2021 Red and White **Clover Report**

University of Kentucky College of Agriculture, Food and Environment Agricultural Experiment Station

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Introduction

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 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

Table 1. Temperature and rainfall at Lexington, Kentucky in 2019, 2020, and 2021.

		20	19			20	20			20	21 ²	
	Te	mp	Raiı	nfall	Tei	mp	Raiı	nfall	Tei	mp	Raiı	nfall
	°F	DEP ¹	IN	DEP	°F	DEP	IN	DEP	°F	DEP	IN	DEP
JAN	33	+2	4.11	+1.25	40	+9	3.72	+0.86	34	+3	4.51	+1.65
FEB	42	+7	7.64	+4.43	38	+3	5.14	+1.93	31	-4	4.60	+1.39
MAR	43	-1	3.49	-0.91	51	+7	3.79	-0.61	50	+6	5.12	+0.72
APR	54	+4	4.76	+0.88	52	-3	4.92	+1.04	54	-1	2.72	-1.16
MAY	69	+5	4.49	+0.02	62	-2	5.69	+1.22	62	-2	4.34	-0.13
JUN	73	+1	6.13	+2.47	72	0	2.56	-1.10	73	+1	6.26	+2.60
JUL	79	+3	3.30	-1.70	79	+3	3.23	-1.77	75	-1	5.90	+0.90
AUG	77	+2	2.42	-1.51	75	0	3.41	-0.52	76	+1	6.16	+2.23
SEP	77	+9	0.18	-3.02	68	0	4.43	+0.83	69	+1	3.03	-0.17
OCT	61	+4	7.55	+5.58	57	0	4.98	+2.41	62	+5	3.68	-1.11
NOV	41	-4	5.39	+2.00	49	+4	2.18	-1.21				
DEC	43	+7	5.74	+1.76	36	0	2.27	-1.71				
Total			55.20	+10.65	·		45.92	+1.37	·		46.32	+9.14

DEP is departure from the long-term average.

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

Table 2. Dry matter yields, seedling vigor, and stand persistence of red clover varieties sown April 2, 2019, at Lexington, Kentucky.

	Seedling			Percen	t Stand						Yiel	d (tons/	/acre)			
	Vigor ¹	20	19	20	20	20	21	2019	2020			20	21			3-year
Variety	May 3, 2019	May 3	Oct 11	Mar 17	Sep 24	Mar 24	Sep 30	Total	Total	May 12	Jun 14	Jul 14	Aug 13	Sep 16	Total	Total
Commercial Varietie	s-Available for I	arm Use	2													
Freedom! MR	4.9	99	99	97	95	95	81	2.72	5.83	1.33	0.83	0.55	0.29	0.39	3.39	11.94*
Freedom!	4.6	99	100	100	100	98	91	2.52	4.57	1.23	0.97	0.68	0.41	0.44	3.72	10.80*
Blaze	4.4	100	100	98	98	96	90	2.19	4.59	1.16	0.83	0.76	0.31	0.38	3.43	10.21*
Kenland (certified)	4.6	98	99	99	97	96	85	2.02	4.90	1.33	0.82	0.56	0.29	0.29	3.28	10.21*
CW9901	4.5	100	100	99	95	94	78	2.21	4.64	1.21	0.65	0.62	0.24	0.24	2.96	9.81
Gallant	4.6	100	100	100	100	100	90	1.80	4.42	1.09	0.71	0.55	0.30	0.37	3.03	9.25
Bigfoot	4.4	100	100	99	99	97	88	1.94	4.35	0.90	0.73	0.66	0.34	0.30	2.93	9.22
GA9908	4.0	99	99	100	97	93	45	1.96	4.34	0.81	0.84	0.49	0.21	0.18	2.53	8.83
SS0303RCG	4.1	98	98	98	97	97	84	1.62	4.46	0.97	0.65	0.57	0.28	0.25	2.72	8.80
Barduro	4.6	100	100	100	81	83	12	2.01	4.19	0.95	0.66	0.29	0.05	0.05	2.01	8.20
Common O	4.9	100	100	98	80	68	2	1.80	3.85	0.86	0.65	0.18	0.01	0.02	1.73	7.37
Experimental Varieti	ies															
BARTP9	4.8	100	100	99	96	96	84	2.30	5.05	1.46	0.78	0.44	0.24	0.40	3.32	10.67*
KY2014 (2,4-D)	4.3	99	99	99	98	95	74	2.24	4.53	1.22	0.92	0.70	0.27	0.27	3.38	10.16*
BARTP11	4.3	100	100	100	97	96	55	2.09	4.40	1.32	0.98	0.57	0.24	0.32	3.42	9.91*
PAG-37	4.6	99	100	100	99	98	89	2.01	4.42	1.17	0.91	0.69	0.23	0.37	3.37	9.79
Mean	4.5	99	99	99	95	94	70	2.10	4.57	1.13	0.80	0.55	0.25	0.29	3.01	9.68.
CV,%	10.1	1	1	2	10	10	12	33.71	15.44	26.20	27.64	21.87	31.22	37.13	14.57	14.99
LSD,0.05	0.6	2	2	2	13	14	12	1.01	1.01	0.42	0.31	0.17	0.11	0.15	0.63	2.07

² 2021 data is for ten months through October.

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.

Table 3. Dry matter yields, seedling vigor, and stand persistence of red clover varieties sown April 3, 2020, at Lexington, Kentucky.

	Seedling		Percen	t Stand					Yield (to	ns/acre)			
	Vigor ¹	20	20	20	21	2020			20	21			2-year
Variety	June 3, 2020	Jun 3	Sep 24	Mar 24	Sep 29	Total	May 12	Jun 15	Jul 13	Aug 13	Sep 17	Total	Total
Commercial Varieti	es-Available for I	Farm Use											
SS0303RCG	3.9	100	100	100	96	2.78	3.36	1.71	1.20	0.54	0.65	7.45	10.23*
Gallant	3.8	96	97	97	96	2.55	3.37	1.71	1.14	0.64	0.82	7.67	10.22*
Freedom!	4.3	100	100	99	97	2.71	2.97	1.81	1.27	0.58	0.84	7.48	10.19*
GA9908	3.9	96	96	98	88	2.83	2.99	1.68	1.05	0.49	0.69	6.90	9.74*
Blaze	4.6	98	98	98	97	2.46	3.18	1.38	1.26	0.61	0.75	7.18	9.64*
Kenland (certified)	3.9	98	98	99	94	2.72	2.97	1.75	0.97	0.47	0.75	6.92	9.64*
Renegade	4.6	100	100	100	79	2.69	2.93	1.88	1.03	0.54	0.54	6.93	9.61*
Robust III	3.3	97	97	98	92	2.43	2.78	1.67	1.11	0.45	0.62	6.63	9.07
Redkin	2.5	45	53	53	68	1.76	3.28	1.62	1.00	0.46	0.54	6.89	8.65
Barduro	4.0	100	99	99	60	2.40	2.76	1.63	0.69	0.36	0.49	5.93	8.33
Rustler	4.5	100	100	100	30	2.16	2.99	1.93	0.45	0.30	0.34	6.00	8.16
Common O	4.8	99	98	98	20	2.07	3.02	1.84	0.57	0.20	0.29	5.92	7.99
Experimental Varie	ties												
CW040040	3.9	97	98	98	96	2.78	3.35	1.76	1.24	0.56	0.79	7.69	10.47*
ISTP12	4.5	100	100	100	94	2.97	3.26	1.59	1.05	0.45	0.62	6.96	9.92*
GATP1412	2.3	77	87	91	88	2.35	3.07	1.72	1.12	0.58	0.79	7.29	9.64*
BARTP10	3.6	97	97	97	96	2.41	3.34	1.44	1.09	0.52	0.61	7.00	9.41
CW30091	2.3	83	86	90	83	2.22	3.19	1.66	1.11	0.46	0.74	7.16	9.38
GATP1403	_	-	25	28	26	1.05	2.95	1.47	0.88	0.33	0.54	6.17	7.22
Mean	3.8	94	90	91	78	2.41	3.10	1.68	1.01	0.47	0.63	6.90	9.31
CV,%	15.0	6	4	4	11	14.02	11.94	10.11	22.98	27.73	20.77	8.18	7.57
LSD,0.05	0.8	9	6	5	13	0.50	0.53	0.24	0.33	0.19	0.19	0.80	1.00

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 2021 Red and White Clover Grazing Tolerance Report (PR-806).

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 8 and 9 show a summary of all clover varieties tested in Kentucky for the past 16 years. The UK Forage Extension website (https://forages. ca.uky.edu) contains electronic versions of all forage variety testing reports from

Table 4. Dry matter yields, seedling vigor, and stand persistence of white clover varieties sown April 2, 2019, at Lexinaton. Kentuckv.

	Seedling			Percen	t Stand						Yield (to	ns/acre)			
	Vigor ¹	20	19	20	20	20	21	2019	2020			2021			3-year
Variety	May 3, 2019	May 3	Oct 23	Mar 25	Sep 24	Mar 24	Sep 30	Total	Total	May 21	Jun 23	Aug 3	Sep 17	Total	Total
Commercial \	/arieties-Availa	ble for Fa	rm Use												
Will	4.3	98	98	98	96	96	73	0.86	1.70	0.51	0.22	0.37	0.39	1.50	4.06*
RegalGraze	5.0	97	97	94	95	93	68	0.95	1.42	0.71	0.19	0.37	0.36	1.62	3.98*
Alice	4.8	97	97	97	96	94	87	0.84	1.16	0.69	0.23	0.40	0.37	1.69	3.70*
Renovation	4.5	96	95	90	92	91	68	0.72	1.11	0.67	0.14	0.32	0.30	1.43	3.26*
Apis	4.3	97	97	93	93	93	71	0.69	0.88	0.69	0.19	0.40	0.35	1.62	3.19
Patriot	2.5	81	83	83	83	87	80	0.46	1.13	0.58	0.24	0.40	0.33	1.54	3.13
Neches	4.3	96	96	92	93	94	73	0.65	1.05	0.63	0.23	0.22	0.29	1.38	3.08
Companion	2.3	75	88	84	88	88	71	0.24	1.29	0.61	0.17	0.31	0.38	1.47	2.99
Rampart	3.5	88	92	84	87	87	58	0.57	1.03	0.56	0.21	0.24	0.36	1.38	2.97
Durana	3.0	91	91	84	84	89	79	0.32	0.98	0.56	0.16	0.33	0.36	1.41	2.71
Experimenta	l Varieties														
GA178	4.8	95	95	94	94	94	89	0.74	1.34	0.61	0.21	0.27	0.27	1.35	3.43*
B-18.2810	2.9	89	89	89	89	89	50	0.63	1.15	0.73	0.20	0.30	0.30	1.52	3.31*
Mean	3.8	91	93	90	91	91	71	0.64	1.19	0.63	0.20	0.33	0.34	1.49	3.32
CV,%	17.0	4	5	9	8	7	27	46.39	27.01	33.69	24.76	30.89	31.42	18.80	16.89
LSD,0.05	0.9	6	6	12	11	9	29	0.43	0.46	0.30	0.07	0.15	0.15	0.40	0.81

¹ Vigor score based on a scale of 1 to 5 with 5 being the most vigorous seedling growth.

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.

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

Table 5. Dry matter yields, seedling vigor, and stand persistence of white clover varieties sown April 3, 2020, at Lexington, Kentucky.

	Seedling		Percen	t Stand					Yield (to	ns/acre)			
	Vigor ¹	20	20	20	21	2020			20	21			
Variety	June 3, 2020	Jun 3	Sep 24	Mar 24	Sep 29	Total	May 13	Jun 15	Jul 13	Aug 14	Sep 17	Total	2-year Total
Commercial \	/arieties-Ava	ailable for	Farm Use	,		,		,	•				
Dusi	3.8	97	97	98	100	1.91	1.47	0.94	1.12	0.63	0.60	4.75	6.66*
RegalGraze	4.6	98	99	99	100	1.92	1.40	0.95	0.97	0.73	0.63	4.68	6.60*
Will	3.8	96	97	98	100	1.78	1.57	0.89	1.02	0.66	0.61	4.75	6.52*
Cresendo	4.8	98	98	99	100	1.69	1.43	0.93	0.91	0.51	0.59	4.38	6.07*
Patriot	3.0	89	91	94	100	1.53	1.48	0.82	0.92	0.60	0.66	4.47	6.00*
Neches	4.1	97	97	97	100	1.49	1.31	0.81	1.06	0.65	0.61	4.44	5.93
Alice	3.1	98	98	98	100	1.80	1.13	0.80	0.96	0.64	0.59	4.12	5.93
Apis	3.8	97	99	99	100	1.80	1.31	0.86	0.91	0.43	0.55	4.06	5.86
Rampart	2.5	75	91	91	100	1.23	1.24	0.75	1.02	0.50	0.58	4.10	5.34
Durana	2.5	89	96	97	100	1.22	1.08	0.70	0.90	0.54	0.61	3.83	5.05
Experimenta	l Varieties										,		
GATR16178	3.5	98	100	99	100	1.69	1.56	0.86	1.09	0.48	0.59	4.58	6.28*
CW9501	2.8	74	79	85	100	1.40	1.46	0.92	1.19	0.72	0.57	4.85	6.25*
Mean	3.5	92	95	96	100	1.62	1.37	0.85	1.01	0.59	0.60	4.42	6.04
CV,%	18.6	9	6	5	0	12.07	14.74	18.67	14.15	22.17	15.73	10.11	8.34
LSD,0.05	0.9	12	8	6	0	0.28	0.29	0.23	0.21	0.19	0.14	0.64	0.72

¹ Vigor score based on a scale of 1 to 5 with 5 being the most vigorous seedling growth.

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 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 (two in 2019 and two in 2020), .The soil at Lexington (Maury) is a well-drained silt loam. All are well-suited to clover production. Plots were 5 feet by

Table 6. Proprietors of red clover varieties in current trials in Kentucky.

Variety	Proprietor/ KY Distributor
Commercial Varieties	s-Available for Farm Use
Barduro	Barenbrug USA
Bigfoot	Preferred Alfalfa Genetics
Blaze	Mountain View Seeds
Common O	Public
CW9901	Barenbrug USA
Freedom!	Barenbrug USA
Freedom! MR	Barenbrug USA
Gallant	Turner Seed
GA9908	Smith Seed
Kenland (certified)	KY Agric. Exp. Station
Redkin	DLF Pickseed
Renegade	DLF Pickseed
Robust III	Blue Moon Farms
Rustler	Oregro Seeds
SS-0303RCG	Southern States
Experimental Varieti	es ¹
BARTP9	Barenbrug USA
BARTP10	Barenbrug USA
BARTP11	Barenbrug USA
CW040040	Barenbrug USA
CW30091	Barenbrug USA
IS-TP-12	DLF Pickseed
GATP1403	Univ. of GA
GATP1412	Univ. of GA
KY2014(2,4-D)	KY Agric. Exp. Station
PAG-37	Preferred Alfalfa Genetics

Experimental varieties are not available commercially, but provide an indication of the progress being made by forage breeding companies.

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 per acre for red clover and 3 pounds per acre for white clover into a prepared seedbed

Table 7. Proprietors and clover type information of white clover varieties in current trials in Kentucky.

Variety	Туре	Proprietor/KY Distributor
Commercial '	Varieties-Availal	ble for Farm Use
Alice	Intermediate	Barenbrug
Apis	Ladino	Smith Seed
Companion	Ladino	Oregro Seeds
Cresendo	Ladino	Barenbrug USA
Durana	Intermediate	Pennington
Dusi	Ladino	Barenbrug USA
Neches	Intermediate	Barenbrug USA
Patriot	Intermediate	Pennington
RegalGraze	Ladino	Cal/West Seed
Rampart	Ladino	Oregro Seeds
Renovation	Intermediate	Smith Seed
Will	Ladino	Allied Seed, L.L.C.
Experimenta	l Varieties ¹	
B-18.2810	Ladino	Blue Moon Farms
CW9501	Ladino	Barenbrug USA
GA178	Ladino	Smith Seed
GATR16178	Intermediate	Univ. of GA

¹ Experimental varieties are not available commercially, but provide an indication of the progress being made by forage breeding companies.

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

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.

Results and Discussion

Weather data for Lexington is presented in Table 1.

Yield data (on a dry matter basis) are presented in tables 2 through 5. Yields are given by cutting date for 2021 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 probably common seed falsely advertised as Kenland. 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.

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 higher of dry matter/acre over the life of the stand.

Tables 6 and 7 show information about proprietors/distributors for all varieties included in the tests discussed 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. 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 2 through 5. Make sure seed of the variety selected is properly labeled and will be available when needed.

How to Interpret the Summary Tables

Tables 8 and 9 are summaries of yield data from 2001 to 2021 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 8 and 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 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 8 and 9 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 (https://forages.ca.uky.edu):

- 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. Summary of Kentucky red clover yield trials 2004-2021 (yield shown as a percentage of the mean of the named commercial varieties in the trial).

								۱۵	levington	,						L	Drington	۵	Drinceton	١ د			ō	Onicksand	7	F	EdonShala		
		041,2	90	80	60	10	1	12	13	14	15 1	16 17	7 18	3 19	70	05	80	60	Ξ	13	15	19	05	08		19 08	10	Moan3	2
Variety	Proprietor	3yr4	2yr	\vdash	-	3yr	3yr	2yr	3yr	+	3yr	3yr 2-yr	yr 3-yr	r 3-yr	r 2-yr	2yr	3yr	2yr	2yr	3yr	_	2-yr 3	3yr 3	3yr 3	3yr 2-	2-yr 3yr	r 3yr	(#trials)	als)
AA117ER	ABI Alfalfa			-	-			_	-	_	_					-	_	_		-			_	-			\vdash	96(3)	3)
Barduro	Barenbrug USA													86	06							73			8	83		83(4)	4
Bearcat	Brett Young Seeds										1.	122																ı	
Bigfoot	Preferred Alf. Genetics													97							,	107			\dashv			101(2)	(2)
Blaze	Mountain View Seeds													107	7 104													106(2)	(2)
Cinnamon Plus	Southern States		109	112	123	117	94	116	101	86						112	102	102	100	100			103 1	108 12	124	108	3 122	108(18)	18)
Common O	Public					96	6	63	84	92	70 4	49 80	0 67	-	98					29	91	70		7	72 8	85	77	78(17)	7
CW9901	Barenbrug USA													103	3						,-	115			1(109		109(3)	(3)
Dominion	Seed Research of OR		102													95	102						93			109	- 6	100(5)	(2)
Emarwan	Turf-Seed	16			117									Щ				106		П				6	66			103(4)	(4)
Evolve	DLF Pickseed USA										98 9	96 102	7.								66							99(4)	4
FF9615	LaCrosse Seed										-	110 104	4															107(2)	(2)
Freedom!	Barenbrug USA	118	91	100	108	106	109	66	101	97 1	107 17	114 113	3 107	7 114	4 110	136	107	116	95	107	104	124	119 1	106 1.	115 13	133 100) 140	111(28)	28)
Freedom!MR	Barenbrug USA	102	114	114		112							117	7 126	5	101		108				82 1	111	1.	128 17	115	125	112(13)	13)
FSG 402	Allied Seed								104											114								108(2)	(2)
FSG 9601	Allied Seed	68																										-	
Gallant	Turner Seed								101	_	112	105	101	1 97	110					107	101	121						106(9)	(6)
GA9908	Smith Seed											93	~	93	105							92			8	85		94(5)	5)
Juliet	Caudill Seed				84												93	06								84	59	82(5)	5)
Kenland (cert.)	KY Ag.Exp Sta.	117	117	66	111	66	116	114	109	103	105 17	119 108	107	7 107	7 104	92	113	106	106	115	100	113	105	104	123 17	110 110	138	_	28)
Kenland (uncert)	Public					82					4	41					74								29	99	92	70(6)	(9
Kenton	KY Ag.Exp Sta.	95	112	121												105	112	94					106	86				105(8)	(8)
Kenway	KY Ag.Exp Sta.	6	119	118												94	106	103					103	94				104(8)	(8)
LS 9703	Lewis Seed							107				-		_						98								97(2)	2)
Morning Star	Cal/West Seeds																8									8		90(2)	2)
Plus II	Allied Seed			130																			0,	26				114(2)	(2)
Quinequeli	Caudill Seed				92													80									57	76(3)	3)
Red Gold	Proseeds Marketing		81											_			88								\dashv	102	21	91(3)	3)
Red Gold Plus	Turner Seed	95																										1	
Redkin	DLF Pickseed USA											-		_	93													1	
Redland Max	ABI Alfalfa	95																										1	
Renegade	DLF Pickseed USA														103													'	
Robust	Blu Moon Farms											78	8	_														ı	
Robust II	Seed Research of OR								1	1	+	+	-	4	_		110			7	7				_	108	~	109(2)	(2)
Robust III	Seed Research of OR								+	+	+	+	+	\perp	88			\prod		\dagger	+	+			+	+			
Rocket	Seed Research of OR											-		_			106							-		108	-	107(2)	(2)
Rustler	Oregro Seeds			83		101	84				+			_	88	\dashv							\dashv	94	66		104	93(7)	2
Solid	Production Service		79							\rightarrow	\rightarrow					98							9/					80(3)	3)
SS-0303RCG	Southern States								-	103	109 15	150 117	7 102	2 93	110					103	104	104			8	80		107(11)	11)
Starfire II	Cal/West & Ampac			101		11				107	+	+	-	4	_		112			7	7	1	\rightarrow	110 1.	112	115	111	110(8)	(8)
Triple Trust 350	ABI Alfalfa		101		\prod			\top	+	+	+	+	+	+	\downarrow	92	\perp	\Box		\dagger	+		92	+	+	+		95(3)	3)
Wildcat	Brett Young Seeds				101			٦	\dashv	\dashv	\dashv	\dashv	\dashv	\dashv	\dashv			107		\dashv	\dashv	\dashv	-	6	86	_	_	102(3)	(3)
1 Vaar trial was astablished	hlished																												

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 from the final year of each specific trial. For example, 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 UK Forage website (https://archived.a)
 Mean only presented when respective variety was included in two or more trials.
 Number of years of data.

Table 9. Summary of Kentucky white clover yield trials 2002-2021 (yield shown as a percentage of the mean of the commercial varieties in the trial).

										Ľ	Lexington	uo.								Pri	Princeton	
			021,2	03	04	90	07	80	60		1	12 1	13 14	1 15	5 16	6 17	7 18	3 19	20	03	02	Mean ³
Variety	Type	Proprietor	3yr4	3yr	3-yr	2-yr	2-yr	3yr	2yr	3yr 3	3yr 2	2yr 3	3yr 3yr	r 2yr	r 3yr	/r 3yr	r 2-yr	r 3-yr	r 2-yr	r 3yr	3-yr	
Advantage	Ladino	Allied Seed, L.L.C.		125																		ı
Alice	Intermediate	Barenbrug USA											105	5 120	0 78	8 94	4 93	1112	2 99	_	98	98(8)
Apis	Ladino	Smith Seed Services																96	98			97(2)
Avoca	Dutch	DLF Pickseed				59															82	71(2)
Barblanca	Intermediate	Barenbrug USA		95																		ı
Bombus	Ladino	Hood River													111	1 115	5					113(2)
Brianna	Ladino	DLF Pickseed													103	3 100	0					102(2)
CA ladino	Ladino	Public	100		124															103		109(3)
Colt	Intermediate	Seed Research of OR		8		57															114	
Common	Dutch	Public	100	L			53			86											78	82(4)
Companion	Ladino	Oregro Seeds						87	94	92								6				93(4)
Crescendo	Ladino	Cal/West Seeds	105			140													101	_	109	113(4)
Crusader II	Intermediate	Allied Seed, L.L.C.								06	20	54 7	75									67(4)
Excel	Ladino	Allied Seed, L.L.C.			100																	1
Domino	Ladino	Grassland Oregon											87									1
Dusi	Ladino	Barenbrug USA																	110	0		I
Durana	Intermediate	Pennington		94		94	88	82	85	6	93 8	84 9	97 89	_	8 99	68 6	9 73	8 82	84	1 87	83	88(18)
GWC-AS10	Ladino	Ampac Seed								-	102											1
Insight	Ladino	Allied Seed, L.L.C.				128																ı
lvory	Intermediate	Cebeco	96												_	_	_					1
Ivory II	Intermediate	DLF Pickseed					98			101	127											105(3)
Jumbo	Ladino	Ampac Seed	93												_							ı
Jumbo II	Ladino	Ampac Seed									121	101		66	6	_	_					107(3)
Kakariki	Ladino	Luisetti Seeds														108	- 8					1
Kopull	Intermediate	Ampac Seed	97			6	95	95	103	96	80	06										94(8)
KY Select	Intermediate	KY. Agric. Exp. Station									86	95		-								97(2)
Neches	Intermediate	Barenbrug USA												79	6			93	99	_		90(3)
Ocoee	Ladino	Allied Seed, L.L.C.								68	74											82(2)
Patriot	Intermediate			103		87	104	113	. 36	117 1	117	8 66	82 78	88	8 100	93	3 92	95	100	0 104	\rightarrow	-
Pinnacle	Ladino	Allied Seed, L.L.C.				120															111	116(2)
Rampart	Ladino	Allied Seed, L.L.C.					80	89	6	83								8	89	_		88(6)
Regal	Ladino	Public	66	96	92		125	100	116	118	129 1	147 1	123		_	_	_			107	100	113(12)
RegalGraze	Ladino	Cal/West Seeds				127	140	102	103					111	1 119	9 112	2 120	0 120	0 110	0		116(10)
Renovation	Intermediate	Smith Seed Services											83	85	5 91	_		66	_			90(4)
Resolute	Intermediate	Southern States				63																I
RIVENDEL	Intermediate	DLF Pickseed													59	9 88	8					74(2)
Seminole	Ladino	Saddle Butte Ag. Inc			108	70	79						114	4								93(4)
Super Haifa	Intermediate	Allied Seed, L.L.C.			77										_	_	_					1
Tillman II	Ladino	Caudill Seed	103																			1
WBDX	Dutch								\rightarrow	_								\rightarrow				I
Will	Ladino	Allied Seed, L.L.C.	107			162	150	132	107	119	137 1	130 1.	123 14	143 140	.0 140	102	122	2 122	2 110	0	136	136 128(17)

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 year of each specific trial. For example, 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 UK Forage website (https://forages.ca.uky.edu).
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