

2024 Red and White Clover and Annual Lespedeza Report

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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 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 2024 Alfalfa, Red Clover and White Clover Grazing Tolerance Report (PR-858).

Annual lespedezas used for forage in the South consist of two species (striate lespedezas and Korean lespedezas) that were introduced from Korea and Japan. Striate lespedeza is commonly referred to simply by the variety names “Kobe” or “Marion”. They are adapted to a wide range of soils and fertility levels and are used in pasture mixtures to provide good quality grazing from late spring until fall. Annual lespedezas can be cut for hay, but yields are relatively low. High levels of fertility will result in the lespedezas being crowded out by other forage species. Advantages-productive during summer months, tolerates soil acidity and low fertility, naturally reseeds itself, is fine stemmed and nonbloating. Disadvantages-short growing season, low quality after frost or if it matures, low yielding, must set seed each year to persist, may fail to reseed if overgrazed, autumns are dry or early frost occurs.

Table 1. Temperature and rainfall at Lexington, Kentucky in 2022, 2023 and 2024.

	2022				2023				2024 ²			
	Temp.		Rainfall		Temp.		Rainfall		Temp.		Rainfall	
	°F	DEP ¹	IN	DEP	°F	DEP	IN	DEP	°F	DEP	IN	DEP
JAN	29	-2	4.93	+2.07	44	+13	6.28	+3.42	32	+1	5.50	2.60
FEB	38	+3	7.69	+4.48	47	+12	3.73	+0.52	44	+9	3.90	0.70
MAR	49	+5	4.27	-0.13	48	+4	4.45	+0.05	49	+5	3.50	-0.90
APR	55	0	3.71	-0.17	58	+3	2.36	-1.52	58	+3	3.90	0
MAY	69	+5	3.84	-0.63	65	+1	2.53	-1.94	67	+3	4.60	0.10
JUN	76	+4	2.10	-1.56	72	0	6.75	+3.09	74	+2	2.40	-1.30
JUL	80	+4	6.46	+1.46	78	+2	5.32	+0.32	77	+1	2.50	-2.50
AUG	77	+2	4.27	+0.34	76	+1	2.40	-1.53	75	0	3.30	-0.60
SEP	70	+2	1.50	-1.70	71	+3	0.99	-2.21	70	+2	6.20	3.00
OCT	57	0	0.96	-1.61	61	+4	2.30	-0.27	58	+1	0.30	-2.30
NOV	49	+4	2.10	-1.29	49	+4	1.70	-1.69				
DEC	40	+4	3.46	-0.52	37	+8	2.41	-1.57				
Total			45.29	+0.74			41.22	-3.33			36.10	-1.10

¹ DEP is departure from the long-term average.

² 2024 data is for ten months through October.

Table 2. Temperature and rainfall at Princeton, Kentucky in 2023 and 2024.

	2023				2024 ²			
	Temp.		Rainfall		Temp.		Rainfall	
	°F	DEP ¹	IN	DEP	°F	DEP	IN	DEP
JAN	43	+9	5.11	+1.31	33	-1	6.42	+2.62
FEB	46	+8	3.27	-1.16	47	9	1.68	-2.75
MAR	48	+1	6.89	+1.95	52	5	1.4	-3.54
APR	57	-2	2.14	-2.66	61	2	3.44	-1.36
MAY	67	0	4.47	-0.49	70	3	8.92	+3.96
JUN	72	-3	1.59	-2.26	75	0	4.36	+0.51
JUL	77	-1	11.23	+6.54	77	-1	3.56	-0.73
AUG	75	-1	8.87	+4.86	76	-1	0.4	-3.61
SEP	71	0	2.77	-0.56	72	1	6.57	+3.24
OCT	59	0	3.82	0.77	62	+3	0.43	-2.62
NOV	49	2	1.26	-3.37				
DEC	43	4	1.73	-3.31				
Total			53.15	2.02			37.18	-4.28

¹ DEP is departure from the long-term average.

² 2024 data is for the ten months through October.

Table 3. Temperature and rainfall at Quicksand, Kentucky in 2023.

	2023			
	Temp.		Rainfall	
	°F	DEP ¹	IN	DEP
JAN	42	+11	3.80	+0.51
FEB	46	+13	5.10	+1.50
MAR	47	+6	4.10	-0.24
APR	56	+3	3.00	-1.10
MAY	62	0	4.30	-0.18
JUN	68	-2	3.70	-0.12
JUL	74	0	3.90	-1.02
AUG	73	0	4.70	+0.69
SEP	67	+1	2.00	-1.52
OCT	57	+3	1.00	-1.91
NOV	49	+7	1.66	-2.22
DEC	44	+11	2.95	-1.19
Total			40.21	-7.13

¹ DEP is departure from the long-term average.

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 11 and 12 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 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 clover studies at Lexington (one in 2022, two in 2023 and two in 2024) and Princeton (one in 2023) and annual lespedeza studies at Princeton (2023) and Quicksand (2023). The soils at Lexington (Maury), Princeton (Cridler) and Quicksand (Nolin) are well-drained silt loams and are well-suited to clover and lespedeza 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 per acre for red clover and 3 pounds 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.

Results and Discussion

Weather data for Lexington, Princeton and Quicksand are presented in tables 1, 2 and 3.

Yield data (on a dry matter basis) are presented in tables 4 through 11. Yields are given by cutting date for 2024 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 is likely common or VNS 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 12 and 13 show information about proprietors/distributors for all clover 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. Make sure seed of the variety selected is properly labeled and will be available when needed.

How to Interpret the Summary Tables

Tables 14 and 15 are summaries of yield data from 2001 to 2024 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 14 and 15, 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 14 and 15 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, Forage, and Cover 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)
- Frost Seeding Clover: A Recipe for Success (AGR-271)
- 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 4. Dry matter yields, seedling vigor, and stand persistence of red clover varieties sown April 4, 2022, at Lexington, Kentucky.

Variety	Seedling Vigor ¹ May 25, 2022	Percent Stand						Yield (tons/acre)						
		2022		2023		2024		2022	2023	2023			3-year Total	
		May 25	Sep 22	Mar 9	Oct 4	Mar 12	Jul 25	Total	Total	May 8	Jun 10	Jul 11		Total
Commercial Varieties-Available for Farm Use														
Freedom!	4.1	97	96	97	95	90	69	2.88	4.89	1.03	1.05	0.32	2.39	10.16*
Gallant	3.5	97	98	98	90	86	65	2.76	4.37	0.96	0.75	0.27	1.98	9.10*
Kenland (certified)	4.3	99	98	97	80	76	44	2.58	4.36	0.93	0.84	0.21	1.97	8.91*
SS0303RCG	3.8	93	98	97	85	78	62	2.54	4.15	0.89	0.74	0.27	1.89	8.59*
GA9908	3.5	96	96	94	64	56	10	2.56	3.89	0.55	0.58	0.15	1.27	7.72
Medalion	4.0	98	98	98	48	48	11	2.33	3.81	0.58	0.46	0.10	1.14	7.29
Blaze	3.9	98	96	96	92	82	55	2.01	3.26	0.71	0.75	0.19	1.65	6.92
Common O	4.1	98	96	94	8	7	1	2.13	2.53	0.29	0.19	0.03	0.51	5.17
Experimental Varieties														
20-LA-RC-1	3.6	96	96	93	46	77	51	2.61	4.23	0.94	0.81	0.19	1.94	8.78*
CW040040	4.0	98	98	98	93	88	44	2.44	3.93	0.77	0.70	0.21	1.68	8.04*
RC08	3.5	97	99	98	90	86	48	2.35	3.74	0.82	0.77	0.24	1.84	7.92*
BARTP10	3.8	98	98	96	64	53	20	2.69	3.81	0.46	0.65	0.16	1.28	7.78
BARTPV23	3.6	96	96	95	77	68	45	2.07	3.55	0.77	0.75	0.20	1.72	7.33
BY-RC31	4.3	98	98	98	79	70	50	1.99	3.52	0.75	0.80	0.18	1.73	7.24
GA-RXS	3.6	97	97	96	79	71	48	1.86	3.52	0.79	0.60	0.10	1.50	6.88
CW30091	2.6	58	60	58	35	33	13	1.80	2.97	0.45	0.36	0.08	0.88	5.65
BARTSRWR	2.5	91	91	91	91	90	64	1.46	2.55	0.64	0.65	0.13	1.42	5.43
GATP1412	2.3	68	73	70	43	30	13	1.49	2.86	0.46	0.41	0.08	0.95	5.30
PSTCLVR98121	3.5	95	96	94	23	33	7	1.42	2.57	0.25	0.23	0.07	0.55	4.53
PSTCLVR20825	2.8	88	89	89	28	24	4	1.54	2.34	0.27	0.18	0.06	0.51	4.38
Mean	3.6	93	93	92	65	62	36	2.17	3.54	0.66	0.61	0.16	1.44	7.16
CV,%	21.9	7	6	6	29	26	40	25.28	22.38	31.36	24.93	37.62	21.82	22.27
LSD,0.05	1.1	9	8	8	27	23	20	0.78	1.10	0.34	0.22	0.09	0.55	2.26

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 5. Dry matter yields, seedling vigor, and stand persistence of red clover varieties sown April 4, 2023, at Lexington, Kentucky.

Variety	Seedling Vigor ¹ May 16, 2023	Percent Stand				Yield (tons/acre)						2-year Total
		2023		2024		2023	2024					
		May 16	Oct 4	Mar 12	Sep 17	Total	May 10	Jun 11	Jul 15	Aug-Sep ²	Total	
Commercial Varieties-Available for Farm Use												
Freedom!	4.0	100	98	98	91	3.06	2.43	1.38	0.50		4.30	7.37*
Kenland (certified)	3.8	100	100	99	71	2.91	2.10	1.49	0.50		4.10	7.01*
Blaze	4.0	100	99	99	83	3.06	2.20	1.11	0.56		3.87	6.93*
Dynamite	4.5	100	99	99	33	2.83	2.33	1.33	0.25		3.91	6.74*
GA9908	2.9	98	91	91	78	2.31	2.27	1.05	0.54		3.86	6.16
SS0303RCG	3.6	99	97	100	84	2.46	2.07	0.95	0.50		3.52	5.97
Gallant	2.5	92	95	95	71	2.23	2.04	1.00	0.44		3.48	5.70
Q red clover	3.4	97	96	94	28	2.01	1.98	1.04	0.27		3.29	5.30
Common O	4.0	100	92	94	17	1.69	1.92	1.08	0.18		3.18	4.87
Experimental Varieties												
BY-RC31	4.5	100	100	100	89	3.21	2.46	1.14	0.56		4.16	7.37*
SERC-V15	3.8	100	100	99	93	3.29	2.08	1.18	0.55		3.81	7.09*
BARTPV23	3.6	99	97	97	68	2.92	2.19	1.09	0.45		3.73	6.65*
20-LA-RC-1	3.0	99	99	97	66	2.50	2.34	1.07	0.56		3.97	6.47
Mean	3.7	99	97	97	69	2.72	2.22	1.17	0.46		3.86	6.57
CV,%	17.4	2	4	4	26	32.73	15.72	12.88	26.67		13.10	18.81
LSD,0.05	0.9	3	6	5	26	1.27	0.50	0.22	0.18		0.72	1.77

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

² There were no August and September harvests in 2024 due to below normal precipitation in July, August, and early September, resulting in insufficient regrowth.

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

Table 6. Dry matter yields and stand persistence of red clover varieties sown March 29, 2024, at Lexington, Kentucky.

Variety	Percent Stand		Yield (tons/acre)		
	2024		2024		
	Jun 3	Sep 17	Jun 27 ¹	Aug 20	Total
Commercial Varieties-Available for Farm Use					
Blaze	93	92	0.14	0.75	0.89*
Freedom!	86	87	0.14	0.65	0.79*
SS0303RCG	94	94	0.14	0.65	0.79*
Kenland (certified)	94	94	0.14	0.65	0.79*
Rancher	93	88	0.13	0.60	0.73*
GA9908	87	87	0.13	0.60	0.72*
Common O	93	92	0.14	0.52	0.66
Dynamite	92	92	0.13	0.53	0.65
Gallant	86	85	0.13	0.48	0.62
Qredclove	85	84	0.14	0.21	0.35
Experimental Varieties					
SERC-V33	80	80	0.14	0.65	0.79*
24DKY2014	74	74	0.14	0.60	0.74*
SERC-V15	93	85	0.13	0.59	0.72*
GRD13014/F5058	92	89	0.13	0.56	0.69*
SERC-V32	87	80	0.13	0.51	0.64
SERC-201PC52	67	67	0.10	0.46	0.56
GRD15002/F4287	92	86	0.11	0.28	0.39
Mean	88	86	0.13	0.55	0.68
CV,%	12	12	7.58	28.11	22.91
LSD,0.05	16	15	0.01	0.22	0.22

¹ Due to delayed emergence and weak seedling growth (cool, wet spring), the first cut yield was exceptionally low.

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

Table 7. Dry matter yields and stand persistence of red clover varieties sown September 13, 2023, at Princeton, Kentucky.

Variety	Percent Stand		Yield (tons/acre)			
	2023	2024	2024			
	Nov 3	Nov 1	May 22	Jul 3	Aug 21	Total
Commercial Varieties-Available for Farm Use						
SS0303RCG	100	100	3.59	3.08	2.02	8.68*
Kenland (certified)	99	100	3.56	2.77	1.94	8.28*
GA9908	99	100	3.28	2.75	1.90	7.93*
Gallant	98	99	3.09	2.74	2.06	7.89
Blaze	98	100	3.47	2.69	1.72	7.87
Freedom!	99	100	3.39	2.65	1.75	7.80
Dynamite	98	97	3.59	2.45	1.73	7.77
Experimental Varieties						
20-LARC-1	99	100	3.52	2.94	2.19	8.65*
BY-RC31	97	99	3.46	2.80	2.08	8.34*
SERC-V15	99	100	3.30	2.69	2.13	8.12*
Mean	99	99	3.43	2.76	1.95	8.13
CV,%	2	1	10.62	7.54	16.86	6.67
LSD,0.05	2	1	0.53	0.30	0.48	0.79

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

Table 8. Dry matter yields, seedling vigor, and stand persistence of white clover varieties sown April 4, 2023, at Lexington, Kentucky.

Variety	Seedling Vigor ¹ May 16, 2023	Percent Stand				Yield (tons/acre)					2-year Total
		2023		2024		2023 Total	2024			Total	
		May 16	Oct 4	Mar 12	Sep 17		May 16	Jun 11	Jul-Sep ²		
Commercial Varieties-Available for Farm Use											
Regal Graze	3.9	100	99	99	95	2.30	1.09	0.70	–	1.79	4.09*
Will	3.6	100	100	98	92	2.52	0.87	0.52	–	1.39	3.92*
Cresendo	3.6	99	100	100	89	2.31	0.93	0.62	–	1.55	3.85*
Patriot	3.3	100	100	98	96	2.41	0.80	0.46	–	1.26	3.67*
Heslop	3.5	99	99	99	93	2.29	0.90	0.47	–	1.37	3.66*
Dusi	3.9	100	99	99	92	2.16	0.94	0.55	–	1.49	3.66*
Stamina	3.9	99	100	96	93	2.34	0.81	0.48	–	1.29	3.63*
Kakariki	3.4	100	98	98	94	2.32	0.66	0.40	–	1.06	3.38
Apis	4.3	100	99	99	91	1.98	0.84	0.43	–	1.28	3.26
Alice	3.5	99	99	98	96	2.04	0.76	0.39	–	1.15	3.19
Marco Polo	3.4	100	100	91	83	1.89	0.87	0.37	–	1.24	3.12
Durana	3.6	100	99	98	90	1.93	0.81	0.34	–	1.15	3.08
Hebe	3.5	100	98	94	78	1.72	0.47	0.18	–	0.65	2.36
Edith	3.9	100	100	76	45	1.60	0.58	0.11	–	0.68	2.28
Experimental Varieties											
C26532	3.4	99	100	94	89	2.29	0.73	0.36	–	1.09	3.38
CW9501	2.6	95	97	95	84	1.73	1.03	0.61	–	1.64	3.38
GATR21024	3.1	100	99	94	84	1.45	0.96	0.39	–	1.35	2.81
GATR22024	2.6	99	95	91	80	1.32	0.88	0.43	–	1.31	2.63
Mean	3.5	99	99	95	87	2.03	0.83	0.43		1.26	3.30
CV,%	20.2	1	2	6	10	21.38	18.87	25.23		17.60	14.91
LSD,0.05	1.0	2	3	8	13	0.62	0.22	0.16		0.32	0.70

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

² There were no July, August and September harvests in 2024 due to below normal precipitation in July, August, and early September, resulting in insufficient regrowth.

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

Table 9. Dry matter yields and stand persistence of white clover varieties sown March 29, 2024, at Lexington, Kentucky.

Variety	Percent Stand		Yield(tons/acre)		
	2024		2024		
	Jun 3	Sep 17	Jun 27	Jul-Sep ¹	Total
Commercial Varieties-Available for Farm Use					
Regal Graze	99	99	0.38*	–	0.38*
Will	97	97	0.35*	–	0.35*
Kakariki	96	96	0.34*	–	0.34*
Heslop	98	98	0.30*	–	0.30*
Marco Polo	98	98	0.29*	–	0.29*
Alice	98	98	0.29*	–	0.29*
Stamina	99	99	0.27*	–	0.27*
Durana	98	98	0.25*	–	0.25*
Edith	98	98	0.23	–	0.23
Patriot	97	97	0.20	–	0.20
Hebe	97	97	0.19	–	0.19
Experimental Varieties					
GWT05203/ C30311	95	97	0.23	–	0.23
GATR23024D	97	84	0.22	–	0.22
GWT09051	97	97	0.20	–	0.20
Mean	97	97	0.27		0.27
CV,%	2	6	36.31		36.31
LSD,0.05	3	9	0.14		0.14

* Not significantly different from the highest numerical value

¹ There were no July- September harvests in 2024 due to below normal precipitation in July, August, and early September, resulting in insufficient regrowth.

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

Table 10. Dry matter yields of annual lespedeza varieties sown May 31, 2023 at Princeton, Kentucky.

Variety	KY Distributor	Yield (tons/acre) Aug 31
Legend+Korean	no inoculant	1.73*
Korean-WF	Woodford Feed	1.67*
Korean-TS	Turner Seed	1.65*
Korean	Ramer Seed	1.63*
Legend+Korean-10#	Southeast Agriseeds	1.58*
Kobe+Korean	Akridge Farm Supply	1.34*
Legend+Korean	Southeast Agriseeds	1.29
Mean		1.55
CV,%		16.74
LSD,0.05		0.39

All were sown at 20 pounds/acre except for the one listed at 10 pounds.

All were inoculated except Legend+Korean NI.

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

Table 11. Dry matter yields of annual lespedeza varieties sown April 12, 2023, at Quicksand, Kentucky.

Variety	KY Distributor	Yield (tons/acre)		
		Jul 1 2	Sep 6	Total
Korean-WF	Woodford Feed	1.96	1.75	3.71*
Korean-TS	Turner Seed	1.84	1.55	3.39*
Legend+Korean NI	no inoculant	1.97	1.39	3.37*
Kobe+Korean	Akridge Farm Supply	1.67	1.35	3.02
Legend+Korean-10#	Southeast Agriseeds	1.53	1.36	2.89
Korean	Ramer Seed	1.66	1.21	2.87
Legend+Korean	Southeast Agriseeds	1.50	1.24	2.74
Mean		1.73	4.41	3.14
CV,%		20.72	14.42	13.98
LSD,0.05		0.53	0.3	0.65

All were sown at 20 pounds/acre except for the one listed at 10 pounds.

All were inoculated except Legend+Korean NI.

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

Table 12. Proprietors of red clover varieties in current trials in Kentucky.

Variety	Proprietor/ KY Distributor
Commercial Varieties-Available for Farm Use	
Barduro	Barenbrug USA
Blaze	Mountain View Seeds
Common O	Public
Dynamite	Grassland Oregon
Freedom!	Barenbrug USA
Gallant	Turner Seed
GA9908	Smith Seed
Kenland (certified)	KY Agric. Exp. Station
Medalion	DLF Pickseed
Q red clover	Grassland Oregon
Rustler	Oregro Seeds
SS-0303RCG	Southern States
Experimental Varieties¹	
BARTP10	Barenbrug USA
BARTPV23	Barenbrug USA
BARTSRWR	Barenbrug USA
BY-RC31	BrettYoungSeeds
CW040040	Barenbrug USA
CW30091	Barenbrug USA
GA-RXS	Univ. of GA
GATP1403	Univ. of GA
GATP1412	Univ. of GA
GRD13014/F5058	Univ. of GA
GRD15002/F4287	Univ. of GA
PSTCLVR20825	Caldbeck Consulting
PSTCLR98121	Caldbeck Consulting
RC08	Bailey Seed & Grain
SERC-201PC52	Smith Seed
SERC-V15	Smith Seed
SERC-V32	Smith Seed
SERC-V33	Smith Seed
20-LA-RC-1	Ampac Seed
24DKY2014	KY Agric. Exp. Station

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

Table 13. Proprietors and clover type information of white clover varieties in current trials in Kentucky.

Variety	Type	Proprietor/KY Distributor
Commercial Varieties-Available for Farm Use		
Alice	Intermediate	Barenbrug USA
Apis	Ladino	Smith Seed
Cresendo	Ladino	Barenbrug USA
Durana	Intermediate	Pennington
Dusi	Ladino	Barenbrug USA
Edith	Dutch White	Smith Seed
Hebe	Dutch White	Smith Seed
Heslop	–	DLF Pickseed
Kakariki	Ladino	Smith Seed
Marco Polo	Intermediate	Smith Seed
Patriot	Intermediate	Pennington
RegalGraze	Ladino	Barenbrug USA
Stamina	Intermediate	Mountain View Seeds
Will	Ladino	Allied Seed, L.L.C.
Experimental Varieties¹		
C26532	Intermediate	Univ. of GA
CW9501	Ladino	Barenbrug USA
GATR21024	Intermediate	Univ. of GA
GATR23024D	–	Univ. of GA
GWT05203/C30311	–	Univ. of GA
GWT09051	–	Univ. of GA
GATR22024	Intermediate	Univ. of GA

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

Table 14. Summary of Kentucky red clover yield trials 2004-2024 (yield shown as a percentage of the mean of the named commercial varieties in the trial).

Variety	Proprietor	Lexington																	Princeton						Quicksand				EdenShale		Mean ³ (#trials)															
		04 ^{1,2}	06	08	09	10	11	12	13	14	15	16	17	18	19	20	22	23	05	08	09	11	13	15	19	05	08	10	19	08		10														
		3yr ⁴	2yr	3yr	2yr	3yr	3yr	2yr	3yr	3yr	3yr	3yr	2-yr	3-yr	3-yr	3-yr	2yr	2yr	3yr	2yr	2yr	3yr	3yr	2-yr	3yr	3yr	3yr	2-yr	3yr	3yr																
AA117ER	ABI Alfalfa		110															87							92								96(3)													
Barduro	Barenbrug USA													86	81									73						83			81(4)													
Bearcat	Brett Young Seeds											118																					-													
Bigfoot	Preferred Alf. Genetics																97							107									101(2)													
Blaze	Mountain View Seeds															107	108	87	111														103(4)													
Cinnamon Plus	Southern States		109	112	123	117	94	113	101	98									112	102	102	100	101			103	108	124		108	122	108(18)														
Common O	Public					96	97	60	84	92	72	47	79	67	77	78	65	78					67	96	70			72	85		77	77(19)														
CW9901	Barenbrug USA																103								115					109			109(3)													
Dominion	Seed Research of OR		102																95	102						93				109			100(5)													
Dynamite	Grassland Oregon																																	-												
Emarwan	Turf-Seed	91				117																												-												
Evolve	DLF Pickseed USA										101	93	101																					98(4)												
FF9615	LaCrosse Seed											107	103																					105(2)												
Freedom!	Barenbrug USA	118	91	100	108	106	109	96	101	97	109	110	112	107	114	115	127	118	136	107	116	95	108	107	124	119	106	115	133	100	140	111(30)														
Freedom!MR	Barenbrug USA	102	114	114		112													101			108				82	111		128	115		125	112(13)													
FSG 402	Allied Seed																																	108(2)												
FSG 9601	Allied Seed	89																																	-											
Gallant	Turner Seed																																		106(11)											
GA9908	Smith Seed																																		95(7)											
Juliet	Caudill Seed					84																													84	59	82(5)									
Kenland (cert.)	KY Ag.Exp Sta.	117	117	99	111	99	116	111	109	103	107	115	107	107	107	108	112	113	92	113	106	106	116	99	113	105	104	123	110	110	138	110(30)														
Kenland (uncert)	Public							82																												66	92	70(6)								
Kenton	KY Ag.Exp Sta.	95	112	121																																105(8)										
Kenway	KY Ag.Exp Sta.	97	119	118																																	104(8)									
LS 9703	Lewis Seed																																				96(2)									
Medalion	DLF Pickseed USA																																				98(8)									
Morning Star	Cal/West Seeds																																				90	90(2)								
Plus II	Allied Seed																																				97		114(2)							
Q red clover	Grassland Oregon																																					-								
Quinequeli	Caudill Seed							92																														57	76(3)							
Raptor	Columbia Seeds																																						-							
Red Gold	Proseeds Marketing																																						102	91(3)						
Red Gold Plus	Turner Seed	95																																					-							
Redkin	DLF Pickseed USA																																						106(5)							
Redland Max	ABI Alfalfa	95																																					-							
Renegade	DLF Pickseed USA																																						-							
Robust	Blu Moon Farms																																						-							
Robust II	Seed Research of OR																																						108	109(2)						
Rocket	Seed Research of OR																																						108	107(2)						
Rustler	Oregro Seeds																																						104	92(7)						
Solid	Production Service																																						80	80(3)						
SS-0303RCG	Southern States																																						80	107(14)						
Starfire II	Cal/West & Ampac																																						110	112	115	111	110(8)			
Triple Trust 350	ABI Alfalfa																																								92		92		95(3)	
Wildcat	Brett Young Seeds																																									107		98		102(3)

¹ 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 final year of each specific trial. For example, the Lexington trial planted in the spring of 2010 was harvested 3 years, so the final report would be "2012 Red and White Clover Report" archived in the UK Forage website (<https://forages.ca.uky.edu>).

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

⁴ Number of years of data

Table 15. Summary of Kentucky white clover yield trials 2002-2024 (yield shown as a percentage of the mean of the commercial varieties in the trial).

Variety	Type	Proprietor	Lexington																				Princeton		Mean ³ (#trials)	
			02 ^{1,2}	03	04	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	23	03	05			
			3yr ⁴	3yr	3-yr	2-yr	2-yr	3yr	2yr	3yr	3yr	2yr	3yr	3yr	2yr	3yr	3yr	2-yr	3-yr	3-yr	2yr	3yr	3-yr			
Advantage	Ladino	Allied Seed, L.L.C.		125																						–
Alice	Intermediate	Barenbrug USA											105	120	77	93	93	112	100	95					86	98(9)
Apis	–	Smith Seed Services																96	99	97						97(2)
Avoca	Dutch	DLF Pickseed				59																			82	71(2)
Barblanca	Intermediate	Barenbrug USA		92																						–
Bombus	Ladino	Columbia Seed													110	113										112(2)
Brianna	Ladino	DLF Pickseed													102	99										101(2)
CA ladino	Ladino	Public	100		124																103					109(3)
Colt	Intermediate	Seed Research of OR		90		57																			114	87(3)
Common	Dutch	Public	100					53			98														78	82(4)
Companion	Ladino	Oregro Seeds							87	94	92								90							89(4)
Crescendo	Ladino	Cal/West Seeds	105			140													100	114					109	114(5)
Crusader II	Intermediate	Allied Seed, L.L.C.								90	50	54	75													67(4)
Excel	Ladino	Allied Seed, L.L.C.			100																					–
Domino	Ladino	Grassland Oregon												87												–
Durana	Intermediate	Pennington		94		94	88	82	85	97	93	84	97	89	78	98	87	73	82	85	91	87	83			88(19)
Dusi	Ladino	Barenbrug USA																	106	109						108(2)
Edith	Dutch	Smith Seed Services																	68							–
GWC-AS10	Ladino	Ampac Seed									102															–
Hebe	Dutch	Smith Seed Services																	70							–
Heslop		DLF Pickseed										101				110	112				109					108(4)
Insight	Ladino	Allied Seed, L.L.C.				128																				–
Ivory	Intermediate	Cebeco	96																							–
Ivory II	Intermediate	DLF Pickseed					86			101	127															105(3)
Jumbo	Ladino	Ampac Seed	93																							–
Jumbo II	Ladino	Ampac Seed									121	101			99											107(3)
Kakariki	Ladino	Luisetti Seeds															106			108	100					105(3)
Kopu II	Intermediate	Ampac Seed	97			97	95	95	103	96	80	90														94(8)
KY Select	Intermediate	KY. Agric. Exp. Station									98	95														97(2)
Marco Polo	Intermediate	Smith Seed Services																		93						–
Neches	Intermediate	Barenbrug USA													79				93	101						91(3)
Ocoee	Ladino	Allied Seed, L.L.C.								89	74															82(2)
Patriot	Intermediate	Pennington		103		87	104	113	95	117	117	99	82	78	88	99	92	92	88	99	109	104	100			98(19)
Pinnacle	Ladino	Allied Seed, L.L.C.				120																			111	116(2)
Rampart	Ladino	Allied Seed, L.L.C.					80	89	97	83									90	90						88(6)
Regal	Ladino	Public	99	96	92		125	100	116	118	129	146	123								107	100				113(12)
RegalGraz	Ladino	Barenbrug USA				127	140	102	103						111	118	110	120	120	108	121					116(11)
Renovation	Intermediate	Smith Seed Services												83	85	90			99							89(4)
Resolute	Intermediate	Southern States				63																				–
RIVENDEL	–	DLF Pickseed														59	87									73(2)
Seminole	Ladino	Saddle Butte Ag. Inc			108	70	79							114												93(4)
Super Haifa	Intermediate	Allied Seed, L.L.C.			77																					–
Tillman II	Ladino	Caudill Seed	103																							–
WBDX	Dutch	Saddle Butte Ag. Inc									72															–
Will	Ladino	Allied Seed, L.L.C.	107			162	150	132	107	119	137	130	123	143	140	139	101	122	122	111	116				136	122(18)

¹ 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 final year of each specific trial. For example, the Lexington trial planted in the spring of 2010 was harvested 3 years, so the final report would be “2012 Red and White Clover Report” archived in the UK Forage website at <forages.ca.uky.edu>.

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

⁴ Number of years of data

Notes

2024 Red and White Clover and Annual Lespedeza Report



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