Introduction

2017 Red and White Clover Report

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Red clover (*Trifolium pratense L.*) is a high-quality, short-lived, perennial legume used in mixed or pure stands for pasture, hay, silage, green chop, soil improvement, and wildlife habitat. This species is adapted to a wide range of climatic and soil conditions. Stands of improved varieties generally are productive for 2½ to 3 years, with the highest yields occurring in the year following establishment. Red clover is used primarily as a renova-

ring in the year following establishment. Red clover is used primarily as a renovation legume for grass pastures and hay fields. It is a dominant forage legume in Kentucky because it is relatively easy to establish and has high forage quality, yield, and animal acceptance.

White clover (*Trifolium repens L.*) is a low-growing, perennial pasture legume with white flowers. It differs from red clover in that the stems (stolons) grow along the surface of the soil and can form adventitious roots that lead to the development of new plants. Three types of white clover grow in Kentucky: Dutch, intermediate, and ladino. Dutch white clover, sometimes called "common," naturally occurs in many Kentucky pastures and even lawns. It is generally long lived and reseeds readily, but its small leaves and low growth habit result in low forage yield. The intermediate type is a cross between ladino and Dutch white clover and has been developed to give higher yields than the Dutch type and to persist better than the ladino type under frequent or continuous grazing conditions. Ladino white clover has larger leaves and taller growth than the intermediate and Dutch types and is the highest yielding of the three white clover types but requires rotational grazing to maintain stands. Information on the grazing tolerance of white clover varieties can be found in the 2017 Red and White Clover Grazing Tolerance Report (PR-734).

Yield and persistence of red and white clover varieties are dependent on

environment and pressure from diseases and insects. The most common red clover diseases in Kentucky are southern anthracnose, powdery mildew, sclerotinia crown rot, and root rots. For white clover, the most common pests are stolon rots, root rots, and potato leafhoppers. High yield and persistence (as measured by percent stand) are two indications that a specific red or white clover variety is resistant to or tolerant of these pests when grown in Kentucky.

This report provides current yield and persistence data on red and white clover

varieties included in yield trials in Kentucky as well as guidelines for selecting clover varieties. Tables 13 and 14 show a summary of all clover varieties tested in Kentucky for the past 15 years. The UK Forage Extension website at www.uky. edu/Ag/Forage contains electronic versions of all forage variety testing reports from Kentucky and surrounding states and a large number of other forage publications.

Important Selection Considerations

Local adaptation and persistence. The variety should be adapted to Kentucky as indicated by superior performance across years and locations in replicated

Table 1. Temperature and rainfall at Lexington, Kentucky, in 2015, 2016, and 2017.

		20	15			20	16			20	17 ²	
	Te	mp	Raiı	nfall	Tei	mp	Raiı	nfall	Te	mp	Rai	nfall
	°F	DEP ¹	IN	DEP	°F	DEP	IN	DEP	°F	DEP	IN	DEP
JAN	32	+1	2.17	-0.69	32	+1	0.80	-2.06	40	+9	6.81	+3.95
FEB	26	-9	3.08	-0.13	38	+3	6.09	+2.88	47	+12	4.46	+1.25
MAR	45	+1	7.34	+2.94	52	+8	4.07	-0.33	48	+4	3.34	-1.06
APR	57	+2	13.19	+9.31	57	+2	3.97	+0.09	62	+7	4.17	+0.29
MAY	69	+5	3.02	-1.45	64	0	9.17	+4.70	66	+2	7.74	+3.27
JUN	75	+3	8.20	+4.54	76	+4	5.09	+1.43	73	+1	7.68	+4.02
JUL	77	+1	10.22	+5.22	79	+3	7.43	+2.43	76	0	4.49	-0.51
AUG	74	-1	3.49	-0.44	79	+4	4.37	+0.44	74	-1	6.66	+2.73
SEP	72	+4	3.49	+0.29	74	+6	2.18	-1.02	69	+1	4.72	+1.52
OCT	59	+2	2.78	+0.21	64	+7	0.37	-2.20	60	+3	6.06	+3.49
NOV	51	+6	3.72	+0.33	51	+6	1.94	-1.45				
DEC	49	+13	8.42	+4.44	37	+1	9.4	+5.42				
Total			69.12	+24.57			54.88	+10.33			56.13	+18.95
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DEP is departure from the long-term average.

Table 2. Temperature and rainfall at Princeton, Kentucky, in 2015, 2016, and 2017.

		20	15			20	16			20	17 ²	
	Tei	mp	Raiı	nfall	Tei	mp	Rair	nfall	Tei	mp	Rair	nfall
	°F	DEP ¹	IN	DEP	°F	DEP	IN	DEP	°F	DEP	IN	DEP
JAN	34	0	1.51	-2.29	35	+1	1.37	-2.43	43	+9	3.18	-0.62
FEB	28	-10	4.16	-0.27	40	+2	4.23	-0.20	49	+11	1.78	-2.65
MAR	46	-1	6.83	+1.89	53	+6	7.3	+2.36	50	+3	4.09	-0.85
APR	60	+1	7.38	+2.58	59	0	4.41	-0.39	63	+4	4.28	-0.52
MAY	68	+1	3.52	-1.44	64	-3	6.21	+1.25	67	0	4.43	-0.53
JUN	76	+1	2.85	-1.00	77	+2	2.18	-1.67	74	-1	5.39	+1.54
JUL	79	+1	8.83	+4.54	80	+2	12.72	+8.43	78	0	2.23	-2.06
AUG	73	-4	2.90	-1.11	78	+2	5.37	+1.36	75	-2	1.39	-2.62
SEP	71	0	0.82	-2.51	73	+2	1.33	-2.00	71	0	3.93	+0.60
OCT	60	+1	4.15	+1.10	65	+6	0.25	-2.80	61	+2	6.65	+3.60
NOV	53	+6	5.95	+1.32	52	+5	2.86	-1.77				
DEC	49	+10	6.37	+1.33	38	-1	6.51	+1.47				
Total			55.27	+4.14			54.74	+3.61			38.35	-4.11
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¹ DEP is departure from the long-term average.

² 2017 data is for ten months through October.

² 2017 data is for the ten months through October.

yield trials such as those reported in this publication. High-yielding varieties are generally also those varieties that are the most persistent. Improved red clover generally produces measurable yields for 2½ to 3 years, with the year of establishment considered as the first year. The highest yields occur in the year following establishment. White clover may persist longer than red clover, particularly in wet seasons, and has the ability to reseed even under grazing.

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, such as those reported in this publication. Other information on the label will include the test date (which must be within the previous nine months), the level of germination, and 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

This report summarizes studies at Lexington (one in 2015, two in 2016, and one in 2017) and Princeton (2015). The soils at Princeton (Crider) and Lexington (Maury) are well-drained silt loams. All are well-suited to clover production. 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.

Seedings were made at 12 pounds of seed per acre for red clover and 3 pounds of seed per acre for white clover into a prepared seedbed using a disk drill. The first cutting in the seeding year was delayed to allow the clover to completely reach maturity as indicated by

full bloom, which generally occurs about 60 to 90 days after seeding. Otherwise, harvests were taken when the clover was in the bud to early flower stage using a sickle-type forage plot harvester. Fresh weight samples were taken at each harvest to calculate percent dry matter production. All tests for establishment, fertility (P, K, and lime based on regular soil tests), and harvest management were managed according to University of Kentucky Cooperative Extension Service recommendations. Weeds were controlled to avoid limiting production and persistence.

Table 3. Dry matter yields and stand persistence of red clover varieties sown March 31, 2015, at Lexington, Kentucky.

			Percen	t Stand					Yield (to	ns/acre)		
	20	15	20	16	20	17	2015	2016		2017 ¹		3-year
Variety	Jun 12	Oct 15	Mar 18	Sep 27	Mar 27	Aug 4	Total	Total	Jun 8	Jul 8	Total	Total
Commercial Variet	ies-Avai	lable for	Farm Us	e								
Gallant	100	100	99	91	79	61	1.81	6.59	1.15	0.61	1.76	10.17*
SS-0303RCG	100	100	100	87	74	45	1.50	6.69	0.98	0.77	1.75	9.93*
Freedom!	100	100	99	56	34	18	2.05	6.41	0.90	0.35	1.25	9.71*
Kenland (certified)	100	100	99	83	63	21	1.86	6.17	0.98	0.53	1.50	9.53*
Evolve	100	100	99	83	46	31	1.86	5.94	0.86	0.31	1.17	8.97*
Common O	100	98	97	3	2	2	1.70	4.56	0.05	0.04	0.10	6.37
Experimental Varie	eties											
RC 0702	98	99	97	91	78	70	1.70	6.70	1.01	0.75	1.76	10.16*
KY 2,4-D	100	98	97	65	50	21	1.82	6.20	0.67	0.32	0.99	9.01*
DLFPS-TP-12	99	99	97	18	15	8	1.41	5.67	0.38	0.09	0.47	7.55
GO-MOB	98	96	97	6	6	3	1.49	4.94	0.14	0.05	0.20	6.62
Mean	99	99	98	58	45	28	1.72	5.99	0.71	0.38	1.10	8.80
CV,%	1	2	2	25	25	47	27.52	11.73	36.55	41.92	34.84	13.04
LSD,0.05	2	3	3	21	15	19	0.69	1.02	0.38	0.23	0.55	1.67

¹ Due to variable plant growth, low yields and high CVs, the May harvest data was not included. *Not significantly different from the highest numerical value in the column, based on the 0.05 LSD.

Table 4. Dry matter yields and stand persistence of red clover varieties sown April 5, 2016, at Lexington, Kentucky.

		Percen	t Stand				Yield (to	ns/acre)		
	20	16	20	17	2016		20	17		2-year
Variety	Jun 14	Sep 27	Mar 27	Sep 29	Total	May 8	Jun 9	Jul 8	Total	Total
Commercial V	arieties-	Availabl	e for Far	m Use						
SS0303RCG	93	79	78	75	2.21	2.25	1.72	1.32	5.30	7.51*
Bearcat	94	64	83	71	1.63	1.64	1.68	1.04	4.36	5.99
Kenland (certified)	87	60	69	48	1.70	1.86	1.59	0.65	4.10	5.79
Freedom!	90	58	66	30	1.39	1.95	1.52	0.73	4.20	5.59
FF 9615	84	69	63	39	1.32	1.67	1.52	0.89	4.09	5.40
Evolve	48	33	35	25	1.03	1.26	1.91	0.84	4.01	5.04
Common O	77	28	18	3	1.05	0.94	0.72	0.28	1.95	3.00
Kenland (uncertified)	53	13	11	3	0.95	0.56	0.86	0.24	1.64	2.50
Experimental	Varietie	s								
RC 0702	81	84	84	81	1.37	1.98	1.58	1.23	4.79	6.16
GATP1412	79	60	65	55	1.59	1.98	1.85	0.70	4.52	6.11
KY 2,4-D	94	80	79	65	1.70	1.41	1.68	0.93	4.03	5.73
IS-TP12	75	28	33	15	1.83	1.53	2.09	0.43	3.86	5.41
GA9908	75	40	40	24	1.73	1.45	1.33	0.74	3.73	5.38
GATP1413	83	45	50	21	1.14	1.26	1.79	0.59	3.65	4.78
GATP1501	78	29	50	13	0.85	1.39	1.70	0.32	3.42	4.26
B-16.0003	69	43	40	14	1.03	0.78	1.77	0.65	3.19	4.22
B-15.3167	83	13	14	3	1.42	0.75	1.02	0.25	2.01	3.44
Pramedi	84	16	8	3	1.37	0.63	1.18	0.39	2.20	3.32
Mean	79	47	49	32	1.40	1.42	1.54	0.69	3.66	5.03
CV,%	13	28	24	34	31.53	31.05	20.46	39.21	17.12	17.69
LSD,0.05	14	18	16	16	0.63	0.63	0.46	0.39	0.92	1.31

stNot significantly different from the highest numerical value in the column, based on the 0.05 LSD.

Results and Discussion

Weather data for Lexington and Princeton are presented in tables 1 and 2.

Yield data (on a dry matter basis) are presented in tables 3 through 7. Yields are given by cutting date for 2017 and as total annual production. Varieties are listed in order from highest to lowest total production (for the life of the test). Experimental varieties are listed separately at the bottom of the tables and are not available commercially.

Statistical analyses were performed on all clover data (including experimental varieties) to determine whether the apparent differences are truly due to variety. Varieties not significantly different from the top variety within a column are marked with one asterisk (*). To determine if two varieties are truly different, compare the difference between the two varieties with 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 a given location. 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.

Certified "Kenland" continues to rank near the top of tests. It is important to note yield differences between certified and uncertified Kenland red clover. Most Kenland offered for sale is uncertified and unlikely pure seed. Our tests show uncertified Kenland is significantly lower in yield than certified Kenland. White clover varieties, as managed in these trials, yielded less than most red clover varieties but were more persistent. Again, certified seed of improved varieties is recommended.

Table 5. Dry matter yields, seedling vigor, and stand persistence of red clover varieties sown August 25, 2015, at Princeton, Kentucky.

	Seedling Vigor ¹		Pe	rcent Sta	nd				Yield (to	ns/acre)		
	Oct 23,	2015	20	16	20	17	2016		20	17		2-year
Variety	2015	Oct 23	Mar 22	Sep 23	Mar 16	Oct 25	Total	May 9	Jun 12	Jul 11	Total	Total
Commercial	Varieties-	Availabl	e for Far	m Use								
Freedom!	4.5	100	98	97	91	55	7.30	1.17	1.30	0.75	3.22	10.51*
SS-0303RCG	4.1	100	98	100	99	79	6.77	1.05	1.22	0.87	3.15	9.92*
Gallant	4.5	100	99	100	99	86	6.64	1.13	1.18	0.80	3.11	9.75*
Kenland (certified)	4.4	100	100	99	93	69	7.04	1.05	1.01	0.58	2.65	9.68*
Common O	5.0	100	100	97	92	44	6.78	1.02	0.96	0.62	2.60	9.38*
Evolve	3.8	100	99	100	99	86	6.28	1.04	1.38	0.67	3.09	9.37*
Experiment	al Varietie	s										
DLFPS- TP-12	3.9	100	99	100	96	63	7.04	1.07	1.26	0.64	2.97	10.01*
RC 0702	4.3	100	98	100	97	85	6.19	1.15	1.17	0.97	3.30	9.49*
KY2,4-D	3.6	100	99	96	83	49	6.89	0.53	0.84	0.51	1.88	8.77
GO-MOB	3.4	100	98	94	79	33	6.14	0.42	0.72	0.31	1.45	7.59
Mean	4.1	100	99	98	93	65	6.71	0.96	1.10	0.67	2.74	9.45
CV,%	13.0	0	1	3	5	32	11.33	30.98	24.77	26.50	21.30	12.62
LSD,0.05	0.8	0	2	4	7	30	1.10	0.43	0.40	0.26	0.85	1.73

¹ Vigor score based on a 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.

In addition to the commercially available varieties and experimental lines, selected "common" red clovers are included in the variety tests for comparison. Common red clover, generally sold as "medium red clover variety unknown," is unimproved red clover with unknown performance. Several years of testing show only about one out of every 10 common red clovers is as productive as certified or proprietary red clovers. In Kentucky, the average yield advantage of seeding improved red clover varieties compared to common types is 3 tons to 6 tons of dry matter over the life of the

Table 6. Dry matter yields and stand persistence of white clover varieties sown April 5, 2016, at Lexington, Kentucky.

		Percen	t Stand				Yield (to	ns/acre)		
	20	16	20	17	2016		20	17		2-year
Variety	Jun 14	Sep 27	Mar 27	Sep 29	Total	May 19	Jun 21	Jul 17	Total	Total
Commercial	Varieties	-Availabl	e for Farn	n Use						
Will	97	94	92	90	1.03	1.22	0.96	0.46	2.64	3.67*
RegalGraze	98	89	87	79	1.10	0.82	1.05	0.41	2.29	3.39*
Bombus	91	88	89	86	0.63	0.80	0.98	0.33	2.11	2.74
Brianna	93	89	86	86	0.57	0.79	0.86	0.44	2.09	2.66
Patriot	85	81	89	86	0.56	0.93	0.88	0.26	2.07	2.63
Durana	89	91	96	93	0.67	0.66	0.85	0.25	1.76	2.43
Renovation	89	88	91	86	0.52	0.72	0.64	0.27	1.63	2.15
Alice	94	90	84	81	0.36	0.81	0.55	0.33	1.70	2.06
RIVENDEL	88	86	76	65	0.41	0.31	0.19	0.11	0.61	1.02
Experimenta	al Varietie	es								
IS-TR12	93	88	93	88	0.57	1.24	0.82	0.37	2.44	3.01*
Mean	92	88	88	84	0.64	0.83	0.79	0.32	1.93	2.58
CV,%	6	7	6	8	39.47	40.36	36.18	40.31	27.30	24.17
LSD,0.05	8	9	8	10	0.37	0.49	0.41	0.21	0.77	0.90

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

Tables 8 and 9 summarize information about proprietors, distributors, and yield performance across years and locations for all varieties currently included in this report. Varieties are listed in alphabetical order, with the experimental varieties at the bottom. Experimental varieties are not available for farm use, but commercial varieties can be purchased from dealerships. In tables 8 and 9, an open block indicates the variety was not

Table 7. Dry matter yields and stand persistence of white clover varieties sown April 5. 2017, at

Lexington, K	ептиску.			
	Percent Stand	Yiel	d (tons/a	cre)
	2017		2017	
Variety	Sep 29	Jul 17	Sep 15	Total
Commercial	Varieties-	Available	for Farm	ı Use
RegalGraze	100	1.08	0.62	1.71*
Kakariki	98	0.90	0.74	1.63*
Bombus	96	0.92	0.67	1.59*
Will	100	0.72	0.71	1.43*
Brianna	96	0.76	0.64	1.40*
Durana	100	0.70	0.41	1.11
Rivendel	96	0.66	0.44	1.10
Alice	98	0.62	0.47	1.09
Patriot	97	0.61	0.48	1.08
Experiment	al Varietie	s		
ISTR-12	98	0.93	0.71	1.64*
PPG-TR-101	98	0.92	0.66	1.58*
NFWC04-29	100	0.78	0.57	1.35*
MVS-ROM	98	0.66	0.64	1.30*
Mean	98	0.79	0.60	1.39
CV,%	3	31.36	25.18	20.83
LSD,0.05	4	0.36	0.22	0.49

^{*}Not significantly different from the highest numerical value in the column, based on the 0.05

included in that particular test (labeled at the top of the column), and an "x" in the block means that the variety was included in the test but yielded significantly less than the top-yielding variety in the test. A single asterisk (*) means the variety was not significantly different from the highest-yielding variety based on the 0.05 LSD. Look at data from several years and locations when choosing a variety of clover rather than results from one test year, as is reported in tables 3 through 7. Make sure seed of the variety selected is properly labeled and will be available when needed.

Tables 10 and 11 are summaries of yield data from 1998 to 2017 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 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 in the yearly reports. See the footnotes in tables 10 and 11 to determine which yearly report should be referenced.

Summary

Red and white clovers can be productive components of pasture and hayfields. Choose varieties with proven performance in yield and persistence.

The following College of Agriculture publications related to the establishment, management, and harvesting of clover are available at local county Extension offices and are listed in the "Publications" section of the UK Forage website, www.uky.edu/Ag/Forage:

- Lime and Fertilizer Recommendations (AGR-1)
- Producing Red Clover Seed in Kentucky (AGR-2)
- Grain and Forage Crop Guide for Kentucky (AGR-18)
- Renovating Hay and Pasture Fields (AGR-26)
- Growing Red Clover in Kentucky (AGR-33)
- Establishing Forage Crops (AGR-64)
- Inoculation of Forage Legumes (AGR-90)
- Growing White Clover in Kentucky (AGR-93)
- Weed Control Strategies for Alfalfa and Other Forage Legume Crops (AGR-148)
- Insect Management Recommendations for Field Crops and Livestock (ENT-17)
- Managing Legume-Induced Bloat in Cattle (ID-186)
- Kentucky Plant Disease Management Guide for Forage Legumes (PPA-10D)
- "Emergency" Inoculation for Poorly Nodulated Legumes (PPFS-AG-F-04)

About the Authors

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Table 8. Performance of red clover varieties across years and locations in Kentucky.

			Le	exingt	on		Princ	:eton
	Proprietor/		2015 ¹		20	16	20	15
Variety	KY Distributor	15 ²	16	17	16	17	16	17
Commercial \	/arieties-Available f	or Fari	n Use					
Bearcat	Brett Young Seeds				*	x ³		
Common O	Public	*	Х	Х	Х	Х	*	*
Evolve	DLF Pickseed USA	*	*	Х	Х	Х	*	*
Freedom!	Barenbrug USA	*	*	*	х	Х	*	*
FF 9615	LaCrosse Seed				х	Х		
Gallant	Turner Seed	*	*	*			*	*
Kenland (certified)	KY Agric. Exp. Station	*	*	*	*	х	*	*
Kenland (uncertified)	Public				х	х		
Robust	Blue Moon Farms							
SS-0303RCG	Southern States	*	*	*	*	*	*	*
Experimenta	l Varieties	•						
B-15.3167	Blue Moon Farms				Х	Х		
B-16.0003	Blue Moon Farms				Х	Х		
B-16.4532	Blue Moon Farms							
B-16.5140	Blue Moon Farms							
DLFPS-TP-12	DLF Pickseed USA	*	Х	Х	*	Х	*	*
GA 9908	Univ. of GA				*	Х		
GATP1401	Univ. of GA							
GATP1402	Univ. of GA							
GATP1403	Univ. of GA							
GATP1412	Univ. of GA				*	*		
GATP1413	Univ. of GA				Х	Х		
GATP1501	Univ. of GA				Х	Х		
GATPCP	Univ. of GA							
GO-MOB	Grassland Oregon	*	х	Х			Х	Х
KY 2,4-D	KY Agric. Exp. Station	*	*	х	*	х	*	х
MVS-ROZ	Mountain View Seeds							
Pramedi	Hood River Seed				Х	Х		
RC 0702	DLF Pickseed USA	*	*	*	Х	*	Х	*
RC 0705G	Hood River Seed							

¹ Establishment year.

Table 9. Performance of white clover varieties across years at Lexington, Kentucky.

		Proprietor/KY	20	16 ¹	2017
Variety	Туре	Distributor	16 ²	17	17
Commercial \	/arieties-Availa	ble for Farm Use			
Alice	Intermediate	Barenbrug	x ³	х	х
Bombus	Ladino	Hood River Seed	х	*	*
Brianna	Ladino	DLF Pickseed USA	Х	*	*
Durana	Intermediate	Pennington	Х	х	х
Kakariki	Ladino	Luisetti Seeds			*
Patriot	Intermediate	Pennington	Х	*	х
RegalGraze	Ladino	Cal/West Seed	*	*	*
Renovation	Intermediate	Smith Seed	Х	Х	
RIVENDEL	_	DLF Pickseed USA	Х	х	х
Will	Ladino	Allied Seed, L.L.C.	*	*	*
Experimenta	Varieties				
IS-TR-12	Ladino	DLF Pickseed USA	Х	*	*
MVS_ROM	_	Mountain View Seeds			*
NFWC04-29	Intermediate	Mountain View Seed			*
PPG-TR-101	_	Mountain View Seed			*

¹ Establishment year.

² Harvest year.

^{3 &}quot;x" in the box indicates the variety was in the test but yielded significantly less than the top variety in the test. Open boxes indicate the variety was not in the test.

^{*}Not significantly different from the top-ranked red clover variety in the test.

² Harvest year.

^{3 &}quot;x" in the box indicates the variety was in the test but yielded significantly less than the top variety in the test. Open boxes indicate the variety was not in the test

^{*}Not significantly different from the top-ranked white clover variety in the test.

Table 10. Summary of Kentucky red clover yield trials 2001-2017 (yield shown as a percentage of the mean of the named commercial varieties in the trial).

							,				,						6				1					F		-	L	
		011,2	2 00	03	2	90	č	Lexington	gton	-	12	7	14	15 16	03	20	Š	Princeton	- l	13	1,	5	א מווכ	Quicksand	~	10	ns ns 1	shale 10		~
Variety	Proprietor	3vr ⁴					_	2vr	+	١.	+	+	+	+	+	+	+	_	_	34	+	+-			+	+	_			(#trials)
AA117ER	ABI Alfalfa	Š	_	_	_		_	ì	+	+	+	+	+	+	+	+	+	_	_		+	+			+	+	+	_	+	96(3)
Bearcat	Brett Young Seeds													117	7														ľ	
Cinnamon Plus	Southern States			97		109	112	123	117	94	116 1		86			112	102	102	100	100			1	103 1	108 12	124	108	8 122		108(19)
Common O	Public								96	97	63	84	92 7	70 59	6					29	96		+		7	72		77	\dashv	79(11)
Dominion	Seed Research of OR					102										95	102							93			109	6	100	100(5)
Duration	Cisco Co.	86	100	0																		106							97	97(3)
Emarwan	Turf-Seed				91			117										106				101			6	66			100	103(5)
Evolve	DLF Pickseed USA												0	66 86	6						96								86	98(3)
FF9615	LaCrosse Seed													106	90														Ċ	1
Freedom!	Barenbrug USA	127	7 123	3 96	118	8 91	100	108	106	109	99	101	97 10	107 110	0 110	0 136	107	116	95	107	108	111	103 1	119 1	106 11	115 10	102 100	0 140	_	109(29)
Freedom!MR	Barenbrug USA		118	8 115	5 102	2 114	114		112						106	101		108					94 1	111	12	128 11	118	125	_	112(14)
FSG 402	Allied Seed										-	104								114									100	108(2)
FSG 9601	Allied Seed				89																								Ė	,
Gallant	Turner Seed										F	101	11	12						107	100								10	105(4)
Juliet	Caudill Seed							84									93	90									84	4 59		82(5)
Kenland (cert.)	KY Ag.Exp Sta.	127	7 139	9 118	3 117	7 117	66	111	66	116	114	109	103 10	105 113	3 102	12 92	113	106	106	115	66	111	88	105 1	104 12	123 9	98 110	0 138	-	110(29)
Kenland (uncert.)	Public								82					49	6		74					83			9	29	99	5 92		73(7)
Kenton	KY Ag.Exp Sta.	119	9 109	6	95	5 112	121								95	5 105	1112	94				93	99 1	106	86	6	86		103	103(15)
Kenway	KY Ag.Exp Sta.	111	134	4	97	7 119	118									94	106	103				100	_	103	94				107	107(11)
LS 9703	Lewis Seed										107									98									97	97(2)
Morning Star	Cal/West Seeds																90										90	0	96	90(2)
Plus II	Allied Seed						130																	J.	97				1	114(2)
Quinequeli	Caudill Seed							92						-				80										57	\dashv	76(3)
Red Gold	Proseeds Marketing					81											88										102	7	91	91(3)
Red Gold Plus	Turner Seed	97			95	16																86							97	97(3)
RedlanGraze II	Americas Alfalfa	91	104	4										-								93	+						96	96(3)
Redland Max	ABI Alfalfa				95	10																							_	1
Robust II	Seed Research of OR																110										108	8	100	109(2)
Rocket	Seed Research of OR													-			106						+				108	8	10	107(2)
Rojo Diablo	Great Plains	66				-								+								101							10	100(2)
Royal Red	Southern States		91																										_	ı
Rustler	Oregro Seeds						83		101	84	+		-	\dashv	-										94 9	66		104		94(6)
Sienna	Great Plains	91																				106							99	99(2)
Solid	Production Service		98	3 84		79									87	7 86							. `	9/		ò	84		85	85(7)
SS-0303RCG	Southern States											,-	103 10	109 147	17					103	102		+						7	113(5)
Starfire	Ampac Seed		66																											,
Starfire II	Cal/West & Ampac						101		111			,-	107				112								110 11	112	11	5 111		110(8)
Triple Trust 350	ABI Alfalfa				_	101				7	\dashv	1	\dashv	\dashv	-	92						1		92					95	95(3)
Vesna	DLF-Jenks	53	+	+	4	-	\downarrow			+	+	+	+	+	+	+	\downarrow	_				96	+	+	-	+			75	75(2)
Wildcat	Brett Young Seeds			\dashv				101			+		\dashv	\dashv				107					-		6	86	_		100	102(3)
1 Year trial was established	stablished.																													

edu/Âg/Forage. ³ Mean only presented when respective variety was included in two or more trials. ⁴ Number of years of data.

Year trial was established.
 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 report would be "2012 Red and White Clover Report" archived in the KY Forage website at www.uky.

Table 11. Summary of Kentucky white clover yield trials 2002-2017 (yield shown as a percentage of the mean of the commercial varieties in the trial).

	•				notanizo				loving	2						-	Dringoton		ickend E	Ouicksand Edon Chalo	
			21.0	5	3	2	1	8	Lexington	ŀ	H	F	\vdash	\vdash	\vdash	+	ייייייייייייייייייייייייייייייייייייייי	T	CKSdild	dell Silale	
Variety	Type	Proprietor	3vr ⁴	34	3-vr	2-vr	2-vr	34	2v.	3vr	3vr 2	2vr 3	3vr 3	3vr 2	2vr 2	2vr 3	3vr 3-	3-vr	2vr	03 2vr	Mean ³ (#trials)
Advantage	Ladino	Allied Seed, LLC	,	125																106	116(2)
Alice	Intermediate	Barenbrug USA											1	105 1	120	81	8	86			98(4)
Avoca	Dutch	DLF International Seeds				59											8	82			71(2)
Barblanca	Intermediate	Barenbrug USA		92																	ı
Bombus	Ladino	Hood River													,	108					1
Brianna	Ladino	DLF Pickseed USA														105					ı
CA ladino	Ladino	Public	100		124											_	103		86		106(4)
Colt	Intermediate	Seed Research of OR		06		57											-	114			87(3)
Common	Dutch	Public	100				53			86							7	78			82(4)
Companion	Ladino	Oregro Seeds						87	94	92											91(3)
Crescendo	Ladino	Cal/West Seeds	105			140											1(109			118(3)
Crusader II	Intermediate	Allied Seed, LLC								06	50 5	54 7	75								67(4)
Excel	Ladino	Allied Seed, LLC			100																I
Domino	Ladino	Grassland Oregon											8	87							I
Durana	Intermediate	Pennington		94		94	88	82	85	67	93 8	84 5	97	. 68	78	96	87 8	83	101	95	90(16)
GWC-AS10	Ladino	Ampac Seed									102										ı
Insight	Ladino	Allied Seed, LLC				128			+												ı
Ivory	Intermediate	Cebeco	96																		ı
Ivory II	Intermediate	DLF International Seeds					98			101	127										105(3)
Jumbo	Ladino	Ampac Seed	93																		I
Jumbo II	Ladino	Ampac Seed								_	121	101		-	66						107(3)
Kopull	Intermediate	Ampac Seed	6			97	95	95	103	96	80	06									94(8)
KY Select	Intermediate	KY. Agric. Exp. Station									6 86	95									97(2)
Neches	Intermediate	Barenbrug USA													79						ı
Ocoee	Ladino	Allied Seed, LLC								89	74										82(2)
Patriot	Intermediate	Pennington		103		87	104	113	95	117 1	117 9	3 66	82 7	78 8	88	104	104 10	100	86	66	104(16)
Pinnacle	Ladino	Allied Seed, LLC				120			+								-	111			116(2)
Rampart	Ladino	Allied Seed, LLC					80	89	62	83											87(4)
Regal	Ladino	Public	66	96	92		125	100	116	118 1	129 1	147 1	123			_	107 10	100	104		112(13)
RegalGraze	Ladino	Cal/West Seeds				127	140	102	103					_	111	134					120(6)
Renovation	Intermediate	Smith Seed Services											8	83 8	85	85					85(3)
Resolute	Intermediate	Southern States				63															I
Rivendel	1	DLF Pickseed USA													_	40					1
Seminole	Ladino	Saddle Butte Ag. Inc			108	70	79						1	114							93(4)
Super Haifa	Intermediate	Allied Seed, LLC			77																ı
Tillman II	Ladino	Caudill Seed	103						+												ı
WBDX	Dutch	Saddle Butte Ag. Inc								-	\dashv	_									1
Will	Ladino	Allied Seed, LLC	107			162	150	132	107	119 1	137 1	130 1	123 1.	143 1	140	145	13	136			133(13)
1 Year trial wa	1 Year trial was established.																				

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 third summary table as a guide in making variety was placed, the Lexington trial planted in 2010 was harvested three years, so the final report would be "2012 Red and White Clover Report" archived in the KY Forage website at www.uky.edu.g/Forage.

3 Mean only presented when respective variety was included in two or more trials.