



The 1995 Red Clover Report

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Introduction

Red clover (*Trifolium pratense*) is a high quality, short-lived, perennial legume that is 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 and therefore is very versatile as a forage crop. Stands are generally productive for two or three years with the highest yields occurring in the year following establishment. Red clover is used primarily as a renovation legume for grass pastures. It is a dominant forage legume in Kentucky because it is relatively easy to establish and has high forage quality, yield, and animal acceptance.

Yield and persistence of red 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. High yields and persistence (as measured by percent stand) are two indications that a red clover variety is resistant to or tolerant of these diseases when grown in Kentucky.

This report provides current yield and percent stand data on red clover varieties included in yield trials in Kentucky as well as guidelines for selecting red clover varieties.

Important Considerations in Selecting a Red Clover Variety

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. Red clover generally produces measurable yields for three years, including the establishment year, with the highest production occurring in the second year. Some varieties of red clover lose their stand after the end of the second year, while others that are not adapted to Kentucky conditions may not survive the first winter. These varieties must be reseeded more often than more persistent varieties, increasing seed and establishment costs.

Seed Quality. Buy either certified or Plant Variety Protected (PVP) seed, which will guarantee that the genetics and performance you are paying for are in the bag. Look

for the blue tag, which must be attached to all bags of certified seed or look for Plant Variety Protection labelling, which is the proprietor's guarantee. Other information on the label will include the test date, which must be within the previous nine months, and the level of germination and 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

Six studies are included in this report. Two are part of the Kentucky Red Clover Breeding Program (sown in 1994 and 1995 at Lexington) and the other four are part of **The Forage Variety Testing Program** (sown in 1995 at Quicksand, 1994 at Lexington, and in 1993 and 1995 at Princeton). The soils at Lexington (Maury) and Princeton (Crider) were well-drained silt loams. The soil at Quicksand is of the Nolin-Grigsby complex, which is loam - silt loam. All are well-suited to red clover production. Plots were 4 x 15 feet and were arranged in a randomized complete block design with four replications. Seedings were made at 12 pounds of seed per acre into a prepared seedbed using a disk drill. The first cutting in the seedling year was delayed to allow the red clover to completely reach maturity as indicated by full bloom, which generally occurs about 60-90 days after seeding. Otherwise, harvests were taken when the red clover was in the bud to early-flower stage using a sickle-type forage plot harvester. Fresh weights were measured in the field and converted to dry matter production using long-term averages for percent dry matter of red clover. Management of all tests for establishment, fertility, weed control, and harvest management was according to University of Kentucky Cooperative Extension Service recommendations.

Results and Discussion

Weather data for Quicksand, Lexington, and Princeton are presented in Table 1. For the most part temperatures across the state were warmer in the winter and early spring as well as in the summer months of July and August. Quicksand and Lexington were cooler in May and Princeton was warmer in October. Generally, surpluses in precipitation were measured across the state in January, while general deficiencies were measured in February, March, and April. May was a wet month everywhere. Lexington and Princeton remained wet in June and then dried up until August. Quicksand was dry from June through August but was wetter in September, when it was dry in the rest of the state. Precipitation was unevenly distributed across the season and within months at all locations. In every month except June, at every location, with or without a surplus, there was at least one rainfall event of greater than 1 inch. Several months received all of their precipitation in a matter of 2-3 days. In August, Princeton received 2.97 inches in one day. Precipitation was also unevenly distributed across the state such that Quicksand had a seasonal surplus of 0.28 inches, while Lexington had a surplus of 3.53 inches and Princeton had a deficiency for the season of 1.66 inches.

Yield data (on an oven dry basis) and ratings for percent stand and disease infestation

for all tests are presented in Tables 2-7. Yields are given by cutting date 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 red clover data (including experimentals) to determine if the apparent differences are truly due to variety or just due to chance. The variety with the highest numerical value in each column is marked with two asterisks (**) and those varieties not significantly different from that variety 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 CV's and larger LSD's.

Percent stand, a visual estimate of ground cover, reflects the cultivar's seedling vigor, ability to compete with weeds, resistance to disease, and stand persistence. In general, the highest yielding varieties in any test were also the most persistent as determined by percent stand.

The Breeding Tests were rated for spring black stem. This disease is not as much of a problem in red clover as it is in alfalfa; however, yield reductions and stand loss are possible. Spring black stem occurs during warm periods of the winter and spring in temperate areas such as Kentucky. It appears as dark lesions on stems and leaves and severe cases cause leaf drop and stem death. Potential for an outbreak of spring black stem can be lessened or averted by using improved varieties, good soil fertility, and proper harvest management.

Red clover yields across Kentucky in 1995 were somewhat equal to or better than those of 1994 for stands of comparable age and management. With the exception of Princeton, most of the production was concentrated in the harvests taken before mid-July across the state. This yield pattern is related to seasonal distribution of precipitation and higher temperatures during July and August. In addition to reducing yields, the summer drought caused considerable stand reduction as evidenced by the OCT09 stand ratings for the 1994 Breeding Test at Lexington (Table 4). Yields from the 1993 seeding at Princeton (Table 6) were uniformly low in the early cuttings even though moisture was plentiful in May and June. Then yields were exceptionally good in August after which there was no production. By NOV02 the percent stand of all varieties was zero. Although October rainfall was much greater than normal at all locations, fall growth was sufficient for harvest only at Quicksand (Table 2). All other tests simply did not recover from the summer drought.

In addition to the commercially available varieties and experimental lines, selected "common" red clovers are included in the variety tests. Common red clover, generally

sold as "medium red clover variety unknown," is unimproved red clover with an unknown performance record. Altaswede, a mammoth or "single-cut" red clover developed in Canada is also included. Several of the 'common' varieties performed quite well in the first year in several tests; however, these generally do not yield well after that. One exception was 'Common-I' in the 1993 seeding at Princeton (Table 6), which yielded well and maintained good stands throughout the life of the test.

Table 8 summarizes information about proprietors, distributors and yield performance across years and locations for all the varieties currently included in tests discussed in this report. Varieties are listed in alphabetical order with the experimental varieties at the bottom. Remember that the experimental varieties are not available for farm use, while commercial varieties can be purchased from dealerships. In Table 8, shaded areas indicate that the variety was not in that particular test (labelled at the top of the column) while clear blocks mean that the variety was in the test. A double Asterisk (**) indicates that the variety was the highest yielding variety in the test for that year. A single asterisk (*) means that the variety was not significantly different from the highest yielding variety. Remember to look at data from several years and locations when choosing a variety of red clover rather than results from one test year as is reported in Tables 2-7. Make sure seed of the variety selected is properly labelled and will be available when needed.

Summary

Proper management, beginning with land preparation and continuing throughout the life of the stand, is necessary for even the highest yielding, most pest-resistant variety to be productive. Maintaining soil fertility at recommended levels, based on soil tests, and controlling weeds are a must. Harvesting at the appropriate stage of maturity will produce 3 cuttings in the seeding year and four to five cuttings every year thereafter before mid-September in Kentucky. Other College of Agriculture publications related to the establishment, management and harvesting of red clover that are available from the local county extension office are listed in Table 9.

TABLE 1. TEMPERATURE AND RAINFALL AT QUICKSAND, LEXINGTON, AND PRINCETON IN 1995

MONTH	QUICKSAND				LEXINGTON				PRINCETON			
	TEMPERATURE		RAINFALL		TEMPERATURE		RAINFALL		TEMPERATURE		RAINFALL	
	F	DEP.	INCHES	DEP.	F	DEP.	INCHES	DEP.	F	DEP.	INCHES	DEP.
JAN	37	+6	5.49	+2.20	34	+3	3.75	+0.89	37	+3	4.12	+0.32
FEB	36	+2	2.68	-0.92	34	-1	1.65	-1.56	40	+1	4.21	-0.22
MAR	48	+4	3.11	-1.23	48	+4	2.85	-1.55	53	+5	2.47	-2.47
APR	57	+2	3.79	-0.39	56	+1	3.39	-0.49	61	+2	2.84	-1.96
MAY	63	-2	8.76	+4.28	63	-3	9.75	+5.28	67	-1	7.70	+2.74
JUN	71	-1	3.74	-0.08	72	0	4.75	+1.09	74	-1	5.21	+1.36
JUL	76	+1	1.51	-3.74	72	+2	3.32	-1.68	79	+1	4.14	-0.15
AUG	78	+5	1.17	-2.84	79	+6	4.61	+0.68	82	+6	4.14	+0.13
SEP	66	0	5.03	+1.51	66	0	2.68	-0.55	69	-1	1.91	-1.43
OCT	57	+1	4.40	+1.49	56	0	3.99	+1.42	62	+2	5.05	+2.00

TEMPERATURES ARE IN DEGREES FAHRENHEIT.

DEP. IS DEPARTURE FROM THE LONG-TERM AVERAGE FOR THAT LOCATION.

**TABLE 2. DRY MATTER YIELDS (TONS/ACRE) OF RED CLOVER VARIETIES
SOWN 4 APRIL 1995, AT QUICKSAND, KENTUCKY.**

VARIETY	1995 HARVESTS					1995
	JUN15	JUL14	AUG11	SEP12	OCT31	TOTAL
COMMERCIAL VARIETIES - AVAILABLE FOR FARM USE						
CONCORDE	0.79*	1.04*	0.53**	0.22*	0.39*	2.98*
KENLAND, CERT	0.80*	1.08*	0.49*	0.17	0.42*	2.96*
COMMON-0	0.75*	0.97*	0.45*	0.16	0.39*	2.73*
EMARWAN	0.68	0.95*	0.48*	0.21*	0.25	2.57*
CINNAMON	0.64	0.91*	0.36*	0.23**	0.42*	2.56*
GREENSTAR	0.69	0.90*	0.35	0.16	0.27	2.36
ALTASWEDE	0.79*	0.61	0.46*	0.18	0.28	2.32
KENLAND, UNCERT	0.54	0.84	0.40*	0.23**	0.29	2.30
COMMON-R	0.64	0.82	0.32	0.18	0.22	2.19
RANDOLPH	0.51	0.81	0.29	0.16	0.31	2.09
COMMON-Q	0.68	0.68	0.31	0.17	0.22	2.07
COMMON-P	0.51	0.77	0.30	0.20*	0.29	2.06
EXPERIMENTAL VARIETIES - NOT AVAILABLE FOR FARM USE						
KENLAND, BRDR	0.86**	1.01*	0.50*	0.19	0.45*	3.00**
KENLAND, FNDN	0.76*	1.09**	0.45*	0.16	0.46**	2.92*
RC8501	0.76*	0.96*	0.48*	0.19	0.42*	2.82*
RC-1	0.54	0.78	0.46*	0.21*	0.30	2.30
KY-NON-HAIRY, LG	0.45	0.56	0.29	0.21*	0.24	1.76
KY-NON-HAIRY, SM	0.40	0.52	0.29	0.22*	0.30	1.73
MEAN	0.66	0.85	0.40	0.19	0.33	2.43
CV, %	26.87	23.50	44.53	22.09	31.13	23.26
LSD, 0.05	0.17	0.20	0.18	0.04	0.10	0.56

**HIGHEST NUMERICAL VALUE IN THE COLUMN.

*NOT SIGNIFICANTLY DIFFERENT FROM THE HIGHEST NUMERICAL VALUE
IN THE COLUMN BASED ON THE 5% LSD.

**TABLE 3. DRY MATTER YIELDS (TONS/ACRE) OF RED CLOVER VARIETIES
SOWN 15 APRIL 1994, AT LEXINGTON, KENTUCKY.**

VARIETY	1994	1995 HARVESTS					1995	2-YR
	TOTAL	MAY10	JUN08	JUL07	AUG07	SEP11	TOTAL	TOTAL
COMMERCIAL VARIETIES - AVAILABLE FOR FARM USE								
GREENSTAR	1.76*	2.76**	0.82*	1.52	0.27	0.52*	5.89*	7.65*
KENSTAR	1.90*	2.57*	0.95*	1.40	0.29	0.47*	5.68*	7.57*
KENLAND, CERT	1.82*	2.61*	0.99*	1.47	0.26	0.35	5.68*	7.50*
KENLAND, UNCERT	1.87*	2.55*	1.04**	1.29	0.26	0.42*	5.56*	7.44*
CINNAMON	1.96**	2.62*	0.75	1.38	0.24	0.38	5.38*	7.33*
ATLAS	1.50	2.45*	0.88*	1.47	0.21	0.34	5.36	6.86
COMMON-K	1.81*	2.43*	0.88*	0.72	0.21	0.45*	4.68	6.49
COMMON-L	1.73*	2.30	0.90*	0.77	0.24	0.44*	4.66	6.39
COMMON-M	1.33	2.09	0.76	0.77	0.17	0.40	4.20	5.53
COMMON-N	1.21	1.66	0.67	0.87	0.18	0.42*	3.80	5.01
EXPERIMENTAL VARIETIES - NOT AVAILABLE FOR FARM USE								
WPB-F-5	1.79*	2.67*	0.80	1.76**	0.22	0.64**	6.08**	7.87**
KY-NON-HAIRY	1.78*	2.50*	0.86*	1.38	0.35**	0.50*	5.59*	7.36*
WPB-A-4	1.67*	2.60*	0.77	1.41	0.27	0.59*	5.64*	7.30*
WPB-1102	1.58*	2.52*	0.75	1.39	0.20	0.39	5.25	6.83
MEAN	1.69	2.45	0.84	1.26	0.24	0.45	5.25	6.94
CV, %	16.10	8.92	19.21	11.49	16.92	37.33	9.63	9.34
LSD	0.39	0.31	0.23	0.21	0.06	0.24	0.72	0.93

1994 TOTAL INCLUDES 3 HARVESTS DATED AUG01, SEP05, AND OCT26.

**HIGHEST NUMERICAL VALUE IN THE COLUMN.

*NOT SIGNIFICANTLY DIFFERENT FROM THE HIGHEST NUMERICAL VALUE IN THE COLUMN
BASED ON THE 5% LSD.

TABLE 4. DRY MATTER YIELDS (TONS/ACRE) AND RATINGS FOR PERCENT STAND AND SPRING BLACK STEM OF RED CLOVER VARIETIES SOWN 12 MAY 1994, AT LEXINGTON, KENTUCKY AS PART OF THE RED CLOVER BREEDING PROGRAM

VARIETY	1995 % STAND			DISEASE	1994	1995 HARVESTS				1995	2-YR
	MAY02	JUL27	OCT09	JUN20 95	TOTAL	MAY22	JUN23	AUG02	SEP11	TOTAL	TOTAL
COMMERCIAL VARIETIES - AVAILABLE FOR FARM USE											
KENLAND	90.00**	82.50**	71.25**	1.25**	1.50*	1.76*	1.68**	0.50*	0.67**	4.61**	6.10**
KENSTAR	89.75*	75.00*	55.00*	1.75*	1.28*	1.88*	1.60*	0.54**	0.58*	4.59*	5.88*
CINNAMON	86.25*	71.25*	35.00	1.50*	1.43*	1.78*	1.57*	0.41*	0.51*	4.27*	5.70*
REDSTAR	73.75	27.50	11.25	2.00*	1.28*	2.03**	1.34	0.44*	0.59*	4.39*	5.67*
ACCLAIM	86.25*	62.50	21.25	2.00*	1.35*	1.91*	1.36	0.39	0.49*	4.15*	5.50*
RUBY	90.00**	47.50	22.50	4.75	1.25	1.83*	1.30	0.33	0.54*	4.00	5.25
MARATHON	75.00	27.50	12.50	2.25*	1.24	1.55	1.32	0.38	0.54*	3.79	5.03
RENEGADE	81.25*	40.00	8.75	5.00	1.31*	1.45	1.38	0.27	0.54*	3.65	4.96
SCARLETT	81.25*	47.50	18.75	3.00*	1.29*	1.69*	1.17	0.30	0.46	3.62	4.90
CHEROKEE	61.25	9.00	0.50	7.50	1.73**	1.20	1.04	0.21	0.51*	2.96	4.70
ARLINGTON	67.50	37.50	11.25	3.25	1.08	1.66	1.14	0.30	0.44	3.54	4.62
COMMERCIAL VARIETIES - NOT AVAILABLE FOR FARM USE											
KY-NON-HAIRY	89.75*	66.25*	42.50	2.00*	1.25	1.83*	1.57*	0.40	0.59*	4.39*	5.64*
UNRED-GAMETE-TETRA	62.50	38.75	22.50	1.50*	1.12	1.76*	1.28	0.49*	0.49*	4.03*	5.15
TEMARA-TETRAPLOID	58.75	23.75	10.00	9.00	1.49*	1.43	1.32	0.27	0.51*	3.53	5.03
TEDI-TETRAPLOID	72.50	22.50	6.75	9.00	1.28*	1.54	1.17	0.29	0.52*	3.52	4.80
MEAN	77.72	45.27	23.32	3.72	1.33	1.69	1.35	0.37	0.53	3.94	5.26
CV, %	12.76	29.67	65.84	35.46	24.88	15.11	13.81	26.44	25.81	10.82	9.31
LSD, 0.05	14.15	19.17	21.91	1.88	0.47	0.36	0.27	0.14	0.20	0.61	0.70

DISEASE (SPRING BLACK STEM) RATING SCALE: 0=NONE 9=SEVERE

1994 TOTAL INCLUDES 1 HARVEST DATED AUG19.

**HIGHEST (OR BEST) NUMERICAL VALUE IN THE COLUMN.

*NOT SIGNIFICANTLY DIFFERENT FROM THE HIGHEST (OR BEST) NUMERICAL VALUE IN THE COLUMN BASED ON THE 5% LSD.

**TABLE 5. DRY MATTER YIELDS (TONS/ACRE) AND RATINGS FOR
PERCENT STAND AND SPRING BLACK STEM OF RED CLOVER
VARIETIES SOWN 3 MAY 1995, AT LEXINGTON, KENTUCKY
AS PART OF THE RED CLOVER BREEDING PROGRAM**

VARIETY	% STAND		DISEASE HARVEST		1995
	JUL17	OCT09	JUL17	SEP11	TOTAL
COMMERCIAL VARIETIES - AVAILABLE FOR FARM USE					
KENLAND	81.25*	81.25**	2.50	0.57**	0.57**
CHEROKEE	84.75**	68.75*	3.00	0.54*	0.54*
KENSTAR	75.00*	70.00*	3.50	0.54*	0.54*
CONCORDE	70.00*	65.00*	2.50	0.48*	0.48*
RENEGADE	81.25*	75.00*	4.00	0.46*	0.46*
SCARLETT	76.25*	75.00	3.50	0.46*	0.46*
CINNAMON	82.50*	81.00*	2.50	0.45*	0.45*
RED-STAR	57.50	62.50	3.00	0.44*	0.44*
RAM	83.75*	75.00*	2.50	0.44*	0.44*
MARATHON	83.50*	81.00*	5.25	0.42*	0.42*
ARLINGTON	73.75*	62.50	2.50	0.42*	0.42*
ACCLAIM	83.75*	71.25*	3.00	0.39	0.39
EXPERIMENTAL VARIETIES - NOT AVAILABLE FOR FARM USE					
KY-NON-HAIRY, LG	46.25	50.00	0.25*	0.55*	0.55*
ISI-84-LM	79.75*	74.75*	4.00	0.54*	0.54*
TAMARA TETRAPLOID	55.00	38.75	4.25	0.50*	0.50*
TEDI TETRAPLOID	62.50	62.50	6.50	0.46*	0.46*
KY-NON-HAIRY, SM	62.50	53.75	1.50*	0.46*	0.46*
GP8	63.75	56.25	2.50	0.41*	0.41*
CF*FC	21.25	31.25	0.00**	0.37	0.37
MEAN	69.70	65.03	2.99	0.47	0.49
CV, %	17.42	17.64	55.72	27.18	27.18
LSD, 0.05	17.21	16.27	2.36	0.18	0.18

DISEASE (SPRING BLACK STEM) RATING SCALE: 0=NONE 9=SEVERE

**HIGHEST (OR BEST) NUMERICAL VALUE IN THE COLUMN.

*NOT SIGNIFICANTLY DIFFERENT FROM THE HIGHEST (OR BEST)
NUMERICAL VALUE IN THE COLUMN BASED ON THE 5% LSD.

TABLE 6. DRY MATTER YIELDS (TONS/ACRE) AND PERCENT STAND RATINGS OF RED CLOVER VARIETIES SOWN 23 APRIL 1993, AT PRINCETON, KENTUCKY.

VARIETY	% STAND	1993	1994	1995 HARVESTS				1995	3-YR
	MAY03 95	TOTAL	TOTAL	MAY03	JUN06	JUL06	AUG10	TOTAL	TOTAL
COMMERCIAL VARIETIES - AVAILABLE FOR FARM USE									
CINNAMDN	87.50*	1.53**	3.97**	0.63	0.56*	0.48	1.16**	2.82*	8.32**
KENLAND, CERT	90.00*	1.26*	3.63*	0.84*	0.60*	0.50	1.03*	2.98*	7.88*
COMMON-I	77.50*	1.28*	3.64*	0.53	0.46	0.35	0.95*	2.28*	7.21*
KENLAND, UNCERT	87.50*	0.94	2.84*	0.70	0.57*	0.47	0.92	2.67*	6.45*
GREENSTAR	70.00	1.14*	3.12*	0.32	0.44	0.40	0.76	1.92	6.18
KENSTAR	67.50	1.05	3.19*	0.39	0.41	0.36	0.74	1.89	6.13
COMMON-H	61.25	0.93	2.58	0.29	0.36	0.30	0.66	1.61	5.12
ACCLAIM	52.50	0.95	2.73	0.22	0.35	0.27	0.58	1.42	5.10
ARLINGTON	16.25	0.92	2.59	0.05	0.08	0.07	0.19	0.39	3.90
CONCORDE	35.00	0.64	1.93	0.09	0.20	0.17	0.40	0.87	3.44
COMMON-G	6.25	0.54	0.88	0.02	0.03	0.03	0.07	0.14	1.57
COMMON-J	0.00	0.16	0.34	0.00	0.00	0.00	0.00	0.00	0.49
ALTASWEDE	0.00	0.12	0.18	0.00	0.00	0.00	0.00	0.00	0.30
EXPERIMENTAL VARIETIES - NOT AVAILABLE FOR FARM USE									
VIRUS-RESISTANT	92.50**	1.25*	3.75*	0.96**	0.64**	0.66**	0.87	3.12**	8.13*
WVPB-RC-91-100	61.25	1.13*	3.00*	0.33	0.41	0.33	0.72	1.79	5.92
WVPB-RC-91-200	47.50	0.75	2.42	0.26	0.30	0.23	0.53	1.32	4.49
WVPB-RC-91-300	45.00	0.68	1.89	0.18	0.23	0.22	0.50	1.13	3.70
MEAN	52.79	0.90	2.51	0.34	0.33	0.28	0.59	1.55	4.96
CV, %	25.74	31.97	33.28	46.68	33.18	28.59	28.33	29.57	26.69
LSD	19.32	0.41	1.19	0.23	0.16	0.12	0.24	0.65	1.88

% STAND OF ALL VARIETIES WAS ZERO AS OF NOV02 95.

1993 TOTAL INCLUDES 3 HARVESTS DATED JUL15, SEP15, AND OCT26.

1994 TOTAL INCLUDES 5 HARVESTS DATED MAY02, JUN01, JUL03, AUG03, AND OCT26.

**HIGHEST NUMERICAL VALUE IN THE COLUMN.

*NOT SIGNIFICANTLY DIFFERENT FROM THE HIGHEST NUMERICAL VALUE IN THE COLUMN BASED ON THE 5% LSD.

**TABLE 7. DRY MATTER YIELDS (TONS/ACRE) AND PERCENT
STAND RATINGS OF RED CLOVER VARIETIES SOWN 23
MARCH 1995, AT PRINCETON, KENTUCKY.**

VARIETY	% STAND	1995 HARVESTS		1995
	NOV02 94	JUL06	AUG10	TOTAL
COMMERCIAL VARIETIES - AVAILABLE FOR FARM USE				
CONCORDE	63.75	0.81*	1.16*	1.97*
KENLAND, UNCERT	51.25	0.71*	1.11*	1.82*
COMMON-P	85.00*	0.60*	1.19**	1.79*
CINNAMON	80.00*	0.66*	1.09*	1.75*
KENLAND, CERT	85.00*	0.61*	1.14*	1.74*
COMMON-R	51.25	0.65*	1.07*	1.71*
GREENSTAR	78.75*	0.50	1.19**	1.69*
EMARWAN	86.25*	0.56	1.05*	1.62*
RANDOLPH	52.50	0.50	1.09*	1.60*
COMMON-Q	35.00	0.44	1.03*	1.47
COMMON-O	63.75	0.42	1.04*	1.47
EXPERIMENTAL VARIETIES - NOT AVAILABLE FOR FARM USE				
RC8501	75.00*	0.88**	1.15*	2.03**
KENLAND, BRDR	88.75*	0.70*	1.18*	1.88*
RC-1	68.75	0.58	1.08*	1.65*
KENLAND, FNDN	92.50**	0.54	1.04*	1.59*
KY-NON-HAIRY, LG	68.75	0.45	1.13*	1.58*
KY-NON-HAIRY, SM	77.50*	0.46	1.04*	1.50
MEAN	70.81	0.59	1.11	1.70
CV, %	17.89	34.51	27.00	20.04
LSD, 0.05	18.01	0.29	0.42	0.48

**HIGHEST NUMERICAL VALUE IN THE COLUMN.

*NOT SIGNIFICANTLY DIFFERENT FROM THE HIGHEST NUMERICAL VALUE IN THE COLUMN BASED ON THE 5% LSD.

ISI-84-KM	International Seeds					*				
Kenland, Breeder seed	KY Agric. Exp. Sta./Experimental	**			*	**	**			*
Kenland, Foundation seed	KY Agric. Exp. Sta./Experimental	*								*
Kentucky Non-Hairy, large seed	KY Agric. Exp. Sta./Experimental		*	*		*	*			*
Kentucky Non-Hairy, small seed	KY Agric. Exp. Sta./Experimental					*				
RC-1	DLF/Experimental									*
RC8501	Allied Seed/Experimental	*								**
Root Rot Selection	KY Agric. Exp. Sta./Experimental									
Tedi Tetraploid	France				*	*	*			
Temara Tetraploid	France				*	*	*			
Unreduced Gamete Tetraploid	KY Agric. Exp. Sta./Experimental					*				
Virus Resistant	KY Agric. Exp. Sta./Experimental							*	*	**
WBPB-1102	Willamette Valley Plant Breeders/Experimental		*							
WBPB-A-4	Production Service International/Experimental		*	*						
WBPB-F-5	Production Service International/Experimental		*	**						
WBPB-RC-91-100	Willamette Valley Plant Breeders/Experimental							*	*	
WBPB-RC-91-200	Willamette Valley Plant Breeders/Experimental									
WBPB-RC-91-300	Willamette Valley Plant Breeders/Experimental									

¹ Establishment year

² Tests sown as part of The Forage Variety Testing Program

³ Tests sown as part of the Kentucky Red Clover Breeding Program

⁴ Harvest year

Indicates that the variety was not in the test.

** Highest yielding variety in the test for that year.

* Not significantly different from the highest yielding variety in the test for that year.

Table 9. University of Kentucky agricultural extension publications related to red clover management

Publication	Title
AGR-33	Growing red clover in Kentucky
AGR-2	Producing red clover seed in Kentucky
AGR-24	Kenstar red clover
AGR-64	Establishing forage crops
-----	Seed tags: What they reveal
AGR-26	Renovating hay and pasture fields
AGR-90	Inoculation of forage legumes
AGR-18	Grain and forage crop guide for Kentucky
AGR-1	Lime and fertilizer recommendations
AGR-148	Weed control strategies for alfalfa and other forage legume crops
ENT-17	Insect management recommendations for field crops and livestock
PPA-10d	Kentucky plant disease management guide for forage legumes

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