

FIELDS INSTRUCTION AND EXPERIMENTAL-FARMS BRANCH.

INTRODUCTION BY THE DIRECTOR-GENERAL.

During the year active work has been carried out by the officers engaged in this service. Inquiries have been made with a view to endeavouring to find a thoroughly capable and in every way suitable man to take charge of the branch, but no appointment has yet been feasible. Meanwhile the control and direction of the work has been in the hands of myself, aided to a very large extent by Mr. B. C. Aston, Mr. A. H. Cockayne, and Mr. J. L. Bruce. Mr. Aston has handled the bulk of the correspondence, and in collaboration with myself has exercised such direction as was necessary, while all details of the work to be carried out by the various officers have been dealt with by him, Mr. Cockayne, and myself in conjunction. In the case of the larger experimental farms Mr. Bruce has superintended the whole of the work, being in close collaboration with myself.

C. J. REAKES.

EXPERIMENTAL FARMS.

Ruakura Farm of Instruction, Hamilton.

The Ruakura Farm has still further developed as an instructional centre, and though the expenditure on the place has been very considerable during the year its value from an instructional point of view and from the standpoint of the development of agriculture must be admitted to have been very great. Quite apart from such instructional work, the number of farmers and others who visit the farm for the purpose of obtaining information is still increasing, these including not only people from all parts of the Dominion, but many from outside countries.

An important feature of the work done on this farm is that in connection with returned soldiers, who are given a four-months course of instruction in various farm occupations of a lighter nature, this place being reserved especially for men who through wounds, sickness, or other causes are unfitted for the more laborious types of agricultural work. The quarters provided are always full, and the average number of soldiers on the place is about thirty. As it is, the existing accommodation is quite inadequate for the number of applications received for admittance to the instructional courses, and consequently additional quarters are being erected by the Repatriation Department. Apart from the training of returned soldiers, more and more instructional classes are being held annually for the benefit of farmers, school-teachers, and scholars. During the year members of fifteen branches of the Farmers' Union held field-days at the farm, and the annual teachers' course was carried out. In addition, special days were set aside for visits of inspection by members of various breed societies. A very successful farm school was held in July last, this being attended by upwards of seventy farmers.

As regards the agricultural work, good progress has been made each year, bringing the land into a higher state of cultivation. For the past few years much work has been done in bringing into profitable use land previously consisting of waste sorrel areas, these being converted into good temporary pastures. From now on it will be possible to devote more attention to rotation cropping, also to breaking up some of the older pastures. Good crops of oats, wheat, barley, and rye-corn were harvested during the year, but the hay crops were light owing to the dry spell in early summer. Some of the root crops were exceptionally heavy, the seed of these having been grown on the farm and saved from selected roots only, uniform in shape, sound and vigorous in growth. A comparison with other root crops grown in the same field from purchased seed and given exactly the same treatment as regards cultivation, &c., afforded an excellent object-lesson, the yield in the latter case being much smaller.

The whole of the Department's Milking Shorthorn stock are now located at Ruakura, those previously at Weraroa having been transferred early in the year. The Berkshire pigs are doing well, and by careful selection and heavy culling the Ruakura pig-stock is reaching a high standard, and is coming into demand from prominent breeders throughout the Dominion. During the year a calf-feeding experiment, mainly with a view to ascertaining to what extent milk or whey could be profitably eliminated from the dietary by the substitution of other foods (largely farm-grown), was carried out with successful results.

In the horticultural section of the farm a considerable amount of test work has been done in connection with spraying, pruning, &c. The garden work was carried on successfully, and was greatly appreciated by those returned soldiers on the farm who were specially desirous of receiving instruction in horticulture.

The apiary section is still expanding, and during the year forty-four persons received training, these comprising twenty-nine returned soldiers, six returned nurses, and eight other ladies. Queen-rearing operations were actively carried on during the season, and considerable sales were made of full colonies and nuclei, all headed by choice-bred queens. The whole were supplied to returned soldiers and former learners. Experimental work was continued on various lines. The apiary is also becoming more self-contained every year in the matter of making its own appliances.

In reference to the expenditure, much of this has been in the direction of improvements, one important item being the erection of a new piggery.

A new system of farm accounts and costing has been initiated, and appears to be working satisfactorily.

Mr. A. W. Green, the Farm Manager, has done excellent work throughout, and has been well backed up by the officers associated with him.

Central Development Farm, Weraroa.

Farming operations for the season mainly consisted of comprehensive variety tests of root crops, trials of fodder crops for hay purposes, trials to ascertain the effect of certain economical field crops for weed-smothering, trials of oats and tares for hay to replace the usual grass-hay, variety tests of