STUDIES were initiated by the Wisconsin Agricultural Experiment Station and the Lake States Forest Experiment Station in the spring of 1940 in Richland County, Wis., to measure returns from land utilized for timber production, woods-pasture, and open pasture. Results presented here deal primarily with the open-pasture phase of these cooperative investigations. The principal objectives of this phase of the study have been to measure (a) the productivity of improved (renovated) and comparable untreated (non-renovated) pastures, (b) the seasonal distribution of the production of such pastures, and (c) the duration of the effects of renovation. Results concerning the woods-pasture phase of the study are presented in another paper.

PLAN OF EXPERIMENT

A review of the literature and the general plan of procedure used in the study, including detailed descriptions of the number and size of the pastures, soil type, exposure and slope, method of seedbed preparation, fertilization, seeding and seeding mixtures, grazing treatments, and methods of sampling for yields of dry matter, weed, and white grub populations have been reported elsewhere. The sampling and grazing procedures used during the 1941 and 1942 growing seasons and previously reported were continued during 1943, 1944, and 1945.

RESULTS AND DISCUSSION

YIELDS OF DRY MATTER

Yields of dry matter produced by the renovated and untreated pastures during the period 1941-45, inclusive, are given in Table 1. Renovated pastures within the 15 to 25% and 26 to 35% slope classes produced average annual yields of 3,367 and 3,054 pounds of dry matter per acre, respectively, during the 5-year period. The average annual yields of dry matter produced by the untreated pastures in the 15 to 25% and 26 to 35% slope classes during the same period were

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