

throughout the Dominion. Instructors are as far as possible supplied with lecture-lanterns, and the addresses are generally illustrated by means of slides. The demand for this class of instruction has increased to such an extent that numerous requests have either been unavoidably refused or many months have to elapse before they can be acceded to. Apart from the lectures, instruction is imparted to the farming community by personal visits, field days on the experimental farms and experimental areas, and also by correspondence. The call for personal visits is very great, and beyond the capacity of the present staff. The problem of rapid means of locomotion for Instructors in Agriculture is a very pressing one. In order to secure the maximum of efficiency each Instructor should be provided with a motor-car, as is customary in all countries where this system of farmer instruction is being carried out.

#### FARM-SCHOOL COURSES.

A rather new feature of the Division's activities is the holding of farm-school courses for farmers at centres throughout the Dominion. These schools are generally of one week's duration and take the form of lectures and demonstrations given by the fields instruction staff, the staff of the Biological Laboratory, and by officers of the other divisions of the Department. I would here like to place on record appreciation of the services of the officers of the Live-stock, Dairy, and Horticulture Divisions at these schools. In every case where assistance has been desired it has always been willingly and cheerfully given. That these schools are getting more and more appreciated is evidenced by the fact that the requests for them are very much on the increase, and by the attendances at the courses. During the year six schools were held, at (1) Ruakura Farm of Instruction, (2) Stratford, (3) Central Development Farm, Weraoia, (4) Ashburton, (5) Dunedin, and (6) Hokitika. In every case both the attendances and the keenness displayed were most gratifying.

#### PERMANENT FARM-SCHOOL FOR YOUTHS, RUAKURA FARM OF INSTRUCTION.

During the year a permanent farm-school for youths was established at the Ruakura Farm of Instruction. The object of the school is not to educate students up to the B.Ag. degree standard, but to turn out young men well versed in practical farming and live-stock management with at the same time a good grounding in the sciences essential in the planning and management of the modern farm. At the present time there are approximately forty students in residence.

#### BOYS' AND GIRLS' AGRICULTURAL CLUBS.

These clubs are now conducted in various centres throughout the country—in Auckland, Taranaki, Wellington-West Coast, Wairarapa, Otago, and the west coast of the South Island. The strongest centre is Taranaki. Here the number of entries in the root-growing competitions reaches four figures, and the work of judging the crops is a heavy drain on the time of the Instructors in this particular part of the Dominion. This is accentuated by the fact that the judging must, of course, be done in the late autumn and early winter, when, in addition to the days being short, the weather is often very broken, thus causing delays and inconvenience. However, the best possible is done. Exhibits of the roots grown in these competitions are made at the local shows, and always cause much complimentary comment.

#### FARMERS' FIELD COMPETITIONS.

Farmers' field competitions in the growing of mangolds, carrots, swedes, soft turnips, lucerne, and maize have developed enormously, especially in the Taranaki and Wellington-West Coast Districts. In the great majority of these competitions the judging is done by the fields instruction staff. The competitions are certainly very much in favour, and the results that accrue are of very great value. Up to a certain point these competitions, especially in the Taranaki and Wellington-West Coast Districts, take the place of co-operative experimental plots. I think it must be agreed that the results are more far-reaching than would be the results of co-operative trials, for the reason that large numbers of farmers visit the different crops at judging-time and see for themselves the results obtained from different cultural methods, different manures, and different seeds. All the information respecting cultural methods, manures and seeds used, &c., is tabulated and made available to those interested.

#### CO-OPERATIVE EXPERIMENTAL PLOTS.

The system of conducting experimental plots, previously undertaken by the Department, has not as yet been carried out very extensively. This system is not altogether satisfactory, owing to the tenure of the ground not always being secure enough, due, of course, mainly to the farms changing hands. As stated in another part of my report, farmers' field competitions have to a large extent replaced these co-operative trials, particularly in regard to the growing of fodder crops, and with regard to that type of co-operative work that may be termed crop demonstration work. Co-operative experimental areas will in the immediate future be planned to secure definite and accurate information mainly on a manurial or variety basis. The system now being adopted was agreed upon at a conference of representatives of this Department, Lincoln Agricultural College, Cawthron Institute, and other institutions dealing with agricultural education. On this system the results can be subjected to statistical examination and the results should be scientifically accurate, a condition that has but rarely been secured in past work in New Zealand. The most conspicuous work carried out during the past year has been with regard to the manuring of wheat and top-dressing of pastures, carried out in conjunction with the Canterbury Soils Improvement Committee. Modern experimental field trials necessitate a vast amount of work, and in consequence, so long as the staff available remains small, only a limited programme can be carried out.