

Wellington, Marlborough, and Nelson : Co-operative trials were conducted at Alfredton (fiorin top-dressing and liming), Pori (liming), Carterton (Nauru phosphate, &c., with wheat), Martinborough (manuring and liming with rape), and Greytown, Carterton, and Karori (lucerne). The Instructor in this district has also supervised development operations at the Wi Tako Prison farm.

Canterbury and North Otago : A comprehensive scheme of work was carried out at the Ashburton experimental farm, in connection with which an advisory committee was set up consisting of representatives of the local High School Board, County Council, Agricultural and Pastoral Association, and Farmers' Union. The lucerne demonstration areas at Templeton, Bankside, Ashburton, and Darfield were continued. Co-operative experiments included tests at Waiau (lucerne), the Waimakariri scrub lands, Oxford (forage crops and grassing), and Mackenzie country (regrassing).

Middle and South Otago and Southland : The main centres of general field experimentation work in the districts are the Gore and Winton experimental areas. A full programme of cropping, ensilage-making, lucerne-culture, &c., was carried out at Gore, while at Winton the main features of the work were pasture establishment and management, and liming. Operations were commenced at the Galloway experimental area, in Central Otago, which establishment will specialize in irrigation practice and cropping. Co-operative tests were conducted at Tisbury and Gorge Road with forage crops for dairying.

West Coast of South Island : The experimental areas at Hokitika (racecourse), Poerua, Rotomanu, Moana, Westport, and Murchison have been continued, operations being mainly connected with problems of permanent pasture for various types of country in the district. Co-operative experiments comprised tests with swedes at Koiterangi, Totara Flat, and Westport ; a pasture top-dressing trial near Kumara ; and the growing of green feed for show stock in conjunction with the Buller Agricultural and Pastoral Association.

EXPERIMENTAL FARMS.

Ruakura Farm of Instruction, Hamilton.—This farm has been maintained at a high all-round level of excellence. During the year the trainees consisted of 101 returned soldiers, eight returned army nurses, fifteen farm learners (youths), and ten other persons. In addition, two farmers' schools of a week's duration were conducted, also various short-course classes for technical and high-school students. The general farm operations were of substantially the same character as in previous recent years. A further area of 38 acres of rough swamp land was reclaimed and brought under the plough. The two breeds of cattle kept—Jerseys and Milking Shorthorns—have been well maintained, and the demand for young stock has been greater than the supply. The Southdown stud flock was increased on the female side ; all available surplus rams were sold at satisfactory prices. The demand for pigs from the Berkshire stud kept fairly steady in spite of the depressed conditions of the market during the period. The annual sale of surplus pedigree cattle and pigs was held with satisfactory results. The apiary and poultry sections were largely availed of by the returned-soldier trainees. An up-to-date and commodious honey-house was erected during the year, greatly adding to the efficiency of the apiary plant. These sections, together with that of horticulture, continue very popular with visitors to the farm, which continues to increase in numbers.

Central Development Farm, Weraroa.—Further general improvements were effected at this farm during the year. Many worn-out pastures have given place to splendid fields of approved grass-mixtures, mostly of a permanent nature. The sowing and management of grasslands in general is receiving special attention. Cereal, root, forage, and hay crops were grown as usual. A study is being made in connection with the tendency of oat crops on this farm to become badly laid. The lucerne stand received various forms of cultivation, with a view to ascertaining the most efficient method of renovation. Top-dressing experiments in connection with meadow-hay production were continued. The Friesian herd has maintained its high standard, and the average butterfat yield is now some 450 lb. on twice-a-day milking. The Red Poll herd has increased considerably, and culling will now be practicable. The average yield during the past year was 330 lb. butterfat. The herd continues to demonstrate the wonderful constitution possessed by this breed. At the annual sale both Friesian and Red Poll bulls realized satisfactory prices. The Berkshire herd of pigs was improved, and experiments were carried out in feeding. The usual flock of crossbred sheep was grazed, the lambing being 125 per cent. A number of farmers' field-days was held at the farm, and visitors generally were numerous. The returned-soldiers training scheme came to a close during the winter as regards Weraroa, and the quarters occupied by these men are now vacant.

Moumahaki Experimental Farm, Waverley.—As mentioned in last year's report, Mr. T. W. Lonsdale, after years of good service, retired from the management of this farm (and from the Department) in May, 1921. The acting-managership was held by Mr. J. Stevenson until November, at which date the supervision of the farm was taken over by Mr. J. W. Deem, who is in charge of the agricultural instruction work in the north-west Wellington and Taranaki districts. Owing to somewhat unsettled conditions only a limited experimental programme was carried out, including variety and manurial tests, trials in the feeding of calves and lambs, lucerne-establishment, and top-dressing of grassland. The Ayrshire herd was maintained, and the Guernsey herd was transferred here from the Weraroa farm. The stud flock of Ryeland sheep was further built up in numbers, and all available rams were disposed of at fair prices. The herd of Berkshire pigs has been given a fresh start with new blood. As usual, a considerable flock of crossbred sheep and a number of beef cattle were grazed on the farm.

GENERAL.

Experimental Farm for West Coast of South Island.—Owing to the financial stringency and the excessive cost that would have been involved in buildings, the development of the property acquired at Waimaunga (Grey Valley) has had to be retarded. Cultural operations are proceeding on a limited scale, however, and when conditions become more favourable further plans of action will be undertaken.