Effects of Cutting First Year Red Clover on Stand and Yield in the Second Year

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Springs seedings of red clover (Trifolium pratense L.) often produce abundant growth the first year. Under good growing conditions, the plants may reach a height of 18 to 20 inches and many of them bloom by the middle of September. Numerous inquiries have been received concerning the advisability of mowing such fields prior to the first winter. Studies at Ohio (3, 4, 5) have shown that early cutting may be beneficial but that late cutting usually is detrimental. No such studies have been reported in the United States for areas as far north as Wisconsin.

Willard (3) found that cutting red clover from Aug. 15 to Sept. 1 in the seedling year increased hay yields the next year as compared with fields that were not cut, but that cutting from Oct. 15 to Nov. 1 was usually injurious. Willard (4) and Willard and Lewis (5) reported that leaving combined straw on the field always resulted in obvious damage to red clover stands, but that cutting the stubble immediately after combining and removing the straw, hay, and weeds never resulted in damage. They further found that it was decidedly better to mow the grain stubble soon after combining and leave it on the field than not to cut it at all. This practice, however, was not as beneficial as removing all material after cutting. Allen (1) reported that clipping red clover in Maryland from mid-August to early September during the seedling year gave better stands and higher yields the second year than when not clipped. Removal of the clippings increased both stand and yield as compared to leaving the clippings on the field.

Nilsson-Leissner (6) made similar studies and found that cutting pure stands of red clover of October of the seeding year reduced yields the following year. He also found that when red clover was grown in mixtures with timothy (Phleum pratense L.) (Dactylis glomerata L.), October clipping reduced the yield of hay the following year in every case and the yield of clover in the mixtures in 4 of 6 comparisons. Clipping reduced the yield of Schlesisk, a relatively early-flowering fast growing broad-leaved strain, but not in mixtures with grasses. He did not investigate the effects of earlier clippings.

The present study was made to determine under Wisconsin conditions the effects of cutting red clover the first year on stand and yield in the second year, and the effects of removing and not removing clippings from cut plots.

MATERIALS AND METHODS

Seedings of red clover were made on May 7 in 1950, May 7 in 1951, and April 24 in 1952. Seeding rates of 12 pounds per acre with a companion crop of oats or barley, seeded at 1 bushel per acre, were used in all years of these tests. The seedings were made on the experimental farms of the Wisconsin Agricultural Experiment Station near Madison, Wis. F.C.13274, commonly called Wisconsin Mildew Resistant, was used in all years except 1947 when a common red clover was seeded. The companion crop was removed at maturity with a binder in 1947 and 1950, and about a week before maturity in the other years.