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Perennial Clover Production at Overton, 1985-87

G. R. SMITH, C. L. GILBERT, AND I. J.
PEMBERTON

Summary

Six perennial clover varieties were evaluated for forage production and adaptation at Overton in 1985-86. Seven perennial clover varieties were evaluated in 1986-87. Forage production ranged from 2,843 lbs DM/A for Kenland red clover to 912 lbs DM/A for La. S-1 white clover in 1985-86. In 1986-87, forage production ranged from 4,777 to 2,729 lbs DM/A for Kenland red clover and La. S-1 white clover, respectively.

Introduction

Red and white clover are legumes with potential for early summer forage production. Although classified as perennials, these clovers seldom live through the summer on sandy soils in east Texas. There is potential for use of red clover and/or white clover to extend clover forage production later than can be achieved with annual clovers like crimson or arrowleaf. The objectives of this research were to evaluate perennial clovers for seasonal forage production, adaptation, and summer survival.

Procedure

Six perennial clovers were drilled into a mixed sod of common and Coastal bermudagrass on October 15, 1985. On October 7, 1986, seven perennial clovers were drilled into a native sod of common bermudagrass and *Paspalum setaceum*. Fertilizer was applied prior to planting and according to soil test. In both years, 100 lbs P₂O₅ and 1.5 lbs B/A were applied to the plot area. Potassium was applied at 162 and 180 lbs K₂O/A in 1985 and 1986, respectively. A small-plot drill, with six double disk openers spaced nine inches apart, was used to place the seed one-half inch deep. The clovers were harvested with a rotary mower at 2.25 inches.

Seeding rate for the red clover was 14 lbs/A, and 6 lbs/A for the white clover. Rhizobium inoculant type B, supplied by the Nitragin Co., was applied at a rate of 1.6 oz/lb of seed with Pelgel solution used as an adhesive to stick the inoculant to the seed.

Each experiment was arranged in a randomized complete block design with four replications. At each harvest, a subsample was weighed, dried at 60°C, then weighed again to calculate dry matter yield per acre.

Results

In 1985-86, Kenland and Kenstar red clover with 2,843 lbs DM/A and 2,630 lbs DM/A, respectively, produced more forage than the white clover varieties (Table 1). Kenland red, Osceola white, and Kenstar red were the most productive during the 1986-87 season (Table 2). The 1986-87 production season was longer than the previous year, allowing the white clovers to increase production. In

1986-87, red clover production peaked at the June 8 harvest and decreased greatly at the July 24 harvest. La. S-1 white clover produced less than the other clover varieties both seasons. No varieties of red or white clover survived after the first summer as perennials.

TABLE 1. SEASONAL FORAGE PRODUCTION OF SOD-SEEDED PERENNIAL CLOVERS AT OVERTON, 1985-86

| Variety | Harvest Date | | | Total |
|------------|----------------------|--------------------|---------|-------|
| | 4-15-86 | 5-12-86 | 6-12-86 | |
| | ----- lbs DM/A ----- | | | |
| Kenland | 497 | 877 | 1,469 | 2,843 |
| Kenstar | 339 | 848 | 1,443 | 2,630 |
| Regal | 316 | 594 | 936 | 1,846 |
| Osceola | 257 | 617 | 960 | 1,834 |
| Tillman | 229 | 571 | 636 | 1,436 |
| La. S-1 | 130 | 427 | 355 | 912 |
| C.V.=35.6% | | LSD (0.05) = 1,029 | | |

TABLE 2. SEASONAL FORAGE PRODUCTION OF SOD-SEEDED PERENNIAL CLOVERS AT OVERTON, 1986-87

| Variety | Harvest Date | | | Total |
|------------|----------------------|------------------|---------|-------|
| | 4-29-87 | 6-8-87 | 7-24-87 | |
| | ----- lbs DM/A ----- | | | |
| Kenland | 1,915 | 2,175 | 687 | 4,777 |
| Osceola | 1,059 | 2,095 | 1,294 | 4,448 |
| Kenstar | 1,350 | 2,164 | 659 | 4,173 |
| Regal | 1,104 | 1,892 | 1,144 | 4,140 |
| Tillman | 1,152 | 1,838 | 1,146 | 4,136 |
| Aran | 756 | 1,803 | 1,050 | 3,609 |
| La. S-1 | 798 | 1,565 | 366 | 2,729 |
| C.V.=11.8% | | LSD (0.05) = 703 | | |