

*Agricultural Instruction and Advice.*—This work has been carried out by means of correspondence and by visiting farms. The latter method means a good deal of time, but meets with most approval from the farmer. Inquiries as to suitable grass mixtures, lucerne-culture, fertilizers, and methods of cultivation form the basis of most of the information asked for. Farmers generally are showing a greater tendency to become better acquainted with all kinds of pasture plants.

*Experimental Areas.*—Poenua: This area was sown down in a grass mixture which is proving very satisfactory.

Rotomanu: The area was sown in a variety test of oats last spring, the crop being harvested for hay purposes. At time of writing the area is being grazed with sheep, and will be prepared in the ensuing spring for sowing down in Lotus major and paspalum tests.

Moana (bush-terrace lands): No work has been done on this area, it having been grazed with stock, but negotiations are in progress to have further work carried out during the coming year.

Hokitika (racecourse area—bush-terrace lands with stiff subsoil followed by gravel in which layers of oxide-of-iron pan are met with at various depths): Advantage was taken of the fine weather from December onwards to have this area sown down in grass tests. Eight different mixtures were sown, ranging from a high-class permanent mixture to a short-rotation pasture leading to a permanent Agrostis and Lotus major combination. So far these grasses have done as well as if on first-class land, and it will be interesting to note how they will stand.

No further drainage-work on the bush-terrace-land class of country was undertaken. Notes on previous work done show that the shafts put down have given better results than was expected. Although this system cannot be recommended on a large scale, in places where the distance makes draining to low-lying areas expensive work the shafts serve the purpose very satisfactorily. Where these shafts have been filled in they are working as satisfactorily as where left open.

Westport (grassing demonstration): Pastures on this area are good, and are in marked contrast to those surrounding it.

Murchison (beech-bush hill-country): The pasture plots on this country have been fully reported on in the *Journal*. During the year a spring and autumn surface-sowing was carried out with various grasses and clovers to note what will "take" on this type of land under this method of seeding. The spring sowing gave poor results.

#### EXPERIMENTAL FARMS.

Condensed notices of the activities of the Department's larger farm establishments, from reports made by the respective Managers, are printed below.

##### *Ruakura Farm of Instruction, Hamilton: A. W. Green, Farm-manager.*

Good progress can be recorded in all sections of the Ruakura Farm, and it has still further developed as an instructional institution. Farm-schools were held for farmers and teachers, and several instructional classes arranged for students and district-high-school boys. The members of sixteen branches of the Farmers' Union held field-days at the farm. The number of general visitors to the farm—many of them from overseas—is still increasing.

*Training of Returned Soldiers.*—During the year the number of returned soldiers in training was doubled, and now amounts to sixty. This work therefore represents a considerable proportion of the activities of the farm. With very few exceptions the trainees have continued to take a keen and intelligent interest in their subjects, and have entered into the practical work with an earnest desire to make good. The addition to the quarters of sleeping-accommodation for another thirty soldiers and a large lecture-room was completed during the year. These buildings are well constructed, and will prove a valuable permanent addition to the farm. The grounds are being laid out by the horticultural staff, assisted by a number of the soldiers who are taking up horticultural work. In regard to the training courses generally, it has been found that in many cases the four-months period granted is quite insufficient, and in such instances extension of time had to be allowed. Ruakura is reserved for men more or less incapacitated by their war service from the heavier types of agricultural work, and those who have had long periods in hospital cannot always be expected to show much advancement for the first few months, even light work often proving too much for them.

*Crops.*—The general policy in regard to agricultural work has been continued, and the usual crops grown and harvested. Root crops were, on the whole, lighter than those of the previous year owing to a dry autumn, but hay and cereal crops yielded above the average. The Ruakura oat continues to give good results, and the whole of the oat crop consisted of this variety, with the exception of plot experiments. Bobs wheat has repeatedly proved itself to be the most suitable variety for the locality, and this experience was again borne out. Black Skinless barley gave excellent results, and is to be grown more extensively during the coming season for pig-feeding. Rye-corn thrives better than any other cereal on the newly broken-in swamp land. As new areas will be stumped at an early date, seed for the sowing of them has been grown and threshed.

*Pastures.*—Valuable information has been gathered in connection with the establishment of temporary and permanent pastures on swamp lands. It was well demonstrated this year that when once grasses and clovers have been successfully established on this class of land it does not pay to break up the land again for years to come with the object of cropping. The method of first sowing Italian or Western Wolths rye-grass and feeding out hay containing clover and Lotus major seed to stock on these areas has met with further success, and can be recommended as sound practice.

*Live-stock.*—Cattle: As the result of careful breeding and management it was not found necessary to purchase females to add to the dairy herd this year. The young stock coming forward