REGISTRATION OF VARIETIES AND STRAINS OF 
ALFALFA, I

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DISEASES, insect pests, and different climatic hazards limit successful alfalfa production unless adapted improved varieties are used. The progressive alfalfa grower is now asking for specific varieties for his particular conditions. A number of alfalfa breeding and improvement programs were underway before World War I, but these received a serious set-back during that war. One of the few programs which continued was at Michigan where F. A. Spragg and co-workers succeeded in producing a superior variety, Hardigan. During this period a number of varieties, strains, and introductions were identified and these were widely tested by state agricultural experiment stations and the Bureau of Plant Industry during the decade beginning in 1920. These tests evaluated the characteristics and determined the range of adaptation of such varieties and strains as Grimm, Baltic, Cossack, Ladak, Kansas Common, Hairy Peruvian, and others.

The isolation, in 1925, of the organism Corynebacterium insidiosum which causes the serious bacterial wilt disease gave a new and greater impetus to alfalfa improvement. Studies indicated this disease could be effectively controlled only through the use of resistant varieties. These improvement programs had their beginning in the search by H. L. Westover for bacterial wilt resistant strains in Turkistan, Asia, in 1929. Investigations indicated that resistant strains could be obtained by selection within certain strains or by combining the disease resistance of introduced strains with the more desirable characteristics of domestic varieties resulting in greater forage and seed yields. The Alfalfa Improvement Conference, organized in 1935, played an important part in evaluating new strains in over 40 states and several Canadian provinces. The Conference also served as an agency to focus attention on the problems involved and to correlate the work in many ways.

Methods of procedure and regulations had been developed by certifying agencies under which seed of alfalfa varieties could be increased without becoming contaminated by strains having inferior characteristics. The need for seed certification of superior alfalfas is emphasized by the recent finding of the high percentage of cross