PR-870

Agricultural Experiment Station

2025 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 2025 Alfalfa, Red Clover and White Clover Grazing Tolerance Report (PR-876).

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 2023, 2024, and 2025.

	2023				2024				2025[2]			
	Temp.		Rainfall		Temp.		Rainfall		Temp.		Rainfall	
	°F	DEP[1]	IN	DEP	°F	DEP	IN	DEP	°F	DEP	IN	DEP
JAN	44	+13	6.28	+3.42	32	+1	5.50	+2.60	27	-4	2.80	-0.06
FEB	47	+12	3.73	+0.52	44	+9	3.90	+0.70	37	+2	6.10	2.89
MAR	48	+4	4.45	+0.05	49	+5	3.50	-0.90	49	+5	3.90	-0.50
APR	58	+3	2.36	-1.52	58	+3	3.90	0.00	57	+7	10.80	6.92
MAY	65	+1	2.53	-1.94	67	+3	4.60	+0.10	62	-2	7.30	2.83
JUN	72	0	6.75	+3.09	74	+2	2.40	-1.30	75	+3	8.20	4.54
JUL	78	+2	5.32	+0.32	77	+1	2.50	-2.50	79	+3	3.90	-1.10
AUG	76	+1	2.40	-1.53	75	0	3.30	-0.60	73	+2	1.80	-2.13
SEP	71	+3	0.99	-2.21	70	+2	6.20	+3.00	70	+2	2.70	-0.50
OCT	61	+4	2.30	-0.27	58	+1	0.30	-2.30	58	+1	8.10	6.13
NOV	49	+4	1.70	-1.69	50	+5	3.80	-0.41				
DEC	44	+8	2.41	-1.57	40	+4	3.9	-0.08				
Total			41.22	-3.33			43.80	-0.75			55.60	18.40

[1] DEP is departure from the long-term average.
[2] 2025 data is for ten months through October.

Table 2. Temperature and rainfall at Princeton, Kentucky, in 2023, 2024, and 2025.

	2023				2024				2025[2]			
	Temp.		Rainfall		Temp.		Rainfall		Temp.		Rainfall	
	°F	DEP[1]	IN	DEP	°F	DEP	IN	DEP	°F	DEP	IN	DEP
JAN	43	+9	5.11	+1.31	33	-1	6.42	+2.62	30	-2	5.6	+1.8
FEB	46	+8	3.27	-1.16	47	+9	1.68	-2.75	38	0	8.8	+4.37
MAR	48	+1	6.89	+1.95	52	+5	1.4	-3.54	53	+6	3.7	-1.24
APR	57	-2	2.14	-2.66	61	+2	3.44	-1.36	61	+2	14.3	+9.5
MAY	67	0	4.47	-0.49	70	+3	8.92	+3.96	66	-1	6	+1.04
JUN	72	-3	1.59	-2.26	75	0	4.36	+0.51	77	+2	6.5	+2.65
JUL	77	-1	11.23	+6.54	77	-1	3.56	-0.73	81	+3	2.8	-1.49
AUG	75	-1	8.87	+4.86	76	-1	0.4	-3.61	65	-12	0.5	-3.51
SEP	71	0	2.77	-0.56	72	+1	6.57	+3.24	73	+2	4.3	+1.25
OCT	59	0	3.82	+0.77	62	+3	0.43	-2.62	61	+2	5.1	+2.05
NOV	49	+2	1.26	-3.37	55	+8	8.7	+4.07				
DEC	43	+4	1.73	-3.31	44	+5	5.8	+0.46				
Total			53.15	+2.02			51.68	+0.55			57.6	+15.62

[1] DEP is departure from the long-term average.
[2] 2025 data is for ten months through October.

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

	2023			
	Temp.		Rainfall	
	°F	DEP[1]	IN	DEP
	°F	DEP1	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 15 and 16 show a summary of all clover varieties tested in Kentucky for the past 23 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 (two in 2023, two in 2024, and two in 2025) and Princeton (one in 2023) and annual lespedeza studies at Princeton (2023) and Quicksand (2023). The soils at Lexington (Maury), Princeton (Crider) 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, 3 pounds per acre for white clover, and 25 pounds per acre for lespedeza 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 12. Yields are given by cutting date for 2025 and as total annual production for previous years. 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 or VNS," 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 13 and 14 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 15 and 16 are summaries of yield data from 2002 to 2025 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 15 and 16, 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 15 and 16 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.mgcafe.uky.edu/):

- Frost Seeding Clover: A Recipe for Success (AGR-271)
- Lime and Fertilizer Recommendations (AGR-1)
- Growing Lespedeza in Kentucky for Cattle, Sheep, and Goats (AGR-86)
- 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)
- 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, 2023, at Lexington, Kentucky.

Variety	Seedling Vigor[1] May 16, 2023	Percent Stand						Yield (tons/acre)						
		2023		2024		2025		2023	2024	2025				3-year Total
		May 16	Oct 4	Mar 12	Sep 17	Mar 17	Jul 22	Total	Total	May 19	Jun 18	Jul 22	Total	
Commercial Varieties-Available for Farm Use														
Freedom!	4.0	100	98	98	91	90	80	3.06	4.30	1.02	1.15	0.55	2.73	10.09*
Bobcat	4.5	100	100	100	89	85	58	3.21	4.16	0.78	0.98	0.58	2.33	9.71*
Blaze	4.0	100	99	99	83	80	79	3.06	3.87	0.86	0.93	0.65	2.44	9.37*
Kenland (certified)	3.8	100	100	99	71	64	36	2.91	4.10	0.64	0.98	0.29	1.90	8.91
Gallant	2.5	92	95	95	71	60	85	2.23	3.48	0.89	0.87	0.63	2.39	8.10
SS0303RCG	3.6	99	97	100	84	68	63	2.46	3.52	0.73	0.84	0.54	2.12	8.09
GA9908	2.9	98	91	91	78	65	38	2.31	3.86	0.70	0.80	0.43	1.92	8.08
Dynamite	4.5	100	99	99	33	8	4	2.83	3.91	0.07	0.21	0.11	0.39	7.13
Q medium red	3.4	97	96	94	28	6	5	2.01	3.29	0.10	0.17	0.19	0.47	5.77
Common O	4.0	100	92	94	17	6	2	1.69	3.18	0.16	0.21	0.21	0.58	5.45
Experimental Varieties														
SERC-V15	3.8	100	100	99	93	91	86	3.29	3.81	0.92	0.93	0.49	2.33	7.43*
BARTPV23	3.6	99	97	97	68	65	46	2.92	3.73	0.60	0.89	0.39	1.88	8.52
20-LARC-1	3.0	99	99	97	66	64	46	2.50	3.97	0.54	0.86	0.44	1.85	8.32
Mean	3.7	99	97	97	69	60	50	2.72	3.86	0.64	0.79	0.43	1.87	8.44
CV,%	17.4	2	4	4	26	31	30	32.73	13.10	36.25	23.03	27.51	21.35	17.27
LSD,0.05	0.9	3	6	5	26	26	22	1.27	0.72	0.33	0.26	0.17	0.57	2.08

[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 and stand persistence of red clover varieties sown March 29, 2024, at Lexington, Kentucky.

Variety	Percent Stand				Yield (tons/acre)					
	2024		2025		2024	2025				2-year Total
	Jun 3	Sep 17	Mar 17	Sep 19	Total	May 19	Jun 18	Jul 18	Total	
Commercial Varieties-Available for Farm Use										
Freedom!	86	87	83	30	0.79	2.50	1.33	0.59	4.42	5.21*
Kenland (certified)	94	94	91	29	0.79	2.40	1.39	0.46	4.25	5.04*
Blaze	93	92	91	33	0.89	2.33	1.11	0.62	4.06	4.95*
Gallant	86	85	81	40	0.62	2.51	1.05	0.70	4.26	4.87*
SS0303RCG	94	94	92	24	0.79	2.18	0.99	0.61	3.79	4.58
GA9908	87	87	71	8	0.72	2.01	0.96	0.42	3.38	4.11
Common O	93	92	87	4	0.66	2.02	0.94	0.11	3.06	3.72
Rancher	93	88	80	2	0.73	1.74	0.83	0.10	2.67	3.41
Dynamite	92	92	65	2	0.65	1.48	0.86	0.13	2.46	3.12
Q medium red	85	84	45	11	0.35	1.51	0.89	0.28	2.68	3.03
Experimental Varieties										
SERC-V32	87	80	84	41	0.64	2.43	1.36	0.63	4.41	5.05*
SERC-V33	80	80	85	33	0.79	2.29	1.21	0.60	4.11	4.90*
SERC-V15	93	85	85	24	0.72	2.07	1.11	0.61	3.79	4.51
24DKY2014	74	74	64	13	0.74	2.12	1.09	0.50	3.71	4.45
GRD13014/F5058	92	89	86	7	0.69	1.96	1.06	0.33	3.35	4.04
SERC-201PC52	67	67	43	2	0.56	1.81	0.90	0.16	2.87	3.44
GRD15002/F4287	92	86	80	7	0.39	1.60	0.41	0.36	2.36	2.75
Mean	88	86	78	20	0.68	2.08	1.05	0.43	3.57	4.25
CV,%	12	12	14	65	22.91	15.88	12.95	23.12	11.70	11.63
LSD,0.05	16	15	15	18	0.22	0.47	0.19	0.14	0.59	0.70

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

Table 6. Dry matter yields, seedling vigor, and stand persistence of red clover varieties sown April 16, 2025, at Lexington, Kentucky.

Variety	Seedling Vigor[1] Jun 11, 2025	Percent Stand 2025		Yield (tons/acre) 2025		
		Jun 11	Sep 19	Jul 22	Sep 5	Total
Commercial Varieties-Available for Farm Use						
Freedom!	4.6	99	100	1.24	0.99	2.23*
Kenland (certified)	4.4	100	100	1.07	0.92	1.99*
GA9908	4.4	99	98	1.11	0.83	1.93*
Blaze	4.5	99	100	0.97	0.96	1.93*
Q medium red	4.5	99	95	1.10	0.79	1.89*
SS0303RCG	4.3	100	100	1.13	0.72	1.85
Gallant	4.1	100	100	0.92	0.80	1.71
Common O	4.9	100	96	1.04	0.58	1.62
Rancher	5.0	100	96	0.93	0.64	1.57
Experimental Varieties						
SERC-V234	4.8	100	100	1.21	0.99	2.19*
SERC-V15	5.0	100	100	1.26	0.90	2.16*
PPG-TP107	4.6	99	100	1.04	0.85	1.89*
PPG-TP108	4.3	99	99	1.00	0.82	1.82
SERC-211	4.1	96	97	0.96	0.78	1.74
Mean	4.5	99	99	1.07	0.83	1.89
CV,%	12.7	2	3	12.17	17.55	12.60
LSD,0.05	0.8	3	4	0.18	0.21	0.34

[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 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	2025	2024	2025				2-year Total
	Oct 20	Nov 1	Apr 3	Total	Jun 4	Jul 14	Aug-Sept[1]	Total	
Commercial Varieties-Available for Farm Use									
SS0303RCG	100	100	95	8.68	2.46	1.64	–	4.11	12.79*
Kenland(certified)	99	100	97	8.28	2.64	1.38	–	4.02	12.29*
Blaze	98	100	94	7.87	2.46	1.67	–	4.13	12.00*
Gallant	98	99	95	7.89	2.34	1.50	–	3.84	11.72*
Freedom!	99	100	92	7.80	2.46	1.44	–	3.90	11.70*
GA9908	99	100	95	7.93	2.21	1.30	–	3.51	11.44
Dynamite	98	97	82	7.77	2.02	0.86	–	2.88	10.65
Experimental Varieties									
BY-RC31	97	99	91	8.34	2.68	1.50	–	4.18	12.52*
20-LARC-1	99	100	87	8.65	2.30	1.27	–	3.56	12.21*
SERC-V15	99	100	96	8.12	2.45	1.60	–	4.05	12.18*
Mean	99	99	92	8.13	2.40	1.42		3.82	11.95
CV,%	2	1	8	6.67	12.56	19.26		11.02	6.78
LSD,0.05	2	1	11	0.79	0.44	0.40		0.61	1.18

[1] There was no late summer or early fall harvest 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 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)							
		2023		2024		2025		2023	2024	2025			Aug-Sep[2]	Total	3-year Total
		May 16	Oct 4	Mar 12	Sep 17	Mar 27	Sep 19	Total	Total	May 19	Jun 18	Jul 17			
Commercial Varieties-Available for Farm Use															
Regal Graze	3.9	100	99	99	95	56	63	2.30	1.79	0.28	0.38	0.59	–	1.25	5.34*
Will	3.6	100	100	98	92	68	68	2.52	1.39	0.22	0.35	0.47	–	1.04	4.96*
Cresendo	3.6	99	100	100	89	45	45	2.31	1.55	0.12	0.40	0.52	–	1.03	4.88*
Dusi	3.9	100	99	99	92	69	68	2.16	1.49	0.28	0.37	0.51	–	1.16	4.81*
Patriot	3.3	100	100	98	96	81	73	2.41	1.26	0.28	0.40	0.42	–	1.10	4.77*
Heslop	3.5	99	99	99	93	64	71	2.29	1.37	0.22	0.34	0.42	–	0.99	4.65*
Stamina	3.9	99	100	96	93	53	60	2.34	1.29	0.14	0.36	0.46	–	0.95	4.58*
Kakariki	3.4	100	98	98	94	49	63	2.32	1.06	0.23	0.34	0.31	–	0.87	4.25
Apis	4.3	100	99	99	91	55	60	1.98	1.28	0.21	0.33	0.45	–	0.99	4.24
Alice	3.5	99	99	98	96	63	65	2.04	1.15	0.21	0.39	0.35	–	0.95	4.15
Durana	3.6	100	99	98	90	68	76	1.93	1.15	0.25	0.35	0.33	–	0.93	4.01
Marco Polo	3.4	100	100	91	83	43	43	1.89	1.24	0.06	0.26	0.37	–	0.69	3.82
Hebe	3.5	100	98	94	78	38	48	1.72	0.65	0.09	0.22	0.34	–	0.65	3.01
Edith	3.9	100	100	76	45	30	35	1.60	0.68	0.07	0.18	0.28	–	0.53	2.81
Experimental Varieties															
C26532	3.4	99	100	94	89	71	65	2.29	1.09	0.29	0.37	0.40	–	1.05	4.43*
CW9501	2.6	95	97	95	84	35	33	1.73	1.64	0.17	0.34	0.52	–	1.03	4.41
GATR21024	3.1	100	99	94	84	58	60	1.45	1.35	0.18	0.32	0.35	–	0.86	3.66
GATR22024	2.6	99	95	91	80	60	60	1.32	1.31	0.24	0.35	0.40	–	0.99	3.62
Mean	3.5	99	99	95	87	56	58	2.03	1.26	0.20	0.34	0.42		0.95	4.25
CV,%	20.2	1	2	6	10	30	20	21.38	17.60	58.86	25.71	23.24		23.72	15.19
LSD,0.05	1.0	2	3	8	13	24	17	0.62	0.32	0.16	0.12	0.14		0.32	0.93

[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 2025 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		2025		2024	2025					2-year Total
	Jun 3	Sep 17	Mar 17	Sep 19	Total	May 19	Jun 18	Jul 18	Aug 22	Total	
Commercial Varieties-Available for Farm Use											
Regal Graze	99	99	98	81	0.38	0.77	0.58	0.60	0.28	2.24	2.62*
Will	97	97	97	89	0.35	0.63	0.59	0.59	0.32	2.13	2.48*
Kakariki	96	96	96	90	0.34	0.69	0.52	0.51	0.28	2.00	2.34*
Heslop	98	98	98	91	0.30	0.70	0.51	0.46	0.29	1.96	2.26*
Alice	98	98	98	95	0.29	0.50	0.55	0.46	0.25	1.76	2.05
Stamina	99	99	95	89	0.27	0.61	0.47	0.34	0.19	1.62	1.88
Patriot	97	97	97	86	0.20	0.55	0.46	0.36	0.18	1.55	1.75
Durana	98	98	94	86	0.25	0.54	0.44	0.30	0.19	1.46	1.72
Marco Polo	98	98	91	81	0.29	0.52	0.38	0.28	0.19	1.38	1.67
Hebe	97	97	96	80	0.19	0.38	0.39	0.29	0.17	1.22	1.41
Edith	98	98	97	70	0.23	0.37	0.31	0.23	0.16	1.07	1.30
Experimental Varieties											
GWT05203/C30311	95	97	97	94	0.23	0.53	0.43	0.42	0.34	1.72	1.95
GATR23024D	97	84	84	66	0.22	0.58	0.48	0.27	0.22	1.55	1.77
GWT09051	97	97	97	86	0.20	0.46	0.43	0.34	0.22	1.45	1.66
Mean	97	97	95	85	0.27	0.56	0.47	0.39	0.24	1.65	1.92
CV,%	2	6	7	13	36.31	24.88	25.54	31.02	33.90	19.99	15.66
LSD,0.05	3	9	10	16	0.14	0.20	0.17	0.17	0.11	0.47	0.43

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

Table 10. Dry matter yields, seedling vigor, and stand persistence of white clover varieties sown April 16, 2025, at Lexington, Kentucky.

Variety	Seedling Vigor[1] Jun 11, 2025	Percent Stand		Yield (tons/acre)		
		2025		2025		
		Jun 11	Sep 22	Jul 22	Aug-Sep[2]	Total
Commercial Varieties-Available for Farm Use						
Fioana	4.1	100	100	0.69	–	0.69
Will	3.3	91	99	0.63	–	0.63
Kakariki	3.0	93	96	0.62	–	0.62
MarcoPolo	3.0	85	94	0.57	–	0.57
Ceibo	3.0	88	91	0.56	–	0.56
Heslop	2.8	98	98	0.55	–	0.55
Durana	3.5	95	98	0.55	–	0.55
RegalGraz	3.9	94	96	0.54	–	0.54
Patriot	2.5	93	96	0.53	–	0.53
Alice	2.9	95	96	0.47	–	0.47
Stamina	3.0	95	95	0.40	–	0.40
Experimental Varieties						
PPG-L3108	3.4	91	96	0.63	–	0.63
Mean	3.2	93	96	0.56		0.56
CV,%	31.2	8	6	26.58		26.58
LSD,0.05	1.4	10	8	0.22		0.22

[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 2025 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 11. Dry matter yields of annual lespedeza varieties sown May 31, 2023, at Princeton, Kentucky.

Variety	KY Distributor	Yield (tons/acre) Aug 31
Legend+Korean NI	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 12. Dry matter yields of annual lespedeza varieties sown April 12, 2023 at Quicksand, Kentucky.

Variety	KY Distributor	Yield (tons/acre)		
		Jul1 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 13. Proprietors of red clover varieties in current trials in Kentucky.

Variety	Proprietor/KY Distributor
Commercial Varieties-Available for Farm Use	
Blaze	Mountain View Seeds
Bobcat	BrettYoungSseeds
Common O	Public
Dynamite	Grassland Oregon
Freedom!	Barenbrug USA
Gallant	Turner Seed
GA9908	Smith Seed
Kenland (certified)	KY Agric. Exp. Station
Q medium red	Grassland Oregon
Rancher	VanDyke Seed
SS-0303RCG	Southern States
Experimental Varieties[1]	
BARTPV23	Barenbrug USA
GRD13014/F5058	Univ. of GA
GRD15002/F4287	Univ. of GA
PPG-TP107	Mountain View Seeds
PPG-TP108	Mountain View Seeds
SERC-201PC52	Smith Seed
SERC-211	Smith Seed
SERC-V15	Smith Seed
SERC-V32	Smith Seed
SERC-V33	Smith Seed
SERC -V234	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 14. 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
Ceibo	Intermediate	Gentos
Cresendo	Ladino	Barenbrug USA
Durana	Intermediate	Pennington
Dusi	Ladino	Barenbrug USA
Edith	Dutch White	Smith Seed
Fioana	Ladino	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 Varieties[1]		
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
PPG-L3108	Ladino	Mountain View Seeds

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

Table 15. Summary of Kentucky red clover yield trials 2006-2025 (yield shown as a percentage of the mean of the named commercial varieties in the trial).

Variety	Proprietor	Lexington																	Princton							Quicksand				EdenShale		Mean[3] (#trials)
		06[1,2]	08	09	10	11	12	13	14	15	16	17	18	19	20	22	23	24	08	09	11	13	15	19	23	05	08	10	19	08	10	
		2yr[4]	3yr	2yr	3yr	3yr	2yr	3yr	3yr	3yr	3yr	2-yr	3-yr	3-yr	3-yr	3yr	3yr	2yr	3yr	2yr	2yr	3yr	3yr	2-yr	2yr	3yr	3yr	3yr	2-yr	3yr	3yr	
AA117ER	ABI Alfalfa	110																								92						101(2)
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	116	118							102							106(6)
Bobcat	BrettYoung Seeds																120															–
Cinnamon Plus	Southern States	109	112	123	117	94	113	101	98										102	102	100	101				103	108	124		108	122	108(17)
Common O	Public				96	97	60	84	92	72	47	79	67	77	78	65	68	88				67	96	70				72	85		77	77(20)
CW9901	Barenbrug USA													103										115					109			109(3)
Dominion	Seed Research of OR	102																	102							93				109		102(4)
Dynamite	Grassland Oregon																88	74							90							84(3)
Emarwan	Turf-Seed			117																106								99				107(3)
Evolve	DLF Pickseed USA									101	93	101											96									98(4)
FF9615	LaCrosse Seed										107	103																				105(2)
Freedom!	Barenbrug USA	91	100	108	106	109	96	101	97	109	110	112	107	114	115	127	125	124	107	116	95	108	107	124	99	119	106	115	133	100	140	111(30)
Freedom!MR	Barenbrug USA	114	114		112								117	126						108				82		111		128	115		125	114(11)
FSG 402	Allied Seed							104														115										108(2)
Gallant	Turner Seed							101		114		104	101	97	110	114	100	116				108	100	121	99							106(11)
GA9908	Smith Seed											92		93	107	97	100							92	97				85			97(8)
Juliet	Caudill Seed			84															93	90									84	59	82(5)
Kenland (cert.)	KY Ag.Exp Sta.	117	99	111	99	116	111	109	103	107	115	107	107	107	108	112	110	120	113	106	106	116	99	113	104	105	104	123	110	110	138	110(30)
Kenland (uncert)	Public				82						40								74									67		66	92	70(6)
Kenton	KY Ag.Exp Sta.	112	121																112	94						106	98					107(6)
Kenway	KY Ag.Exp Sta.	119	118																106	103						103	94					107(6)
LS 9703	Lewis Seed						104															87										96(2)
Medalion	DLF Pickseed USA						98			85	101	104			109	91						94	103									98(8)
Morning Star	Cal/West Seeds																		90											90		90(2)
Plus II	Allied Seed		130																								97					114(2)
Q medium red	Grassland Oregon																71	72														72(2)
Quinequeli	Caudill Seed			92																80											57	76(3)
Rancher	VanDyke Seed																	81														–
Raptor	Columbia Seeds														99																	–
Red Gold	Proseeds Marketing	81																	89											102		91(3)
Red Gold Plus	Turner Seed																															–
Redkin	DLF Pickseed USA									112	123	106			94								97									106(5)
Renegade	DLF Pickseed USA														99																	–
Robust	Blu Moon Farms											77																				–
Robust II	Seed Research of OR																		110											108		109(2)
Rocket	Seed Research of OR																		106											108		107(2)
Rustler	Oregro Seeds		83		101	84									80												94	99			104	92(7)
Solid	Production Service	79																								76						78(2)
SS-0303RCG	Southern States						117		103	112	146	116	102	93	115	108	100	109				104	102	104	108				80			107(16)
Starfire II	Cal/West & Ampac		101		111				107										112								110	112		115	111	110(8)
Triple Trust 350	ABI Alfalfa	101																								92						97(2)
Wildcat	Brett Young Seeds			101																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 three years, so the final report would be "2012 Red and White Clover Report" archived in the UK Forage website at https://forages.mgcafe.uky.edu/.edu.

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

[4] Number of years of data.

Table 16. Summary of Kentucky white clover yield trials 2002-2025 (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	24	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	3yr	2yr	3yr	3-yr	
Advantage	Ladino	Allied Seed, L.L.C.		125																					–
Alice	Intermediate	Barenbrug USA												105	120	77	93	93	112	100	96	105		86	99(10)
Apis	–	Smith Seed Services																	96	99	98				98(3)
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	113			109	113(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	93	88	87	83	88(20)
Dusi	Ladino	Barenbrug USA																		106	112				109(2)
Edith	Dutch	Smith Seed Services																		68	65	67			67(3)
GWC-AS10	Ladino	Ampac Seed									102														–
Hebe	Dutch	Smith Seed Services																		70	70	72			71(2)
Heslop		DLF Pickseed										101				110	112				108	116			109(5)
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	99	120			108(4)
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)
Mara Polo	Intermediate	Smith Seed Services																		93	89	86			89(3)
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	111	90	104	100	98(20)
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)
RegalGraze	Ladino	Barenbrug USA				127	140	102	103						111	118	110	120	120	108	124	134			118(12)
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)
Stamina	Intermediate	Mountain View Seeds																				96			–
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	115	127		136	122(19)

[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 three years, so the final report would be "2012 Red and White Clover Report" archived in the UK Forage website at https://forages.mgcafe.uky.edu/.

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

[4] Number of years of data.

Notes

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Martin-Gatton
College of Agriculture,
Food and Environment

12-2025