STRAIN TESTS OF RED AND WHITE CLOVERS

O. S. AAMODT, J. H. TORRIE, AND O. F. SMITH

The use of adapted strains is essential for success with red and white clovers. This has been reported often with red clover but not for white clover. Frequently a shortage of domestic red clover seed in the United States results in large importations of unadapted foreign seed. Such a situation arose immediately following the World War and again in 1924, 1926, 1927, and 1937.

Numerous tests conducted at various experiment stations have shown, with few exceptions, that foreign strains of red clover are decidedly inferior to domestic strains. Among the earlier work was that of Moore (4), which showed that European red clovers were not sufficiently hardy for Wisconsin conditions. During the years 1922 to 1929 tests were conducted at several experiment stations in cooperation with the U. S. Dept. of Agriculture. The results of these tests, which are reported by Pieters and Morgan (6), show that foreign red clovers, with few exceptions, are unadapted for the north central and eastern United States. A more detailed report of these studies at Wisconsin, New York, and Kentucky are given respectively by Delwiche (2), Wiggans (7), and Fergus (3). Their conclusions are essentially the same as given by Pieters and Morgan (6). From the results of tests of foreign red clovers in Illinois over a 15-year period Pieper and Burlison (5) state "the foreign seeds germinated well, but the stands though good the first year, were soon lost because of winter-killing and susceptibility to disease and insect injury. The true inferiority of the foreign strains, except those from Canada, showed up in their inability to produce a crop the second year".

Interest was renewed in this subject in 1937 as a result of large importations of foreign red clover seed, caused by a shortage of domestic seed. Aamodt, Delwiche, and Stone (1) stress the disadvantage of using foreign seed. They state that in years when winter injury is negligible foreign red clovers may produce a fair yield in the first but the second cut is usually small. There is also the danger that domestic stocks will become contaminated by mechanical mixtures or cross pollination with foreign strains.

MATERIALS AND METHODS

In order to obtain more recent data on the relative performance of foreign and domestic clovers, under Wisconsin conditions, some 63 samples of red clover and 16 of white clover were planted in duplicate randomized plots in the spring of 1937 at the University Hill Farms. Similar plots of some 80 strains of red clover and...