

blending purposes. The Graders report that beekeepers are maintaining a high standard of packing and branding. The use of petrol-tins has practically ceased, and little fermented honey was in evidence. During the year the honey-grading regulations were revised and new colour-standards adopted in connection with the different grades of honey. Experimental work is being undertaken in conjunction with the Biology Section in regard to fermentation in honey.

Queen-rearing apiary at Tauranga : Orders for queens were considerably in excess of those received the previous year, the sales being more than doubled. The apiary is being disposed of in conjunction with the closing of the Horticultural Station.

Certificates in beekeeping : Some thirty persons attended the annual course of instruction in beekeeping at the Ruakura farm apiary. Eighteen passed the examination held at the end of the term and gained the Department's certificate of proficiency.

AGRICULTURAL INSTRUCTION AND EXPERIMENTAL FARMS BRANCH.

This branch has remained in my charge, no appointment to the Directorship having yet been made. The active supervision of the Agricultural Instruction Service was carried out by Mr. A. H. Cockayne, while Mr. J. L. Bruce has superintended the larger experimental farms.

AGRICULTURAL INSTRUCTION SERVICE.

The Agricultural Instruction Service, in supplying reliable and practical advice on all phases of the agricultural side of farming, is steadily becoming a potent factor in the adoption of rational methods of farm-management. It is unfortunate that during the year the financial position necessitated an extremely conservative policy with regard to increasing the staff, but it is hoped that in the near future expansion in this respect may be carried out. At the present time certain important districts, such as Hawke's Bay and Poverty Bay, are without the services of a resident Instructor, while all the other districts contain too large a territory to enable the requests of farmers for advice to be adequately satisfied. During the year no fresh appointments were made, and Mr. W. Dibble, who was located in the Auckland District, was retired on superannuation after a lengthy and useful service in the Department. The present staff consists of four Instructors in Agriculture, two Assistant Instructors in Agriculture, and six Fields Instructors. In addition three junior officers are being trained, and are completing their science course at the University.

The work of the Instructors consists both in the giving of sound practical advice based on the accumulated experience of farming practice, and the elucidation of the many local farming problems on which reliable advice can only follow accurate observation and investigation. There are in New Zealand many men on the land whose agricultural knowledge in certain directions is inadequate, and who are in need of advice on many matters that come within the scope of well-established practice. To such men the work of the Instructors is of immediate value. The methods adopted for disseminating instruction are mainly direct correspondence, personal visits, practical demonstrations, and illustrated addresses. During the year very large numbers of letters have been despatched, many hundreds of farms visited, and addresses given in all parts of the country. The requests for addresses have been so many that only a portion could be dealt with. The investigation-work is carried out partly on the Department's farms, partly on the experimental areas under the control of the Instructors, and partly by means of co-operative experiments with farmers themselves. Farmers' field competitions and boys' and girls' agricultural clubs have also been promoted or assisted, notably in the Taranaki and north-west Wellington districts, where both these movements are increasing with great rapidity. Among other miscellaneous work performed by the Agricultural Instruction staff must be mentioned the taking of soil-samples, also assistance in carrying out the provisions of the Fertilizers Act.

In July of last year a very successful farm-school for farmers was held at the Ruakura Farm of Instruction, the entries being so numerous that two courses of a week's duration each had to be conducted. Since the close of the period under review a similar school has been held at the Central Development Farm, Weraroa, with equal success and appreciation by the farming community. The time is now ripe for the establishment by the Department of a permanent institution for training lads to become practical farmers. Ruakura (as have one or two of the other departmental farms in the past) is now providing such facilities on a very limited scale, but what is intended is a specialized establishment with accommodation for a much larger number of trainees. The Ruakura farm is a suitable place for such an institution, and it is hoped to make a start with the project during the present year (1922-23). The gradual reduction in the number of returned-soldier trainees on the farm is making available excellent accommodation for the purpose in question. Details of much of the field investigation and demonstration work are given publicity in the Department's *Journal* by means of articles and reports. It is therefore not necessary to more than briefly mention the more important operations in the several instructorates, as follows :—

Auckland : The gum lands experimental areas at Puwera and Albany have been further developed, and the Puwera operations in particular are giving good results, and are being keenly followed by the local agricultural interests. Co-operative trials were conducted and are in progress at Aria (supplementary forage crops), Cambridge and Te Awamutu (lucerne), Putaruru (roots, pasture, &c.), Pukekohe (top-dressing and seed potatoes), Oranga (paspalum), Te Kumi (top-dressing and liming), and Parakai (top-dressing).

North-west Wellington, Taranaki, Hawke's Bay, and Poverty Bay : A good season's programme of cropping, &c., was carried out at the Marton experimental area. The work of the subsidized demonstration farms at Stratford and Waimate West was supervised as in previous years. In Hawke's Bay co-operative work was carried out at Rawhiti (pasture-establishment), Putorino (top-dressing, &c.), and Takapau (lucerne).