# 2016 Red and White Clover Report

G.L. Olson and S.R. Smith, Plant and Soil Sciences

## 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 primar-

ily 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 may 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 pasture 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. Information on the grazing tolerance of white clover varieties can be found in the 2016 Red and White Clover Grazing Tolerance Report (PR-716).

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 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 15 years. The UK Forage Exten-



|       |      | 2013             |          |       |      | 20  | 14       |       |      | 20  | 15       |        | 2016 <sup>2</sup> |     |          |       |
|-------|------|------------------|----------|-------|------|-----|----------|-------|------|-----|----------|--------|-------------------|-----|----------|-------|
|       | Temp |                  | Rainfall |       | Temp |     | Rainfall |       | Temp |     | Rainfall |        | Temp              |     | Rainfall |       |
|       | °F   | DEP <sup>1</sup> | IN       | DEP   | °F   | DEP | IN       | DEP   | °F   | DEP | IN       | DEP    | °F                | DEP | IN       | DEP   |
| JAN   | 38   | +7               | 4.50     | +1.64 | 25   | -6  | 2.28     | 58    | 32   | +1  | 2.17     | -0.69  | 32                | +1  | 0.80     | -2.06 |
| FEB   | 36   | +1               | 1.78     | -1.43 | 30   | -5  | 5.47     | +2.26 | 26   | 14  | 3.08     | -0.13  | 38                | +3  | 6.09     | +2.88 |
| MAR   | 39   | -5               | 5.47     | +1.07 | 39   | -5  | 3.08     | -1.32 | 45   | +1  | 7.34     | +2.94  | 52                | +8  | 4.07     | -0.33 |
| APR   | 55   | 0                | 4.46     | +0.58 | 58   | +3  | 5.27     | -1.89 | 57   | +2  | 13.19    | +9.31  | 57                | +2  | 3.97     | +0.09 |
| MAY   | 65   | +1               | 5.23     | +.076 | 66   | +2  | 5.72     | +1.25 | 69   | +5  | 3.02     | -1.45  | 64                | 0   | 9.17     | +4.70 |
| JUN   | 72   | 0                | 7.32     | +3.66 | 75   | +3  | 2.93     | -0.73 | 75   | +3  | 8.20     | +4.54  | 76                | +4  | 5.09     | +1.43 |
| JUL   | 72   | -4               | 9.33     | +4.33 | 74   | -2  | 3.18     | -1.82 | 77   | +1  | 10.22    | +5.22  | 79                | +3  | 7.43     | +2.43 |
| AUG   | 72   | -3               | 3.68     | -0.25 | 76   | +1  | 6.53     | +2.60 | 74   | -1  | 3.49     | -0.44  | 79                | +4  | 4.37     | +0.44 |
| SEP   | 67   | -1               | 2.21     | -0.99 | 69   | +1  | 3.63     | +.43  | 72   | +4  | 3.49     | +0.29  | 74                | +6  | 2.18     | -1.02 |
| OCT   | 55   | -2               | 7.02     | +4.45 | 57   | 0   | 5.55     | +2.98 | 59   | +2  | 2.78     | +0.21  | 64                | +7  | 0.37     | -2.20 |
| NOV   | 41   | -4               | 3.06     | -0.33 | 41   | -4  | 2.79     | -0.60 | 51   | +6  | 3.72     | +0.33  |                   |     |          |       |
| DEC   | 36   | 0                | 4.19     | +0.21 | 40   | +4  | 2.47     | -1.51 | 49   | +13 | 8.42     | +4.44  |                   |     |          |       |
| Total |      |                  |          |       |      |     | 49.4     | +4.85 |      |     | 69.12    | +24.57 |                   |     | 46.54    | +6.36 |

<sup>1</sup> DEP is departure from the long-term average.

<sup>2</sup> 2016 data is for ten months through October.

| 2013 0 | 10 201 | ••               |       |       |    |     |                 |       |
|--------|--------|------------------|-------|-------|----|-----|-----------------|-------|
|        |        | 20               | 15    |       |    | 20  | 16 <sup>2</sup> |       |
|        | Te     | mp               | Raiı  | nfall | Te | mp  | Rai             | nfall |
|        | °F     | DEP <sup>1</sup> | IN    | DEP   | °F | DEP | IN              | DEP   |
| JAN    | 34     | 0                | 1.51  | -2.29 | 35 | +1  | 1.37            | -2.43 |
| FEB    | 28     | -10              | 4.16  | -0.27 | 40 | +2  | 4.23            | -0.20 |
| MAR    | 46     | -1               | 6.83  | +1.89 | 53 | +6  | 7.3             | +2.36 |
| APR    | 60     | +1               | 7.38  | +2.58 | 59 | 0   | 4.41            | -0.39 |
| MAY    | 68     | +1               | 3.52  | -1.44 | 64 | -3  | 6.21            | +1.25 |
| JUN    | 76     | +1               | 2.85  | -1.00 | 77 | +2  | 2.18            | -1.67 |
| JUL    | 79     | +1               | 8.83  | +4.54 | 80 | +2  | 12.72           | +8.43 |
| AUG    | 73     | -4               | 2.90  | -1.11 | 78 | +2  | 5.37            | +1.36 |
| SEP    | 71     | 0                | 0.82  | -2.51 | 73 | +2  | 1.33            | -2.00 |
| OCT    | 60     | +1               | 4.15  | +1.10 | 65 | +6  | 0.25            | -2.80 |
| NOV    | 53     | +6               | 5.95  | +1.32 |    |     |                 |       |
| DEC    | 49     | +10              | 6.37  | +1.33 |    |     |                 |       |
| Total  |        |                  | 55.27 | +4.14 |    |     | 45.37           | +3.91 |

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

<sup>1</sup> DEP is departure from the long-term average. <sup>2</sup> 2016 data is for the ten months through October. Table 3. Temperature and rainfall at Quicksand, Kentucky in 2016.

|       |    | 20               | 16 <sup>2</sup> |       |  |  |  |  |  |
|-------|----|------------------|-----------------|-------|--|--|--|--|--|
|       | Te | Temp Rainfall    |                 |       |  |  |  |  |  |
|       | °F | DEP <sup>1</sup> | IN              | DEP   |  |  |  |  |  |
| JAN   | 32 | +1               | 2.76            | -0.53 |  |  |  |  |  |
| FEB   | 40 | +7               | 6.06            | +2.46 |  |  |  |  |  |
| MAR   | 51 | +10              | 2.16            | -2.18 |  |  |  |  |  |
| APR   | 57 | +4               | 3.53            | -0.57 |  |  |  |  |  |
| MAY   | 63 | +1               | 8.04            | +3.56 |  |  |  |  |  |
| JUN   | 73 | +3               | 5.51            | +1.69 |  |  |  |  |  |
| JUL   | 78 | +4               | 6.52            | +1.27 |  |  |  |  |  |
| AUG   | 78 | +5               | 5.59            | +1.58 |  |  |  |  |  |
| SEP   | 72 | +6               | 1.05            | -2.47 |  |  |  |  |  |
| OCT   | 62 | +8               | 1.01            | -1.90 |  |  |  |  |  |
| NOV   |    |                  |                 |       |  |  |  |  |  |
| DEC   |    |                  |                 |       |  |  |  |  |  |
| Total |    |                  | 42.23           | +2.91 |  |  |  |  |  |

<sup>1</sup> DEP is departure from the long-

term average.

<sup>2</sup> 2016 data is for the ten months

through October.

Agricultural Experiment Station Ŧĸ.

| Table 4. Dry matter yields, seedling vigor and stand persistence of red clover varieties sown August 21, 2 $^{ m o}$ | 2013 at Lexington, | Kentucky. |
|--|--------------------|-----------|
|--|--------------------|-----------|

|                          | Seedling    |             |       | Pe    | rcent Sta | nd     |        |        |       |       | Yield (to | ons/acre) |       |        |
|--------------------------|-------------|-------------|-------|-------|-----------|--------|--------|--------|-------|-------|-----------|-----------|-------|--------|
|                          | Sep 26,     | 2013        | 20    | 14    | 20        | 15     | 20     | 16     | 2014  | 2015  |           | 2016      |       | 3-year |
| Variety                  | 2013        | Sep 26      | Apr 1 | Oct 6 | Apr 6     | Oct 15 | Mar 23 | Jul 21 | Total | Total | May 20    | Jun 23    | Total | Total  |
| <b>Commercial Variet</b> | ies-Availab | le for Farr | n Use |       |           |        |        |        |       |       |           |           |       |        |
| Kenland (certified)      | 4.1         | 100         | 100   | 100   | 97        | 81     | 78     | 20     | 7.70  | 3.29  | 0.95      | 1.49      | 2.45  | 13.44* |
| FSG 402                  | 4.4         | 100         | 100   | 100   | 98        | 93     | 86     | 64     | 7.04  | 3.54  | 0.83      | 1.40      | 2.23  | 12.81* |
| Cinnamon Plus            | 4.4         | 100         | 100   | 100   | 95        | 81     | 73     | 39     | 7.26  | 3.24  | 0.85      | 1.07      | 1.92  | 12.41* |
| Freedom!                 | 4.1         | 98          | 100   | 98    | 84        | 39     | 49     | 11     | 7.50  | 2.92  | 0.74      | 1.21      | 1.96  | 12.37* |
| Gallant                  | 3.4         | 100         | 100   | 100   | 94        | 89     | 84     | 55     | 7.02  | 3.39  | 0.71      | 1.25      | 1.96  | 12.37* |
| Common O                 | 4.6         | 100         | 100   | 98    | 89        | 4      | 3      | 3      | 7.39  | 2.17  | 0.16      | 0.59      | 0.74  | 10.30  |
| <b>Experimental Vari</b> | eties       |             |       |       |           |        |        |        |       |       |           |           |       |        |
| RC 0401                  | 4.1         | 100         | 100   | 100   | 89        | 61     | 51     | 24     | 7.55  | 3.41  | 0.88      | 1.10      | 1.98  | 12.94* |
| AMP-RC0501               | 4.1         | 98          | 99    | 99    | 95        | 70     | 53     | 30     | 7.10  | 3.17  | 0.85      | 1.03      | 1.87  | 12.15* |
| B-12.2689                | 3.4         | 93          | 97    | 96    | 83        | 18     | 14     | 7      | 7.29  | 2.91  | 0.51      | 1.25      | 1.75  | 11.95* |
| GA 9908                  | 4.4         | 98          | 99    | 98    | 90        | 35     | 30     | 15     | 6.62  | 3.19  | 0.53      | 1.00      | 1.53  | 11.34  |
| B-12.2688                | 3.6         | 96          | 100   | 100   | 95        | 55     | 45     | 18     | 6.95  | 2.99  | 0.54      | 0.73      | 1.27  | 11.21  |
| B-12.3051                | 3.3         | 99          | 99    | 98    | 91        | 55     | 48     | 23     | 6.68  | 3.00  | 0.49      | 0.86      | 1.34  | 11.03  |
| GA-Bulldog-S             | 4.0         | 100         | 100   | 98    | 93        | 43     | 33     | 9      | 6.97  | 2.99  | 0.32      | 0.58      | 0.90  | 10.86  |
| GA-Bull-AST              | 3.4         | 100         | 100   | 99    | 90        | 40     | 38     | 7      | 6.54  | 2.90  | 0.56      | 0.72      | 1.28  | 10.72  |
|                          |             |             |       |       |           |        |        |        |       |       |           |           |       |        |
| Mean                     | 3.9         | 99          | 100   | 99    | 91        | 55     | 49     | 23     | 7.12  | 3.08  | 0.64      | 1.02      | 1.66  | 11.85  |
| CV,%                     | 17.9        | 2           | 1     | 2     | 9         | 31     | 35     | 47     | 8.85  | 10.79 | 44.81     | 38.39     | 31.63 | 9.23   |
| LSD,0.05                 | 1.0         | 3           | 1     | 3     | 12        | 24     | 24     | 15     | 0.90  | 0.48  | 0.41      | 0.56      | 0.75  | 1.57   |

<sup>1</sup> 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.

sion website at www.uky.edu/Ag/Forage contains electronic versions of all forage variety testing reports from Kentucky and surrounding states and a large number of other forage publications.

## Important Selection Considerations

**Local adaptation and persistence.** The variety should be adapted to Kentucky as indicated by superior performance across years and locations in replicated yield trials such as those reported in this publication. High-yielding varieties are generally also those varieties that are the most persistent. Improved red clover generally produces measurable yields for 2½ to 3 years, with the year of establishment considered as the first year. The highest yields occur in the year following establishment. White clover may persist longer than red clover, particularly in wet seasons, and has the ability to reseed even under grazing.

**Seed quality.** Buy premium-quality seed that is high in germination and purity and free from weed seed. Buy certified seed or proprietary seed of an improved variety. An improved variety is one that has performed well in independent trials, such as those reported in this publication. Other information on the label will include the test date (which must be within the previous nine months), the

level of germination, and percentage of other crop and weed seed. Order seed well in advance of planting time to assure that it will be available when needed.

#### **Description of the Tests**

This report summarizes studies at Lexington (two in 2013, 2014 and 2015 and one in 2016), Princeton (2015) and Quicksand (2016). The soils at Princeton (Crider), Lexington (Maury) and Quicksand (Nolin) are well-drained silt loams. All are well-suited to clover production. Plots were 5 feet by 20 feet in a randomized complete block design with four replications with a harvested plot area of 5 feet by 15 feet.

| Table 5. Dry | v matter yields, | , seedling vigor a | nd stand persistenc | e of red clover va | rieties sown April 10, | 2014 at Lexington, k | Kentucky. |
|--------------|------------------|--------------------|---------------------|--------------------|------------------------|----------------------|-----------|
|--------------|------------------|--------------------|---------------------|--------------------|------------------------|----------------------|-----------|

|                             | Seedling    |            |       | Percen | t Stand |        |        |       |       | Yield (to | ons/acre) |       |        |
|-----------------------------|-------------|------------|-------|--------|---------|--------|--------|-------|-------|-----------|-----------|-------|--------|
|                             | May 27,     | 20         | 14    | 20     | 15      | 20     | 16     | 2014  | 2015  |           | 2016      |       | 3-vear |
| Variety                     | 2014        | May 27     | Oct 6 | Apr 6  | Oct 15  | Mar 23 | Jul 21 | Total | Total | May 20    | Jun 23    | Total | Total  |
| <b>Commercial Varieties</b> | s-Available | for Farm U | se    |        |         |        |        |       |       |           |           |       |        |
| Starfire II                 | 3.8         | 88         | 88    | 87     | 53      | 44     | 28     | 2.96  | 3.51  | 0.39      | 0.87      | 1.26  | 7.72*  |
| SS-0303RCG                  | 4.0         | 91         | 91    | 91     | 64      | 53     | 25     | 2.78  | 3.72  | 0.31      | 0.66      | 0.97  | 7.47*  |
| Kenland (certified)         | 3.9         | 88         | 89    | 88     | 33      | 30     | 13     | 2.79  | 3.65  | 0.43      | 0.56      | 0.99  | 7.42*  |
| Cinnamon Plus               | 4.0         | 88         | 89    | 92     | 63      | 54     | 24     | 2.88  | 3.04  | 0.50      | 0.66      | 1.16  | 7.08*  |
| Freedom!                    | 4.3         | 90         | 91    | 90     | 36      | 28     | 11     | 3.06  | 3.35  | 0.29      | 0.33      | 0.61  | 7.03*  |
| Common O                    | 4.8         | 94         | 94    | 93     | 6       | 6      | 8      | 3.29  | 2.95  | 0.09      | 0.31      | 0.40  | 6.65   |
|                             |             |            |       |        |         |        |        |       |       |           |           |       |        |
| Mean                        | 4.1         | 90         | 90    | 90     | 42      | 36     | 18     | 2.96  | 3.37  | 0.33      | 0.56      | 0.90  | 7.23   |
| CV,%                        | 20.0        | 6          | 6     | 6      | 42      | 43     | 58     | 14.07 | 5.23  | 68.27     | 39.46     | 39.07 | 9.51   |
| LSD,0.05                    | 1.2         | 8          | 8     | 8      | 26      | 23     | 16     | 0.63  | 0.27  | 0.34      | 0.34      | 0.53  | 1.04   |

<sup>1</sup> 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.

Seedings were made at 12 pounds of seed per acre for red clover and 3 pounds of seed per acre for white clover into a prepared seedbed using a disk drill. The first cutting in the seeding year was delayed to allow the clover to completely reach maturity as indicated by full bloom, which generally occurs about 60 to 90 days after seeding. Otherwise, harvests were taken when the clover was in the bud to early flower stage using a sickletype 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 and Princeton 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 2016 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

Table 6. Dry matter yields and stand persistence of red clover varieties sown March 31, 2015 at Lexington, Kentucky.

|                        |          | Percen  | t Stand   |        | Yield (tons/acre) |       |       |        |        |       |        |  |
|------------------------|----------|---------|-----------|--------|-------------------|-------|-------|--------|--------|-------|--------|--|
|                        | 20       | 15      | 20        | 16     | 2015              |       |       | 2016   |        |       | 2-vear |  |
| Variety                | Jun 12   | Oct 15  | Mar 18    | Sep 27 | Total             | May 6 | Jun 9 | Jul 13 | Aug 18 | Total | Total  |  |
| <b>Commercial V</b>    | arieties | Availab | le for Fa | rm Use |                   |       |       |        |        |       |        |  |
| Freedom!               | 100      | 100     | 99        | 56     | 2.05              | 2.99  | 2.04  | 0.91   | 0.47   | 6.41  | 8.46*  |  |
| Gallant                | 100      | 100     | 99        | 91     | 1.81              | 3.06  | 1.73  | 1.11   | 0.69   | 6.59  | 8.41*  |  |
| SS-0303RCG             | 100      | 100     | 100       | 87     | 1.50              | 2.94  | 1.89  | 1.47   | 0.39   | 6.69  | 8.18*  |  |
| Kenland<br>(certified) | 100      | 100     | 99        | 83     | 1.86              | 2.79  | 1.80  | 1.13   | 0.45   | 6.17  | 8.03*  |  |
| Evolve                 | 100      | 100     | 99        | 83     | 1.86              | 2.81  | 1.66  | 1.14   | 0.32   | 5.94  | 7.79*  |  |
| Common O               | 100      | 98      | 97        | 3      | 1.70              | 2.54  | 1.61  | 0.26   | 0.15   | 4.56  | 6.27   |  |
| Experimental           | Varietie | S       |           |        |                   |       |       |        |        |       |        |  |
| RC 0702                | 98       | 99      | 97        | 91     | 1.70              | 2.82  | 1.71  | 1.71   | 0.46   | 6.70  | 8.40*  |  |
| KY 2,4-D               | 100      | 98      | 97        | 65     | 1.82              | 2.84  | 1.61  | 1.36   | 0.38   | 6.20  | 8.02*  |  |
| DLFPS-TP-12            | 99       | 99      | 97        | 18     | 1.41              | 2.84  | 1.66  | 0.83   | 0.35   | 5.67  | 7.08   |  |
| GO-MOB                 | 98       | 96      | 97        | 6      | 1.49              | 2.59  | 1.52  | 0.53   | 0.30   | 4.94  | 6.42   |  |
|                        |          |         |           |        |                   |       |       |        |        |       |        |  |
| Mean                   | 99       | 99      | 98        | 58     | 1.72              | 2.82  | 1.72  | 1.05   | 0.40   | 5.99  | 7.71   |  |
| CV,%                   | 1        | 2       | 2         | 25     | 27.52             | 15.49 | 12.67 | 22.31  | 39.52  | 11.73 | 11.67  |  |
| LSD,0.05               | 2        | 3       | 3         | 21     | 0.69              | 0.63  | 0.32  | 0.34   | 0.23   | 1.02  | 1.30   |  |

\*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 |
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| sown April 5, 2016 at Lexington, Kentucky.                               |

|                             | Percen     | t Stand    | Yie    | ld (tons/a | cre)  |  |  |  |
|-----------------------------|------------|------------|--------|------------|-------|--|--|--|
|                             | 20         | 16         |        | 2016       |       |  |  |  |
| Variety                     | Jun 14     | Sep 27     | Jul 14 | Aug 19     | Total |  |  |  |
| <b>Commercial Varieties</b> | -Available | e for Farm | Use    |            |       |  |  |  |
| SS0303RCG                   | 93         | 79         | 1.45   | 0.76       | 2.21* |  |  |  |
| Kenland (certified)         | 87         | 60         | 1.16   | 0.53       | 1.69* |  |  |  |
| Bearcat                     | 94         | 64         | 1.10   | 0.53       | 1.63* |  |  |  |
| Freedom!                    | 90         | 58         | 0.94   | 0.45       | 1.39  |  |  |  |
| FF 9615                     | 84         | 69         | 0.83   | 0.49       | 1.32  |  |  |  |
| Common O                    | 77         | 28         | 0.66   | 0.40       | 1.05  |  |  |  |
| Evolve                      | 48         | 33         | 0.65   | 0.38       | 1.03  |  |  |  |
| Kenland (uncertified)       | 53         | 13         | 0.74   | 0.20       | 0.95  |  |  |  |
| Experimental Varieties      |            |            |        |            |       |  |  |  |
| IS-TP12                     | 75         | 28         | 1.37   | 0.46       | 1.83* |  |  |  |
| GA9908                      | 75         | 40         | 1.32   | 0.41       | 1.73* |  |  |  |
| KY2,4-D                     | 94         | 80         | 1.27   | 0.43       | 1.70* |  |  |  |
| GATP1412                    | 79         | 60         | 1.15   | 0.43       | 1.59* |  |  |  |
| B-15.3167                   | 83         | 13         | 1.16   | 0.26       | 1.42  |  |  |  |
| RC 0702                     | 81         | 84         | 0.90   | 0.47       | 1.37  |  |  |  |
| Pramedi                     | 84         | 16         | 0.95   | 0.41       | 1.37  |  |  |  |
| GATP1413                    | 83         | 45         | 0.75   | 0.38       | 1.14  |  |  |  |
| B-16.0003                   | 69         | 43         | 0.70   | 0.32       | 1.03  |  |  |  |
| GATP1501                    | 78         | 29         | 0.59   | 0.26       | 0.85  |  |  |  |
|                             |            |            |        |            |       |  |  |  |
| Mean                        | 79         | 47         | 0.98   | 0.42       | 1.40  |  |  |  |
| CV,%                        | 13         | 28         | 40.22  | 38.41      | 31.53 |  |  |  |
| LSD,0.05                    | 14         | 18         | 0.56   | 0.23       | 0.63  |  |  |  |

\*Not significantly different from the highest numerical value in the column,

based on the 0.05 LSD.

note yield differences between certified and uncertified Kenland red clover. Most Kenland offered for sale is uncertified, and our tests show it 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 of dry matter over the life of the stand.

Tables 13 and 14 summarize information about proprietors, distributors, and yield performance across years and locations for all varieties currently included in this report. Varieties are listed in alphabetical order, with the experimental varieties at the bottom. Experimental varieties are not available for farm use, but commercial varieties can be purchased from dealerships. In tables 13 and 14, an open block indicates the variety was not included in that particular test (labeled at the top of the column), and an "x" in the block means that the variety was included in the test but yielded significantly less than the top-yielding variety in the test. A single asterisk (\*) means the variety was not significantly different from the highest-yielding variety based on the 0.05 LSD. Look at data from several years and locations when choosing a variety of clover rather than results from one test year, as is reported in tables 4 through 12. Make sure seed of the variety selected is properly labeled and will be available when needed.

Tables 15 and 16 are summaries of yield data from 1998 to 2016 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

Table 8. Dry matter yields, seedling vigor and stand persistence of red clover varieties sown August 25, 2015 at Princeton, Kentucky.

|                             | Seedling    | Pe       | rcent Sta | nd     | Yield (tons/acre) |       |        |        |       |  |  |
|-----------------------------|-------------|----------|-----------|--------|-------------------|-------|--------|--------|-------|--|--|
|                             | Oct 23,     | 2015     | 20        | 16     | 2016              |       |        |        |       |  |  |
| Variety                     | 2015        | Oct 23   | Mar 22    | Sep 23 | May 4             | Jun 7 | Jul 20 | Aug 23 | Total |  |  |
| <b>Commercial Varieties</b> | s-Available | for Farm | Use       |        |                   |       |        |        |       |  |  |
| Freedom!                    | 4.5         | 100      | 98        | 97     | 3.08              | 1.61  | 1.91   | 0.70   | 7.30* |  |  |
| Kenland (certified)         | 4.4         | 100      | 100       | 99     | 3.01              | 1.55  | 1.70   | 0.77   | 7.04* |  |  |
| Common O                    | 5.0         | 100      | 100       | 97     | 3.04              | 1.55  | 1.50   | 0.69   | 6.78* |  |  |
| SS-0303RC                   | 4.1         | 100      | 98        | 100    | 2.85              | 1.34  | 1.97   | 0.62   | 6.77* |  |  |
| Gallant                     | 4.5         | 100      | 99        | 100    | 2.81              | 1.46  | 1.92   | 0.45   | 6.64* |  |  |
| Evolve                      | 3.8         | 100      | 99        | 100    | 2.40              | 1.36  | 1.99   | 0.53   | 6.28* |  |  |
| <b>Experimental Varieti</b> | es          |          |           |        |                   |       |        |        |       |  |  |
| DLFPS-TP-12                 | 3.9         | 100      | 99        | 100    | 2.96              | 1.58  | 1.80   | 0.71   | 7.04* |  |  |
| KY2,4-D                     | 3.6         | 100      | 99        | 96     | 3.09              | 1.56  | 1.77   | 0.47   | 6.89* |  |  |
| RC 0702                     | 4.3         | 100      | 98        | 100    | 2.47              | 1.42  | 1.73   | 0.57   | 6.19  |  |  |
| GO-MOB                      | 3.4         | 100      | 98        | 94     | 2.60              | 1.49  | 1.59   | 0.45   | 6.14  |  |  |
|                             |             |          |           |        |                   |       |        |        |       |  |  |
| Mean                        | 4.1         | 100      | 99        | 98     | 2.83              | 1.49  | 1.79   | 0.60   | 6.71  |  |  |
| CV,%                        | 13.0        | 0        | 1         | 3      | 15.58             | 16.69 | 17.89  | 24.17  | 11.33 |  |  |
| LSD,0.05                    | 0.8         | 0        | 2         | 4      | 0.64              | 0.36  | 0.33   | 0.21   | 1.10  |  |  |

<sup>1</sup> 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 9. Dry matter yields and stand persistence of red cl | over |
|--|------|
| varieties sown March 30, 2016 at Quicksand, Kentucky.      |      |

|              | Percen      | t Stand     | Yie      | eld (tons/ac | re)   |
|--------------|-------------|-------------|----------|--------------|-------|
|              | 20          | 16          |          | 2016         |       |
| Variety      | Jun 3       | Nov 3       | Jul 11   | Sep 13       | Total |
| Commercial V | arieties-Av | ailable for | Farm Use |              |       |
| Kenland      | 100         | 95          | 1.29     | 1.04         | 2.34* |
| SS-0303RCG   | 99          | 97          | 1.31     | 0.92         | 2.23* |
| Freedom!     | 99          | 93          | 1.34     | 0.85         | 2.19* |
| Bearcat      | 99          | 96          | 1.16     | 0.85         | 2.01* |
| Evolve       | 89          | 76          | 0.72     | 0.78         | 1.51  |
| Common O     | 100         | 39          | 0.96     | 0.33         | 1.28  |
| Experimental | Varieties   |             |          |              |       |
| GO-MOB       | 97          | 50          | 0.77     | 0.48         | 1.26  |
| Pramedi      | 99          | 29          | 0.67     | 0.18         | 0.85  |
|              |             |             |          |              |       |
| Mean         | 98          | 72          | 1.03     | 0.68         | 1.71  |
| CV,%         | 3           | 17          | 24.99    | 36.46        | 23.63 |
| LSD,0.05     | 4           | 18          | 0.38     | 0.36         | 0.59  |

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

|                      | Seedling    |              |          | Pe    | ercent Sta | nd     |        |        |       |       | Yield (to | ns/acre) |       |        |
|----------------------|-------------|--------------|----------|-------|------------|--------|--------|--------|-------|-------|-----------|----------|-------|--------|
|                      | Oct 3,      | 2013         | 20       | 14    | 20         | 15     | 20     | 16     | 2014  | 2015  |           | 2016     |       | 3-vear |
| Variety              | 2013        | Oct 3        | Apr 1    | Oct 6 | Apr 6      | Oct 15 | Mar 23 | Jul 27 | Total | Total | May 20    | Jun 27   | Total | Total  |
| <b>Commercial Va</b> | rieties-Ava | ilable for l | Farm Use |       |            |        |        |        |       |       |           |          |       |        |
| Will                 | 3.8         | 73           | 82       | 97    | 93         | 81     | 73     | 85     | 3.40  | 1.13  | 0.29      | 0.28     | 0.58  | 5.11*  |
| Regal                | 4.0         | 86           | 93       | 93    | 63         | 40     | 40     | 70     | 3.66  | 0.81  | 0.37      | 0.26     | 0.62  | 5.09*  |
| Durana               | 2.1         | 68           | 69       | 95    | 93         | 81     | 75     | 73     | 2.40  | 0.93  | 0.31      | 0.39     | 0.70  | 4.04   |
| Patriot              | 1.8         | 49           | 61       | 93    | 84         | 60     | 68     | 68     | 2.01  | 0.85  | 0.27      | 0.28     | 0.56  | 3.42   |
| Crusader II          | 3.3         | 85           | 10       | 84    | 65         | 50     | 43     | 58     | 1.63  | 0.80  | 0.33      | 0.34     | 0.67  | 3.10   |
| <b>Experimental</b>  | /arieties   |              |          |       |            |        |        |        |       |       |           |          |       |        |
| GA-178               | 3.3         | 69           | 78       | 93    | 73         | 54     | 49     | 73     | 3.08  | 1.04  | 0.36      | 0.33     | 0.69  | 4.81*  |
| VS-41730             | 3.6         | 85           | 92       | 93    | 70         | 28     | 33     | 40     | 2.64  | 0.70  | 0.22      | 0.19     | 0.41  | 3.75   |
| XLFWC1               | 3.3         | 73           | 30       | 95    | 81         | 55     | 56     | 78     | 1.67  | 0.84  | 0.41      | 0.26     | 0.67  | 3.19   |
|                      |             |              |          |       |            |        |        |        |       |       |           |          |       |        |
| Mean                 | 3.1         | 73           | 64       | 93    | 78         | 56     | 54     | 68     | 2.56  | 0.89  | 0.32      | 0.29     | 0.61  | 4.06   |
| CV,%                 | 24.5        | 27           | 32       | 6     | 14         | 32     | 30     | 21     | 15.61 | 24.30 | 39.94     | 50.04    | 36.87 | 12.65  |
| LSD,0.05             | 1.1         | 29           | 31       | 9     | 16         | 27     | 24     | 21     | 0.59  | 0.32  | 0.19      | 0.21     | 0.33  | 0.76   |

Table 10. Dry matter yields, seedling vigor and stand persistence of white clover varieties sown August 21, 2013 at Lexington, Kentucky. (See Table 14 for designation of ladino, intermediate or dutch type varieties.)

<sup>1</sup> 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 11. | Dry matter yields,   | , seedling vigor and sta | nd persistence of white | clover varieties sown April | 10, 2014 at Lexington | n, Kentucky. (See Ta | ble 14 for |
|-----------|----------------------|--------------------------|-------------------------|-----------------------------|-----------------------|----------------------|------------|
| designati | ion of ladino, inter | mediate or dutch type    | varieties.)             |                             |                       |                      |            |

|                     | Seedling     |               |          | Percen | t Stand |        |        |       |       | Yield (to | ons/acre) |       |        |
|---------------------|--------------|---------------|----------|--------|---------|--------|--------|-------|-------|-----------|-----------|-------|--------|
|                     | May 27.      | 20            | 14       | 20     | 15      | 20     | 16     | 2014  | 2015  |           | 2016      |       | 3-vear |
| Variety             | 2014         | May 27        | Oct 6    | Apr 6  | Oct 15  | Mar 23 | Sep 29 | Total | Total | May 20    | Jun 27    | Total | Total  |
| <b>Commercial V</b> | arieties-Ava | ailable for l | Farm Use |        |         |        |        |       |       |           |           |       |        |
| Will                | 4.8          | 90            | 99       | 89     | 48      | 58     | 58     | 1.29  | 1.09  | 0.59      | 0.67      | 1.26  | 3.64*  |
| Seminole            | 4.3          | 89            | 98       | 54     | 80      | 64     | 46     | 1.13  | 0.62  | 0.52      | 0.63      | 1.15  | 2.90*  |
| Alice               | 3.5          | 76            | 73       | 84     | 53      | 40     | 25     | 0.83  | 0.63  | 0.63      | 0.57      | 1.20  | 2.66   |
| Durana              | 2.8          | 63            | 87       | 70     | 33      | 38     | 33     | 0.87  | 0.40  | 0.51      | 0.48      | 0.99  | 2.27   |
| Domino              | 3.0          | 76            | 93       | 13     | 53      | 40     | 25     | 0.93  | 0.31  | 0.44      | 0.53      | 0.97  | 2.22   |
| Renovation          | 2.8          | 85            | 92       | 66     | 33      | 31     | 31     | 0.76  | 0.52  | 0.36      | 0.48      | 0.84  | 2.12   |
| Patriot             | 2.8          | 66            | 94       | 71     | 28      | 20     | 23     | 0.77  | 0.46  | 0.38      | 0.38      | 0.76  | 1.99   |
| Experimental        | Varieties    |               |          |        |         |        |        |       |       |           |           |       |        |
| NFWC04-29           | 3.4          | 86            | 94       | 80     | 28      | 18     | 16     | 1.31  | 0.75  | 0.37      | 0.41      | 0.79  | 2.84*  |
| GO-FD               | 3.3          | 75            | 91       | 14     | 30      | 18     | 16     | 0.89  | 0.32  | 0.45      | 0.36      | 0.81  | 2.02   |
| VS-41730            | 3.5          | 79            | 93       | 56     | 11      | 9      | 7      | 1.08  | 0.26  | 0.24      | 0.32      | 0.56  | 1.91   |
|                     |              |               |          |        |         |        |        |       |       |           |           |       |        |
| Mean                | 3.4          | 79            | 91       | 60     | 39      | 33     | 28     | 0.99  | 0.54  | 0.45      | 0.48      | 0.93  | 2.46   |
| CV,%                | 21.2         | 13            | 16       | 19     | 52      | 49     | 48     | 25.00 | 36.69 | 39.77     | 50.31     | 37.88 | 23.69  |
| LSD,0.05            | 1.0          | 15            | 21       | 17     | 30      | 24     | 20     | 0.36  | 0.29  | 0.26      | 0.35      | 0.51  | 0.84   |

<sup>1</sup> 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.

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 vielded 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 to which yearly report to refer.

#### Summary

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

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

- Lime and Fertilizer Recommendations (AGR-1)
- Producing Red Clover Seed in Kentucky (AGR-2)

| Table 12. Dry matter yields and stand persistence of white clover varieties sown March 31, 2015 a  | at  |
|--|-----|
| Lexington, Kentucky. (See Table 14 for designation of ladino, intermediate or dutch type varieties | s.) |

| -           |            |           |          |        |       |        |           |          |       |        |
|-------------|------------|-----------|----------|--------|-------|--------|-----------|----------|-------|--------|
|             |            | Percen    | t Stand  |        |       |        | Yield (to | ns/acre) |       |        |
|             | 20         | 15        | 20       | 16     | 2015  |        | 20        | 16       |       | 2-vear |
| Variety     | Jun 12     | Oct 15    | Mar 23   | Sep 27 | Total | May 20 | Jun 27    | Aug 8    | Total | Total  |
| Commercial  | Varieties- | Available | for Farm | Use    |       |        |           |          |       |        |
| Will        | 100        | 100       | 99       | 84     | 0.71  | 0.90   | 0.81      | 0.68     | 2.39  | 3.10*  |
| Alice       | 98         | 99        | 98       | 90     | 0.57  | 0.70   | 0.80      | 0.59     | 2.09  | 2.66*  |
| RegalGraze  | 100        | 98        | 94       | 79     | 0.64  | 0.69   | 0.59      | 0.54     | 1.82  | 2.45   |
| Jumbo II    | 99         | 97        | 83       | 76     | 0.55  | 0.53   | 0.61      | 0.49     | 1.63  | 2.18   |
| Patriot     | 93         | 91        | 83       | 76     | 0.45  | 0.56   | 0.43      | 0.50     | 1.49  | 1.95   |
| Renovation  | 98         | 97        | 93       | 88     | 0.49  | 0.38   | 0.62      | 0.38     | 1.38  | 1.88   |
| Neches      | 97         | 96        | 70       | 58     | 0.48  | 0.50   | 0.49      | 0.29     | 1.27  | 1.75   |
| Durana      | 95         | 94        | 89       | 59     | 0.44  | 0.58   | 0.49      | 0.21     | 1.28  | 1.73   |
| Experimenta | l Varietie | s         |          |        |       |        |           |          |       |        |
| GA-178      | 99         | 99        | 90       | 84     | 0.63  | 0.53   | 0.85      | 0.50     | 1.88  | 2.52*  |
| AL 9701     | 100        | 99        | 93       | 88     | 0.61  | 0.73   | 0.60      | 0.57     | 1.91  | 2.51*  |
| PPG-TR-102  | 97         | 94        | 73       | 69     | 0.45  | 0.43   | 0.49      | 0.31     | 1.23  | 1.67   |
| SSS-SH1     | 100        | 99        | 21       | 20     | 0.58  | 0.09   | 0.17      | 0.19     | 0.45  | 1.03   |
|             |            |           |          |        |       |        |           |          |       |        |
| Mean        | 98         | 97        | 82       | 72     | 0.55  | 0.55   | 0.58      | 0.44     | 1.57  | 2.12   |
| CV,%        | 2          | 4         | 21       | 23     | 19.66 | 35.44  | 38.36     | 40.59    | 25.85 | 19.71  |
| LSD,0.05    | 3          | 5         | 24       | 24     | 0.16  | 0.28   | 0.32      | 0.25     | 0.58  | 0.60   |

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

- · Grain and Forage Crop Guide for Kentucky (AGR-18)
- Renovating Hay and Pasture Fields (AGR-26)
- Growing Red Clover in Kentucky (AGR-33)
- Establishing Forage Crops (AGR-64)
- Inoculation of Forage Legumes (AGR-90)
- Growing White Clover in Kentucky (AGR-93)
- Weed Control Strategies for Alfalfa and Other Forage Legume Crops (AGR-148)
- Insect Management Recommenda-

tions for Field Crops and Livestock (ENT-17)

- Managing Legume-Induced Bloat in Cattle (ID186)
- Kentucky Plant Disease Management Guide for Forage Legumes (PPA-10D)
- "Emergency" Inoculation for Poorly Nodulated Legumes (PPFS-AG-F-04)

#### About the Authors

G.L. Olson is a research specialist and S.R. Smith is an Extension professor in Forages.

#### Table 13. Performance of red clover varieties across years and locations in Kentucky.

| Proprietar/<br/>Wr DistributorPOTIS201620152016201520162015Variety<br/>Wr Distributor115161415161516161616Commercil Variety-s-wer<br/>BarcaBrett Young Seeds111111111111161616Common OPublic111<!--</th--><th></th><th></th><th></th><th></th><th></th><th></th><th>Lexingtor</th><th>า</th><th></th><th></th><th></th><th>Princeton</th><th>Quicksand</th>  |                            |                          |                 |                   |    |    | Lexingtor      | า  |    |    |      | Princeton | Quicksand |
|---|----------------------------|--------------------------|-----------------|-------------------|----|----|----------------|----|----|----|------|-----------|-----------|
| VarietyWY Distributor14215161415161516161616Commercial Variets-Available for Farm UseBertty Vong Seeds***   |                            | Proprietor/              |                 | 2013 <sup>1</sup> |    |    | 2014           |    | 20 | 15 | 2016 | 2015      | 2016      |
| Commercial Varieties-Available for Farm Use         Image: Common O Public         Im   | Variety                    | KY Distributor           | 14 <sup>2</sup> | 15                | 16 | 14 | 15             | 16 | 15 | 16 | 16   | 16        | 16        |
| Bearcat<br>Cinnamo PlusBrett Young Seeds··  | <b>Commercial Varietie</b> | s-Available for Farm Use |                 |                   |    |    |                |    |    |    |      |           |           |
| Cinnamon PlusSouthern States****x3*Image: State in the state  | Bearcat                    | Brett Young Seeds        |                 |                   |    |    |                |    |    |    | *    |           | *         |
| CommonOPublic**xxxxxxxxxxxEvolveDLF Pickseed USA*xx**x**x**x**x***x** <td< td=""><td>Cinnamon Plus</td><td>Southern States</td><td>*</td><td>*</td><td>*</td><td>*</td><td>x<sup>3</sup></td><td>*</td><td></td><td></td><td></td><td></td><td></td></td<>  | Cinnamon Plus              | Southern States          | *               | *                 | *  | *  | x <sup>3</sup> | *  |    |    |      |           |           |
| EvolveDLF Pickseed USAIII   | Common O                   | Public                   | *               | х                 | x  | *  | x              | х  | *  | х  | x    | *         | х         |
| Freedom!Barenbrug USA**xx   | Evolve                     | DLF Pickseed USA         |                 |                   |    |    |                |    | *  | *  | х    | *         | х         |
| FF 9615LaCrosse SeedInI   | Freedom!                   | Barenbrug USA            | *               | x                 | *  | *  | x              | х  | *  | *  | x    | *         | *         |
| FSG 402Farm Science Genetics****< <th< td=""><td>FF 9615</td><td>LaCrosse Seed</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>x</td><td></td><td></td></th<>   | FF 9615                    | LaCrosse Seed            |                 |                   |    |    |                |    |    |    | x    |           |           |
| GallantTurner Seed**<   | FSG 402                    | Farm Science Genetics    | *               | *                 | *  |    |                |    |    |    |      |           |           |
| Kenland (certified)KY Agric. Exp. Station**   | Gallant                    | Turner Seed              | *               | *                 | *  |    |                |    | *  | *  |      | *         |           |
| Kenland (uncertified)PublicImage: Constraint of the statesImage: Constraint of the  | Kenland (certified)        | KY Agric. Exp. Station   | *               | *                 | *  | *  | *              | *  | *  | *  | *    | *         | *         |
| SS-0303RCGSouthern StatesIII<   | Kenland (uncertified)      | Public                   |                 |                   |    |    |                |    |    |    | х    |           |           |
| Starfire IIAmpac SeedAmpac SeedImage Seed   | SS-0303RCG                 | Southern States          |                 |                   |    | *  | *              | *  | *  | *  | *    | *         | *         |
| Experimental VariettiesAMP RC0501Ampac Seed***<   | Starfire II                | Ampac Seed               |                 |                   |    | *  | *              | *  |    |    |      |           |           |
| AMP RC0501Ampac Seed**<   | <b>Experimental Variet</b> | ies                      |                 |                   |    |    |                |    |    |    |      |           |           |
| B-12.2688Blue Moon Farms*xxxB-12.2689Blue Moon Farms*x* <td>AMP RC0501</td> <td>Ampac Seed</td> <td>*</td> <td>*</td> <td>*</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>  | AMP RC0501                 | Ampac Seed               | *               | *                 | *  |    |                |    |    |    |      |           |           |
| B-12.2689Blue Moon Farms*x**Image: Constraint of the symbol of  | B-12.2688                  | Blue Moon Farms          | *               | x                 | х  |    |                |    |    |    |      |           |           |
| B-12.3051Blue Moon Farmsxxx <t< td=""><td>B-12.2689</td><td>Blue Moon Farms</td><td>*</td><td>х</td><td>*</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>   | B-12.2689                  | Blue Moon Farms          | *               | х                 | *  |    |                |    |    |    |      |           |           |
| B-15.3167Blue Moon FarmsIII <t< td=""><td>B-12.3051</td><td>Blue Moon Farms</td><td>х</td><td>х</td><td>х</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>   | B-12.3051                  | Blue Moon Farms          | х               | х                 | х  |    |                |    |    |    |      |           |           |
| B-16.003Blue Moon FarmsIII <th< td=""><td>B-15.3167</td><td>Blue Moon Farms</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>x</td><td></td><td></td></th<>  | B-15.3167                  | Blue Moon Farms          |                 |                   |    |    |                |    |    |    | x    |           |           |
| DLFPS-TP-12DLF Pickseed USAxxx <td>B-16.0003</td> <td>Blue Moon Farms</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>x</td> <td></td> <td></td>   | B-16.0003                  | Blue Moon Farms          |                 |                   |    |    |                |    |    |    | x    |           |           |
| GA-Bull-ASTUniv. of GAxxx   | DLFPS-TP-12                | DLF Pickseed USA         |                 |                   |    |    |                |    | *  | x  | *    | *         |           |
| GA-Bulldog-SUniv. of GA*xxxx </td <td>GA-Bull-AST</td> <td>Univ. of GA</td> <td>x</td> <td>х</td> <td>x</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>  | GA-Bull-AST                | Univ. of GA              | x               | х                 | x  |    |                |    |    |    |      |           |           |
| GA 9908Univ. of GAx*x**GATP1412Univ. of GAIIIIIIIIIIIGATP1413Univ. of GAIII <tdi< td="">II<t< td=""><td>GA-Bulldog-S</td><td>Univ. of GA</td><td>*</td><td>х</td><td>х</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<></tdi<>   | GA-Bulldog-S               | Univ. of GA              | *               | х                 | х  |    |                |    |    |    |      |           |           |
| GATP1412Univ. of GAImage: Constraint of GAImage: Co  | GA 9908                    | Univ. of GA              | х               | *                 | х  |    |                |    |    |    | *    |           |           |
| GATP1413Univ. of GAImage: Constraint of GAImage: Co  | GATP1412                   | Univ. of GA              |                 |                   |    |    |                |    |    |    | *    |           |           |
| GATP1501         Univ. of GA         Image: Constraint of the system of t | GATP1413                   | Univ. of GA              |                 |                   |    |    |                |    |    |    | х    |           |           |
| GO-MOB         Grassland Oregon         Image: Comparison of the system         Image   | GATP1501                   | Univ. of GA              |                 |                   |    |    |                |    |    |    | x    |           |           |
| KY 2,4-D         KY Agric. Exp. Station         Image: Comparison of the state of | GO-MOB                     | Grassland Oregon         |                 |                   |    |    |                |    | *  | x  |      | x         | х         |
| Pramedi         Hood River Seed         ·         ·         ·         ·         x         x         x           RC 0401         Allied Seed         *         *         *         ·   | KY 2,4-D                   | KY Agric. Exp. Station   |                 |                   |    |    |                |    | *  | *  | *    | *         |           |
| RC 0401         Allied Seed         *         * <td>Pramedi</td> <td>Hood River Seed</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>x</td> <td></td> <td>х</td>   | Pramedi                    | Hood River Seed          |                 |                   |    |    |                |    |    |    | x    |           | х         |
|   | RC 0401                    | Allied Seed              | *               | *                 | *  |    |                |    |    |    |      |           |           |
| RC 0702         DLF Pickseed USA         *         *         x         x  | RC 0702                    | DLF Pickseed USA         |                 |                   |    |    |                |    | *  | *  | x    | x         |           |

<sup>1</sup> Establishment year.
 <sup>2</sup> Harvest year.
 <sup>3</sup> x in the box indicates the variety was in the test but yielded significantly less than the top variety in the test. Open boxes indicate the variety was not in the test.
 \*Not significantly different from the top-ranked red clover variety in the test.

#### Table 14. Performance of white clover varieties across years at Lexington, Kentucky.

|              |                  | Proprietor/KY       |                 | 2013 <sup>1</sup> |    |                | 2014 |    | 20 | 15 |
|--------------|------------------|---------------------|-----------------|-------------------|----|----------------|------|----|----|----|
| Variety      | Туре             | Distributor         | 14 <sup>2</sup> | 15                | 16 | 14             | 15   | 16 | 15 | 16 |
| Commercial V | arieties-Availab | le for Farm Use     |                 |                   |    |                |      |    |    |    |
| Alice        | Intermediate     | Barenbrug           |                 |                   |    | x <sup>3</sup> | Х    | *  | *  | *  |
| Crusader II  | Intermediate     | Allied Seed, L.L.C. | Х               | х                 | *  |                |      |    |    |    |
| Domino       | Ladino           | Grassland Oregon    |                 |                   |    | *              | Х    | *  |    |    |
| Durana       | Intermediate     | Pennington          | Х               | *                 | *  | Х              | Х    | *  | Х  | х  |
| Jumbo II     | Ladino           | Ampac Seed Co       |                 |                   |    |                |      |    | *  | Х  |
| Neches       | Intermediate     | Barenbrug           |                 |                   |    |                |      |    | Х  | Х  |
| Patriot      | Intermediate     | Pennington          | Х               | *                 | *  | х              | Х    | *  | х  | х  |
| Regal        | Ladino           | Public              | *               | *                 | *  |                |      |    |    |    |
| RegalGraze   | Ladino           | Cal/West Seed       |                 |                   |    |                |      |    | *  | *  |
| Renovation   | Intermediate     | Smith Seed          |                 |                   |    | х              | Х    | *  | х  | х  |
| Seminole     | Ladino           | Caudill Seed        |                 |                   |    | *              | Х    | *  |    |    |
| Will         | Ladino           | Allied Seed, L.L.C. | *               | *                 | *  | *              | *    | *  | *  | *  |
| Experimental | Varieties        |                     |                 |                   |    |                |      |    |    |    |
| AL 9701      | -                | Barenbrug           |                 |                   |    |                |      |    | *  | *  |
| GA-178       | Ladino           | Univ. of Georgia    | *               | *                 | *  |                |      |    | *  | *  |
| GO-FD        | -                | Grassland Oregon    |                 |                   |    | Х              | Х    | *  |    |    |
| NFWC04-29    | -                | Noble Foundation    |                 |                   |    | *              | Х    | *  |    |    |
| PPG-TR-102   | -                | Mountain View Seed  |                 |                   |    |                |      |    | Х  | Х  |
| SSS-SH1      | Ladino           | Smith Seed          |                 |                   |    |                |      |    | х  | х  |
| VS-41730     | Ladino           | Turner Seed         | Х               | х                 | *  | *              | Х    | х  |    |    |
| XLFWC1       | -                | ProSeeds Marketing  | Х               | *                 | *  |                |      |    |    |    |

<sup>1</sup> Establishment year.

<sup>2</sup> Harvest year.
 <sup>3</sup> x in the box indicates the variety was in the test but yielded significantly less than the top variety in the test.
 <sup>3</sup> Not significantly different from the top-ranked white clover variety in the test.

|   |   | ·                    |        |                |         |                    |            | lovi               | oton.       |                  | •         |                   |                   |           |          |         |          | Dring       | oton        |          |                    |           | C       | rkcan   | 7                                      |           | Eden     | oleda       | -                                     |                |
|---|---|----------------------|--------|----------------|---------|--------------------|------------|--------------------|-------------|------------------|-----------|-------------------|-------------------|-----------|----------|---------|----------|-------------|-------------|----------|--------------------|-----------|---------|---------|--|-----------|----------|-------------|---------------------------------------|----------------|
|   |   | 001.2                | 5      | 5              | 5       | 5                  | 2          |                    |             | 1                | 1         | 1                 | 1                 | 11        | 15       | 5       | 20       | 2           |             | 11       | ;                  | 5         | 2 2     | 20      |  | 2         | 2        |             | 2                                     | ſ              |
| Varietv   | ronrietor   | 3vr4                 | 3vr    | 3vr            | 3vr     | 2 2                | 34         | 2                  |             | - ~              | - 2       | 2                 | 2 %               | - 12<br>~ | 2 2      | %r      | 3vr      | <u>د</u> 2  |             |          | 3~r                | 2         | S Z     | 3 Å     | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | vr 3vr    | ŝ        | 3vr<br>3vr  | 2 #                                   | trials)        |
| AA117ER /   | \BI Alfalfa   |                      | ÷      | ÷              |         | ÷                  | ÷          | 110                |             |                  | 5         | ì                 | 5                 | ÷         | ì        |         |          | 87          | ì           | <b>ì</b> |                    | ì         | ì       | 92      | •<br>•                                 | ;<br>;    | ì        | ;           |                                       | 96(3)          |
| Acclaim /   | Allied Seed   |                      |        |                | 92      |                    |            |                    |             |                  |           |                   |                   |           |          |         |          |             |             |          |                    |           |         |         |  |           |          |             |                                       | I              |
| Arlington   | VI Agr. Exp.Sta.  |                      |        |                | 72      |                    |            |                    |             |                  | _         |                   |                   |           |          |         |          | _           | _           |          |                    |           |         | _       |  |           |          |             | _                                     | I              |
| Belle /   | Agribiotech   | 88                   |        |                | 82      |                    |            |                    |             | $\neg$           |           |                   |                   |           |          |         |          |             |             |          |                    |           |         |         |  |           |          |             | ~                                     | 35(2)          |
| Cherokee  | <sup>-</sup> L Agr. Exp. Sta.                               | 78                   |        |                | 65      | 1                  |            | +                  | +           | +                | +         |                   |                   |           |          |         | +        | +           | +           |          |                    |           |         |         |  |           |          |             |                                       | 72(2)          |
| Cinnamon  | outhern States  | 111                  |        | 1              | 108     | 5                  |            | 007                | 7<br>7<br>7 |                  | 5<br>1    | 7                 | 5                 | ç         |          |         | •        | ,<br>,<br>, | -           |          | 1                  |           |         | ,       | •<br>•                                 |           |          | *<br>0<br>7 | - ;                                   | 10(2)          |
| Cinnamon Plus   | outhern States  |                      |        |                |         | 16                 |            | 601                | 711         | 23 1             | 7 7       |                   | 0                 | 8         | 0        |         |          | 17          | 01 70       | 7 10     | 001                |           |         | 103     | 801                                    | 74        |          | 801         | )  77                                 | 19) 8(19)      |
| Common U  | ublic   |                      | T      |                | T       | T                  |            | 102                | +           | ~                | م<br>م    | 00                | \$                | 77        | δŬ       |         | +        | 36 1/       | 2           |          | 6                  |           | T       | 6       |  | 7         |          | 100         | ~ -                                   | 51(9)          |
|   | Tisco Co  |                      |        | 96             | 100     |                    |            | 701                | -           | +                | _         | _                 |                   |           |          | +       |          |             | 2           |          |                    | 106       |         | 5       |  |           |          | 103         | - -                                   | (6)00          |
| Luration  | LISCO LO.   |                      |        | δö             | 8       | 1                  | 5          | +                  | -           | 1                | +         | _                 |                   |           |          |         |          |             | -           |          |                    | 100       |         |         |  | 4         |          |             |                                       | 1(3)<br>(1)    |
| Emarwan   | VIT SEED  |                      |        |                |         |                    | 4          | +                  | +           | -                | +         |                   |                   |           | 0        |         | +        |             | 2           | 0        |                    | 5         |         |         |  | 2         |          |             | -                                     | (c)5U          |
| Evolve  | JLF PICKSeed USA  | 007                  | L      | 1              | 0       | à                  | 1          | 2                  |             |                  |           | 0                 | 207               | ľ         | 99       | L       | 7<br>7   |             | 1           | (<br>(   | 1                  | 2         | 0       |         | 1                                      |           | 00       |             |                                       | 1              |
| Freedom!  | sarenbrug USA   | 108                  | 105    | 12/            | 123     | 96<br>712          | 118        | 91                 | 00          | 08 11            | 01 0      | 9 99              | 101               | 6/        | 108      | 105     | 110      | 36 1        |             | 6 95     | 10/                | Ξ         | 103     | 119     | 106                                    | 15 102    | 102      | 100         | 40<br>16                              | )9(31)         |
| Freedom:MK  | Sarenbrug USA   |                      | Ť      | T              | 8       | <u>c</u>           | 107        | 4                  | 4           | +                | 7         | +                 |                   |           |          | Ť       | 100      | 0           | 2           | 20       | 7                  | 1         | 94      | Ξ       | -                                      | 78        | 8        | -           | 72                                    | 12(14)         |
| F5G 402   | Allied Seed   |                      | T      |                | T       |                    |            | +                  | +           | +                | +         |                   | 104               |           |          |         | +        | +           | +           |          | 114                |           |         |         |  |           |          |             |                                       | 08(2)          |
| FSG 9601  | Allied Seed   |                      |        |                |         | 1                  | 89         | ╡                  | +           | +                | +         |                   | _                 |           |          |         | ╡        | +           | +           | +        | +                  |           |         |         | +                                      |           |          | +           |                                       | I              |
| Gallant   | urner Seed  |                      |        |                | 1       |                    |            |                    | +           |                  |           |                   | 101               |           | 107      |         |          | -           |             |          | 107                |           |         |         |  |           |          |             | -                                     | 05(3)          |
| Impact 5  | specialty Seeds   | 106                  | 97     |                |         |                    |            |                    |             |                  |           |                   |                   |           |          | 98      |          |             | _           |          |                    |           |         |         |  |           |          |             | -                                     | 00(3)          |
| Juliet (  | Caudill Seed  |                      |        |                |         |                    |            |                    |             | 34               |           |                   |                   |           |          |         |          | 2           | 30          |          |                    |           |         |         |  |           |          | 84          | 59 8                                  | 32(5)          |
| Kenland (cert.)   | (Y Ag.Exp Sta.  | 110                  | 111    | 127            | 139     | 118                | 117        | 117                | 99          | 11 9             | 9 11      | 6 114             | 109               | 103       | 102      | 104     | 102      | 92 1        | 13 10       | 6 10(    | 5 115              | 111       | 88      | 105     | 104 1                                  | 23 104    | 98       | 110 1       | 38 1(                                 | 07(31)         |
| Kenland (uncert)  | ublic   |                      |        |                |         |                    |            |                    |             | 8                | 2         |                   |                   |           |          |         |          | 2           | 4           |          |                    | 83        |         | _       | 6                                      | 12        |          | 66          | 92                                    | 77(6)          |
| Kenstar   | (Y Ag.Exp Sta.  |                      | 105    |                |         |                    |            |                    |             |                  |           |                   |                   |           |          | 104     |          |             |             |          |                    |           |         |         |  |           |          |             | 1                                     | 05(2)          |
| Kenton  | (Y Ag.Exp Sta.  | 100                  | 93     | 119            | 109     | 90                 | 95         | 112                | 121         |                  |           |                   |                   |           |          | 98      | 95 1     | 05 1        | 12 94       | .+       |                    | 93        | 66      | 106     | 98                                     | 102       | 98       |             | 1                                     | 02(19)         |
| Kenway  | (Y Ag.Exp Sta.  | 106                  | 104    | 111            | 134     |                    | 97         | 119                | 18          | $\vdash$         |           |                   |                   |           |          | 100     |          | 94 1(       | <u> 10.</u> | e        |                    | 100       |         | 103     | 94                                     | 102       |          |             | 1(                                    | 06(15)         |
| LS 9703 L   | ewis Seed   |                      |        |                |         |                    |            |                    |             |                  |           | 107               |                   |           |          | ŀ       |          |             | -           |          | 86                 |           |         |         |  |           |          |             |                                       | 97(2)          |
| Morning Star  | .al/West Seeds  |                      |        |                |         |                    |            |                    |             |                  |           |                   |                   |           |          | ŀ       |          | 6           | 0           |          |                    |           |         |         |  |           |          | 90          |                                       | 90(2)          |
| Plus 4  | Vllied Seed   | 113                  |        |                | 113     |                    |            |                    |             |                  |           |                   |                   |           |          |         |          |             | -           |          |                    |           |         |         |  | 97        |          |             | -                                     | 08(3)          |
| Plus II /   | Vllied Seed   |                      |        |                |         |                    |            |                    | 130         | $\vdash$         |           |                   |                   |           |          |         |          |             |             |          |                    |           |         |         | 97                                     |           |          |             | 1                                     | 14(2)          |
| Prima   | ublic   | 92                   |        |                | 74      |                    |            |                    |             | -                | -         |                   |                   |           |          |         |          |             | -           |          |                    |           |         |         |  |           |          |             |                                       | 33(2)          |
| Quinequeli (  | audill Seed   |                      |        |                |         |                    |            |                    |             | 32               | -         |                   |                   |           |          |         |          |             | 8           |          |                    |           |         |         |  |           |          |             | 21                                    | 76(3)          |
| Red Gold F  | roseeds Marketing   |                      |        |                |         |                    |            | 81                 |             |                  |           |                   |                   |           |          | ŀ       |          | 8           | 6           |          |                    |           |         |         |  |           |          | 102         |                                       | 91(3)          |
| Red Gold Plus   | urner Seed  |                      | 97     | 97             |         | T                  | 95         | ;                  | $\vdash$    | $\vdash$         | -         |                   |                   |           |          | 95      |          | '<br>       |             |          |                    | 98        |         |         |  | 98        |          |             |                                       | 97(6)          |
| RedlanGraze /   | VBI Alfalfa   | 95                   |        |                |         |                    |            |                    |             |                  |           |                   |                   |           |          | ŀ       |          |             | -           |          |                    |           |         |         |  |           |          |             |                                       | 1              |
| RedlanGraze II /  | Americas Alfalfa  |                      |        | 91             | 104     | t                  |            |                    | $\vdash$    | $\vdash$         | -         |                   |                   |           |          |         |          | -           | -           |          |                    | 93        |         |         |  |           |          |             |                                       | 96(3)          |
| Redland Max /   | VBI Alfalfa   |                      |        |                |         |                    | 95         |                    |             | $\left  \right $ |           |                   |                   |           |          |         |          |             |             |          |                    |           |         |         |  |           |          |             |                                       |                |
| Redstart 5  | yngenta   | 102                  |        |                | 78      |                    |            |                    |             |                  |           |                   |                   |           |          |         |          |             |             |          |                    |           |         |         |  |           |          |             |                                       | 90(2)          |
| Robust  | Scott Seed  | 92                   |        |                |         |                    |            |                    |             |                  |           |                   |                   |           |          |         |          |             |             |          |                    |           |         |         |  |           |          |             |                                       | I              |
| Robust II 5   | sed Research of OR  |                      |        |                |         |                    |            |                    |             |                  |           |                   |                   |           |          |         |          | -           | 10          |          |                    |           |         |         |  |           |          | 108         | 1                                     | 09(2)          |
| Rocket 5  | sed Research of OR  |                      |        |                |         |                    |            |                    |             |                  |           |                   |                   |           |          |         |          | 7           | 92          |          |                    |           |         |         |  |           |          | 108         | -                                     | 07(2)          |
| Rojo Diablo (   | areat Plains  |                      |        | 66             |         |                    |            |                    |             |                  |           |                   |                   |           |          |         |          |             | _           |          |                    | 101       |         |         |  |           |          |             | -                                     | 00(2)          |
| Royal Red   | Southern States   | 108                  | 92     |                | 91      |                    |            |                    |             |                  |           |                   |                   |           |          |         |          |             |             |          |                    |           |         |         |  | 96        |          |             | 0.                                    | 97(4)          |
| Rustler (   | Dregro Seeds  |                      |        |                |         |                    |            |                    | 83          | =                | )1 84     |                   |                   |           |          |         |          | -           | -           |          |                    |           |         |         | 94 5                                   | 6         |          | -           | 04                                    | 94(6)          |
| Scarlet I   | Dairyland   | 95                   |        |                |         |                    |            |                    |             | +                | _         |                   |                   |           |          |         |          |             | _           |          |                    | 1         |         |         |  |           |          |             |                                       | 1              |
| Sienna  | areat Plains  | I                    | 007    | 16             | 0       |                    | +          | c<br>r             | +           | +                | _         |                   |                   |           |          | 0       | ,<br>I   |             | +           |          |                    | 106       |         | ř       |  | 1         | č        |             |                                       | )9(2)          |
| Solid   | roduction service   | 4/                   | 107    | Ť              | 98      | 84                 | +          | 6/                 | +           | +                | +         | +                 | _                 | ζ,        |          | 98      | 8/       | 86          | +           | +        | ,                  | 1         | †       | 9/      | +                                      | 5         | 84       | -           | י ע                                   | (11)           |
| 52-0303RCG  | outhern States  | I                    | ć      | T              | 0       | ╡                  | ╡          | +                  | +           | +                |           | +                 |                   | 103       | 104      | 0       | +        | +           | +           |          | 103                |           |         |         | +                                      | L C       |          | +           | - `                                   | 03(3)          |
| Starfire /  | Ampac Seed  | 9/                   | 56     |                | 66      | T                  |            |                    | 2           |                  |           | _                 |                   | 1         |          | 98      | +        |             | 4           |          |                    |           |         |         | •<br>•                                 | 7         |          | ۲<br>۱<br>۲ | , , , , , , , , , , , , , , , , , , , | (5)06          |
| Trink Truct 250   | Jai/West & Ampac  |                      |        |                |         | 1                  |            | 101                | 5           | -                | _         |                   |                   | 2         |          |         |          |             | 2           |          |                    |           |         | 6       | -                                      | 7         |          |             | = -                                   | 10(8)          |
|   | 1 E-lonks   |                      |        | 53             |         | 1                  | $\uparrow$ | 2                  | +           | +                |           |                   |                   |           |          | +       | +        | 72          | -           |          |                    | 06        |         | 72      |  |           |          |             |                                       | (0)22          |
|   | Tratt Valuar Coode  |                      |        | c c            |         |                    |            |                    | -           | 5                | _         | _                 |                   |           |          | +       |          | -           | 10          | ~        |                    | 02        |         |         |  | 0         |          |             |                                       | (2)(0)         |
| WIIGCAT   | srett roung seeds   |                      |        |                |         |                    |            |                    | -           | 10               |           |                   |                   |           |          |         |          |             | 2           |          |                    |           |         |         |  | Ø         |          |             | -                                     | U2(3)          |
| <ul> <li>Year trial was esta</li> <li>Use this summary</li> </ul> | blished.<br>table as a guide in m<br>in trial For evample i | aking vi<br>the Levi | ariety | decis<br>trial | ions, k | but ref<br>od in 2 | fer to 5   | specifi<br>specifi | c year      | y repc           | orts to ( | detern<br>rha fin | nine sta<br>Jrang | atistic   | al diffe | erence: | s in for | age yid     | eld bet     | tween    | varieti<br>oort" a | ies. To f | find ac | tual yi | elds, lo                               | ook in th | e yearl  | y repor     | t for th                              | ie final<br>a' |
| Forage>.  | יוכ מומוי ו סו בעמווו אוכי                                  |                      | li y c |                | big     |                    |            |                    |             |                  |           |                   |                   |           |          | 4 64    |          |             |             |          |                    |           |         |         | 0.490                                  |           | ar / ^ ^ |             |                                       | ñ              |
| <sup>3</sup> Mean only presen                                     | ted when respective   | variety v            | vas in | Iclude         | d in tv | wo or              | more       | trials.            |             |                  |           |                   |                   |           |          |         |          |             |             |          |                    |           |         |         |  |           |          |             |                                       |                |
| <sup>4</sup> Number of years c                                    | vf data.  |                      |        |                |         |                    |            |                    |             |                  |           |                   |                   |           |          |         |          |             |             |          |                    |           |         |         |  |           |          |             |                                       |                |

Table 15. Summary of Kentucky red clover yield trials 2000-2016 (yield shown as a percentage of the mean of the named commercial varieties in the trial).

| Table 16. Sumi  | mary of Kentuck                          | cy white clover yield trials   | 2002               | 2016               | yield   | shown               | as a p               | ercent                                  | age o             | fthe    | nean   | of the             | comn           | iercia | l vari           | eties i           | n the trial).                   |                        |                   |
|---|--|--------------------------------|--------------------|--------------------|---|---------------------|----------------------|---|-------------------|---------|--------|--------------------|----------------|--------|------------------|-------------------|---------------------------------|------------------------|-------------------|
|   |  |                                |                    |                    |   |                     |                      | Lexind                                  | iton              |         |        |                    |                |        | Prin             | ceton             | Ouicksand                       | Eden<br>Shale          |                   |
|   |  |                                | 02 <sup>1,2</sup>  | 03                 | 04  | 90                  | 07 0                 | 8 05                                    | 10                | 11      | 12     | 13                 | 14             | 15     | 03               | 05                | 03                              | 03                     | Mean <sup>3</sup> |
| Variety   | Type                                     | Proprietor                     | 3yr <sup>4</sup>   | 3yr                | 3-yr  | 2-yr 2              | -yr 3;               | yr 2y                                   | r 3yr             | 3yı     | . 2yı  | 3yr                | 3yr            | 2yr    | 3yr              | 3-yr              | 2yr                             | 2yr                    | (#trials)         |
| Advantage   | Ladino                                   | Allied Seed, L.L.C.            |                    | 125                |   |                     |                      |   |                   |         |        |                    |                |        |                  |                   |                                 | 106                    | 116(2)            |
| Alice   | Intermediate                             | Barenbrug USA                  |                    |                    |   |                     |                      |   |                   |         |        |                    | 105            | 120    |                  | 86                |                                 |                        | 104(3)            |
| Avoca   | Dutch                                    | <b>DLF International Seeds</b> |                    |                    |   | 59                  |                      |   |                   |         |        |                    |                |        |                  | 82                |                                 |                        | 71(2)             |
| Barblanca   | Intermediate                             | Barenbrug USA                  |                    | 92                 |   |                     |                      |   |                   |         |        |                    |                |        |                  |                   |                                 |                        | I                 |
| CA ladino   | Ladino                                   | Public                         | 100                |                    | 124   |                     |                      |   |                   |         |        |                    |                |        | 103              |                   | 98                              |                        | 106(4)            |
| Colt  | Intermediate                             | Seed Research of OR            |                    | 90                 |   | 57                  |                      |   |                   |         |        |                    |                |        |                  | 114               |                                 |                        | 87(3)             |
| Common  | Dutch                                    | Public                         | 100                |                    |   |                     | 53                   |   | 98                |         |        |                    |                |        |                  | 78                |                                 |                        | 82(4)             |
| Companion   | Ladino                                   | Oregro Seeds                   |                    |                    |   |                     | 8                    | 7 94                                    | 92                |         |        |                    |                |        |                  |                   |                                 |                        | 91(3)             |
| Crescendo   | Ladino                                   | Cal/West Seeds                 | 105                |                    |   | 140                 |                      |   |                   |         |        |                    |                |        |                  | 109               |                                 |                        | 118(3)            |
| Crusader II   | Intermediate                             | Allied Seed, L.L.C.            |                    |                    |   |                     |                      |   | 90                | 50      | 54     | 75                 |                |        |                  |                   |                                 |                        | 67(4)             |
| Excel   | Ladino                                   | Allied Seed, L.L.C.            |                    |                    | 100   |                     |                      |   |                   |         |        |                    |                |        |                  |                   |                                 |                        | I                 |
| Domino  | Ladino                                   | Grassland Oregon               |                    |                    |   |                     |                      |   |                   |         |        |                    | 87             |        |                  |                   |                                 |                        | I                 |
| Durana  | Intermediate                             | Pennington                     |                    | 94                 |   | 94                  | 38 8                 | 2 85                                    | 97                | 93      | 84     | 97                 | 89             | 78     | 87               | 83                | 101                             | 95                     | 90(15)            |
| GWC-AS10  | Ladino                                   | Ampac Seed                     |                    |                    |   |                     |                      |   |                   | 10,     |        |                    |                |        |                  |                   |                                 |                        | I                 |
| Insight   | Ladino                                   | Allied Seed, L.L.C.            |                    |                    |   | 128                 |                      |   |                   |         |        |                    |                |        |                  |                   |                                 |                        | I                 |
| lvory   | Intermediate                             | Cebeco                         | 96                 |                    |   |                     |                      |   |                   |         |        |                    |                |        |                  |                   |                                 |                        | I                 |
| Ivory II  | Intermediate                             | <b>DLF</b> International Seeds |                    |                    |   |                     | 36                   |   | 101               | 127     |        |                    |                |        |                  |                   |                                 |                        | 105(3)            |
| Jumbo   | Ladino                                   | Ampac Seed                     | 93                 |                    |   |                     |                      |   |                   |         |        |                    |                |        |                  |                   |                                 |                        | I                 |
| Jumbo II  | Ladino                                   | Ampac Seed                     |                    |                    |   |                     |                      |   |                   | 12.     | 101    |                    |                | 66     |                  |                   |                                 |                        | 107(3)            |
| Kopull  | Intermediate                             | Ampac Seed                     | 97                 |                    |   | 97                  | 95 9                 | 5 10                                    | 3 96              | 80      | 90     |                    |                |        |                  |                   |                                 |                        | 94(8)             |
| KY Select   | Intermediate                             | KY. Agric. Exp. Station        |                    |                    |   |                     |                      |   |                   | 98      | 95     |                    |                |        |                  |                   |                                 |                        | 97(2)             |
| Neches  | Intermediate                             | Barenbrug USA                  |                    |                    |   |                     |                      |   |                   |         |        |                    |                | 79     |                  |                   |                                 |                        | I                 |
| Ocoee   | Ladino                                   | Allied Seed, L.L.C.            |                    |                    |   |                     |                      |   | 89                | 74      |        |                    |                |        |                  |                   |                                 |                        | 82(2)             |
| Patriot   | Intermediate                             | Pennington                     |                    | 103                |   | 87 1                | 04 11                | 3 95                                    | 117               | 11      | 96     | 82                 | 78             | 88     | 104              | 100               | 98                              | 66                     | 99(15)            |
| Pinnacle  | Ladino                                   | Allied Seed, L.L.C.            |                    |                    |   | 120                 | _                    | _                                       | _                 | _       | _      |                    |                |        |                  | 111               |                                 |                        | 116(2)            |
| Rampart   | Ladino                                   | Allied Seed, L.L.C.            |                    |                    |   |                     | 80 8                 | 97                                      | 83                |         |        |                    |                |        |                  |                   |                                 |                        | 87(4)             |
| Regal   | Ladino                                   | Public                         | 66                 | 96                 | 92  | 1                   | 25 10                | 00 11                                   | 6 116             | 129     | 147    | 123                |                |        | 107              | 100               | 104                             |                        | 112(13)           |
| RegalGraze  | Ladino                                   | Cal/West Seeds                 |                    |                    |   | 127 1               | 40 10                | 02 10                                   | m                 |         |        |                    |                | 111    |                  |                   |                                 |                        | 117(5)            |
| Resolute  | Intermediate                             | Southern States                |                    |                    |   | 63                  | _                    |   |                   |         |        |                    |                |        |                  |                   |                                 |                        | I                 |
| Renovation  | Intermediate                             | Smith Seed Services            |                    |                    |   |                     |                      |   |                   |         |        |                    | 83             | 85     |                  |                   |                                 |                        | 84(2)             |
| Seminole  | Ladino                                   | Saddle Butte Ag. Inc           |                    |                    | 108   | 70                  | 79                   |   |                   |         |        |                    | 114            |        |                  |                   |                                 |                        | 93(4)             |
| Super Haifa   | Intermediate                             | Allied Seed, L.L.C.            |                    |                    | 77  |                     |                      |   |                   |         |        |                    |                |        |                  |                   |                                 |                        | I                 |
| Tillman II  | Ladino                                   | Caudill Seed                   | 103                |                    |   |                     |                      |   |                   |         |        |                    |                |        |                  |                   |                                 |                        | I                 |
| WBDX  | Dutch                                    | Saddle Butte Ag. Inc           |                    |                    |   |                     |                      |   |                   | 72      |        |                    |                |        |                  |                   |                                 |                        | I                 |
| Will  | Ladino                                   | Allied Seed, L.L.C.            | 107                |                    |   | 162 1               | 50 13                | 32 10                                   | 7 115             | 137     | 130    | 123                | 143            | 140    |                  | 136               |                                 |                        | 132(12)           |
| <sup>1</sup> Year trial was                           | established.                             | والمعادية والمترامس والمرابع   | 2                  |                    | 4<br>2<br>2   |                     |                      | + | 04040             |         | 104040 | 100                | found          |        | 1000             | 1010              |                                 | otios To               | 4.2               |
| <ul> <li>Use this summary actual yields, l</li> </ul> | hary table as a gu<br>look in the yearly | report for the final year of e | ions, p<br>each sr | ut rere<br>vecific | r to sp<br>trial. F   | eciric y<br>or exan | eariy re<br>nple, th | eports t<br>e Lexir                     | o dete<br>ngton t | rial pl | anted  | tical di<br>in 201 | neren<br>0 was | narve: | iorage<br>sted 3 | e yrera<br>years, | between vari<br>so the final re | leties. Io<br>eport wo | nna<br>ould be    |
| "2012 Řed and   | d White Clover Ré                        | port" archived in the KY For   | age w              | ebsite             | at <w< td=""><td>ww.uk)</td><td>.edu/A</td><td>g/Fora</td><td>ge&gt;.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></w<> | ww.uk)              | .edu/A               | g/Fora                                  | ge>.              |         |        |                    |                |        |                  |                   |                                 |                        |                   |
| <sup>4</sup> Number of yea                            | esented when res<br>ars of data.         | pective variety was include    |                    | /0 0L II           | iore tri  | als.                |                      |   |                   |         |        |                    |                |        |                  |                   |                                 |                        |                   |
|   |  |                                |                    |                    |   |                     |                      |   |                   |         |        |                    |                |        |                  |                   |                                 |                        |                   |

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