

GRAZING ESTABLISHED PASTURE.

During the past year a 6-acre field of pasture established on a typical block of pakihi land has been grazed by dairy cows. During midsummer production of pasture on the field was extremely high, and for several weeks more than two cows per acre were successfully carried. Under grazing-conditions consolidation of the surface has taken place, and very little damage has been done to the sward by stock even during periods of somewhat high rainfall. The owner of the cows reports that they have milked extremely well during the time in which the cows have grazed this particular block.

PHORMIUM TENAX.

During the past year three new blocks of *Phormium tenax* were planted in order to obtain further information concerning the economic possibilities of flax-culture on pakihi land, and concerning the nutrition of *Phormium tenax*. The experiments on *Phormium tenax* comprise (1) different methods of land preparation prior to planting, and (2) the use of different manures in the treatment of the land. Excellent growth is being made on many of the plots, indicating that with proper treatment *Phormium tenax* can be successfully grown on pakihi land. The experiments already have demonstrated the outstanding value of phosphatic manures. The best growth has been obtained on those plots in which lime, phosphate, and sulphate of ammonia have been used. In certain cases the inclusion of potassic manures has given a slight additional advantage. On those plots where phosphatic manures have been omitted little improvement over the growth of the untreated plot has occurred.

TREE-CULTURE.

In view of the importance of shelter-trees in the economic development of pakihi land for dairying, a number of different species of exotic trees were planted last spring in order to test their growth on pakihi soil under different conditions. As far as the experiment has gone, *Pinus radiata*, *Pinus ponderosa*, and *Pinus densiflora* are giving the most promising results of success in their adaptation to pakihi land.

PIG RECORDING.

A grant of £200 made by the New Zealand Meat-producers Board to the Waikato Pig Recording Club enabled pig recording to be continued part time in one group in the Hamilton district. The work was undertaken during the year by the recording officer, who visited monthly some twelve farms, where sows and their litters were weighed, management and feed trials supervised, and general advice given to growers regarding the handling of their herds.

Although the scope of the work was considerably restricted owing to its being possible to make available the recording officer's services for only portion of the time, the results secured were most impressive, and indicate what advances can be made by due attention to management, feeding, and selection. During the past three seasons, during which recording has been pursued, the average litter-weight at eight weeks has increased from 191 lb. to 281 lb., and the weight per piglet from 25 lb. to 40 lb. Among the Berkshire, Tamworth, Large White, Middle White breeds, and the various cross-bred pigs under record consistent increases in litter-weights occurred during the three seasons. As in previous years, the weights of the individual piglets in large litters were equal to those in small ones, and indicate that large litters are good measures of the real productivity of the sows. In management, the use of the creep system has been demonstrated as a highly desirable measure to adopt on economic grounds, while small grass-paddocks and movable shelters have proved superior for breeding sows.

PORK AND BACON.

Arrangements were made through the Waikato Group Marketing Association to despatch to Smithfield a number of marked carcasses of pigs which had been recorded on the farms. These were assessed by a panel of Smithfield butchers, officials of the Food Investigation Board, and, in addition, cooking trials were arranged through the courtesy of Messrs. J. Lyons. The general terms of the detailed criticisms were distinctly favourable to the quality of the carcasses as despatched, while the cooking tests revealed that the flavour of New Zealand frozen pork from these recorded pigs closely approximated that of the best English article. The details of these overseas investigations have provided much information to local pig-farmers, and have served to guide them as to the adoption of such practices as will lead to the production of carcasses suited to meet a high-grade English demand.

WOOL.

Advisory Committee : Dr. C. J. Reakes (Chairman), Mr. W. Perry, Professor G. S. Peren, Professor R. E. Alexander, Mr. E. Short, Dr. F. W. Dry, Mr. Q. Donald, Mr. A. H. Cockayne.

Massey College.—Dr. Dry has continued his study of the fibre types of the Romney and their development. The information is assisting in providing the basis for genetic and other investigations, and, on the practical side, in placing the breeder in a better position in selecting breeding-animals. Interesting results are available, indicating the possibility of foretelling the future hairiness of an individual sheep. A detailed account of the work is in course of publication, a preliminary account having been published in the *Wool Record* of the 4th September, 1930—"The Fibre Types of the New Zealand Romney Hogget."

Numerous projects are under way in connection with the growth-rate of wool, influence of medullated fibres, methods of selecting representative samples, influence of food on the yolk, &c.

Lincoln College.—This work is concerned mainly with the effect of breeding and feeding on wool characteristics. A valuable paper by Mr. D. J. Sidey is in course of publication.