

Measurements of the amount of feed produced during the year by pastures in various districts throughout New Zealand and in several varying seasons have a direct application to farm practice and management. The following preliminary survey indicates the results

GRASSLAND PRODUCTION in NEW ZEALAND

which may be expected from this type of work, and the methods by which it is carried out. It should be noted, however, that the full value of this investigation can be secured only by a continuation of measurements over a large number of years.

FOR many years there has been a need for a more detailed knowledge of the production from pastures throughout the year, and for information concerning the species contributing to that production. This was particularly noticeable when the investigations concerning facial eczema began, for the rate of pasture growth at certain critical periods is in some way connected with the incidence of that disease. Consequently, in the years following the major outbreak in 1934-35, the development of a satisfactory technique was in progress, and when a useful method was discovered, several "rate of growth" trials were started.

Measuring the Amount of Feed Produced by Pastures

— By —

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Technique of Measurement

Pasture growth is probably the most difficult crop to measure under conditions approximating those of normal farm management. Unlike the wheat crop, for example, where measurement is restricted to one crop, pastures may be considered as a number of crops growing in association. Each pasture species has different times, rates, and habits of growth, and all are delicately balanced in the sward. The sward is extremely sensitive to changes in management, and as frequent cutting necessitates a drastic change, the mower has to be used with the greatest care. The kind and severity of stocking will also greatly influence the type of pasture and its production, and therefore the grazing management of the trials is important.

The methods employed in measuring pasture growth may be summarised as follows:—

(1) "Mowing and Grazing" Trials

These were developed by Mr. A. W. Hudson,* a former Crop Experimentalist to the Department, and the technique used involves the use of a pair of similar fields, the growth in one of which is mown and weighed, while that in the other is grazed. Mow-

ings alternate with sheep grazings, so that after two mowings and weighings the sward is grazed and the production of the duplicate section is measured. This technique approximates that of intensive rotational graz-



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*Hudson, A. W.: Imperial Bureau of Plant Genetics, Herbage Plants, Bulletin II, 1933, 21-35.

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