix Research			98										-
Barderby	Barenbrug USA					94		101	91	98	87	103	105	97(7)
Big Blue	Rose-AgriSeed							82			95			89(2)
Common	Public				71	66	68							68(3)
Ginger	ProSeeds Marketing		89		118	119	114	118	112	107	110	107	95	109(10)
Kenblue	Public	90		102	133				96	95	118	95	96	103(8)
Lato	Turf Seed Inc.	110				122								116(2)
Park (certified)	Public										90	95	104	96(3)
RAD-5	Radix Research				103									-
RAD-339	Radix Research				101									-
RAD-643	Radix Research				94									-
RAD-731zx	Radix Research				87									-
RAD-762	Radix Research				94									-
RAD-1039	Radix Research						118							-
Slezanka	DLF International Seeds		111											-

<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 2012 was harvested three years, so the final report would be "2015 Timothy and Kentucky Bluegrass Report" archived in the KY Forage website at <www.uky.edu/Ag/Forage>. The 96 and 03 Lexington results are in the appropriate Tall Fescue Reports.

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

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

**Table 11. Summary of Kentucky Timothy Yield Trials 2000-2016 (yield shown as a percentage of the mean of the commercial varieties in the trial).**

Variety	Proprietor/KY Distributor	Lexington												Quicksand		Princeton		Mean <sup>3</sup> (#trials)
		00 <sup>1,2</sup>	01	02	06	07	08	09	11	12	13	14	99	01	00	04		
		2yr <sup>4</sup>	3yr	4yr	3yr	3yr	3yr	3yr	3yr	3yr	3yr	3yr	2yr	2yr	3yr	2yr		
Alma	Newfield Seeds Co/Caudill Seed Co.															81	-	
Auroro	General Feed and Grain	100											98				99(2)	
Barfleo	Barenbrug USA							95	91	101		95					96(4)	
Barpenta	Barenbrug USA					74			82	82							79(3)	
Clair	Ky Agric. Exp. Station		109	115	107	95	108	104	112	99	100	97		108		122	106(12)	
Classic	Cebeco International Seeds	100		88									87				92(3)	
Climax	Canada Agr. Res. Station				79	102	105	98	102	100	84	108					97(8)	
Colt	FS Growmark	105		101	90								112			99	101(5)	
Common	Public		96														-	
Comtral	Caudill Seed									92	95						94(2)	
Derby	Southern States				112	111		106	112	108	115	112			124		113(8)	
Dolina	DLF International	100		91													96(2)	
Express	Seed Research of Oregon			97		91		97	95								95(4)	
Hokuei	Snow Brand Seed	103															-	
Hokusei	Snow Brand Seed	97											99				98(2)	
Joliette	Newfield Seeds Co/Caudill Seed Co.					87	89									90	89(3)	
Jonaton	Newfield Seeds Co/Caudill Seed Co.															84	-	
Outlaw	Grassland West Company														107		-	
Richmond	Pickseed Canada Inc.	100											103				102(2)	
Summergraze	Brett Young									99							-	
Summit	Allied Seed, L.L.C.			114													-	
Talon	Seed Research of Oregon				110	112		108	106	109							109(5)	
Tenho	Barenbrug USA										94						-	
Treasure	Seed Research of Oregon				103	115		103	101	108							106(5)	
Tundra	DLF International	95															-	
Tuukka	Ampac Seed Company		95	90										92	93		93(4)	
Varis	Mountain View Seeds										93						-	
Zenyatta	DLF International									106							-	

<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 2012 was harvested three years, so the final report would be "2015 Timothy and Kentucky Bluegrass Report" archived in the KY Forage website at <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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