A COMPARISON OF HARDIGAN AND LADAK ALFALFA IN THEIR REACTIONS TO LEAFHOPPER INFESTATION

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In a study of the general adaptability of Ladak alfalfa in comparison with Hardigan for conditions in Michigan, made over a period of five years, the several sets of plots have afforded an opportunity for detailed observation of the damage done by leafhoppers. It has been a common observation in farming practice, and more particularly in field plot work in Michigan, that when part of an alfalfa field is cut a few days later than an adjacent area, heavy leafhopper infestation and yellowing may occur on the second growth of the plants in the early cut area, such damage being most severe on a narrow strip next to the later cut portion. Not infrequently it is virtually confined to a border strip 10 to 20 feet wide.

Throughout the five years of study of the comparative responses of Ladak and Hardigan alfalfa to different time-of-cutting treatments, the second growth on the border areas of early cut plots has been, to all appearances, equally infested with leafhoppers as evinced by the characteristic reduced growth and yellowed appearance of both varieties. As usual, Ladak was slower in recovery after cutting than was Hardigan. In these trials, the actual damage done by leafhoppers was largely confined to the second crop, was most intense on the borders of early cut alfalfa, but was not reflected in reduced stands on such border areas, in increased winterkilling there, or in reduced growth of the first crop the next season. In fact, such border areas, severely yellowed and stunted in one summer, were indistinguishable as regards stand and vigor of growth from the immediately adjacent alfalfa which had been cut later the previous season and had thereby escaped the more serious leafhopper attack.

In order to obtain additional evidence with respect to the recovery of the alfalfa or possible differential recovery of the two varieties, additional winterhardiness and root reserve studies were made on a series of plots in the winter of 1940-41, and yields were taken in June 1941 from the same plots.

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