THE DIFFERENTIAL RESPONSE OF ALFALFA VARIETIES TO TIME OF CUTTING

H. M. TYSDAL AND T. A. KIESSELBACH

THAT alfalfa responds adversely to too frequent cutting has been rather thoroughly demonstrated in numerous experimental tests. The comparative reaction of different varieties has not been studied to a similar extent, however, and the response of the comparatively new variety Ladak has, as yet, not been reported. Since this variety has shown a rather strikingly different response to cutting treatment, the present report has been prepared showing its yield and stand in comparison with three standard varieties under several cutting treatments during the past five years at the Nebraska Experiment Station.

As a preliminary comparison, Table 1 is presented giving a summary of the yield and maturity at time of cutting Ladak compared to Grimm and Nebraska Common in a number of field plat varietal tests conducted during the period 1929 to 1933. These tests were on two different fields, and considering the number of replications and years involved, averages of 29 different plat yields of each variety are reported in the table. The actual and relative yields are given by cuttings. The cutting treatment in these variety tests may be considered approximately normal for standard varieties for this locality, the first cutting being taken about June 1, the second during the first 10 days of July, and the third usually more than a month later. In general, the Ladak yielded proportionately more than Grimm or Nebraska Common in the first cutting, 57% of the total crop being produced in the first cutting compared with 49% for Grimm and Nebraska Common. Ladak yielded both actually and proportionately less than the other varieties in the second and third cuttings. The high yield of Ladak in the first cutting suggests that it may be a very desirable variety under those conditions where one cutting constitutes the total hay crop. This particular adaptation has been mentioned in other reports.

The maturity at the time of cutting as indicated by the percentage of bloom, shows that Ladak is more immature at the second and third cutting under these conditions of harvest than the other two varieties although there is not much difference in the first cutting.

TIME-OF-CUTTING EXPERIMENT

In August, 1932, a new set of field plats was sown to four varieties—

1Contribution from the Division of Forage Crops and Diseases, Bureau of Plant Industry, U. S. Dept. of Agriculture, and the Department of Agronomy, Nebraska Agricultural Experiment Station, cooperating. Published with the approval of the Director of the Nebraska Agricultural Experiment Station, Lincoln, Nebr., as Journal Series Paper No. 226. Received for publication January 28, 1939.

2Associate Agronomist, Division of Forage Crops and Diseases, Bureau of Plant Industry, U. S. Dept. of Agriculture, and Agronomist, Department of Agronomy, Nebraska Agricultural Experiment Station, respectively.