

THE MARTON EXPERIMENTAL PLOTS.

THE following report on operations at the small experimental area near Marton Junction worked by the Department is furnished by Mr. G. de S. Baylis, Fields Supervisor:—

The Marton plots up to the close of 1914 had been chiefly used as propagating and preliminary rough trial plots for various cereals recently introduced into the country. Consignments of a bushel or so were sown and tested, and such varieties as seemed likely to be useful or suitable to any particular district were distributed from the stocks grown, through the channel of the co-operative experiment, to farmers in various parts of the country. In this way Federation, John Brown, Jonathan, Taragon, and Yandilla King wheats, all of which varieties are now well known in certain districts of the North Island, were originally introduced to this country.

Numerous other varieties of wheats from Australia, such as Comeback, Bobs, and Powers Fife, were also tested, as well as Canadian Fifes, both red and white varieties, Imperial Amber, and Turkey Red, all being varieties imported from Canada; Grenadier and Pearl wheats imported from Sweden; and numerous other cereals from England and elsewhere. Among Swedish importations, the White Ligowo oat—now thoroughly well established in the Wairarapa, where it has given excellent results—also Hannchen barley, have been markedly successful in certain districts, and, like the wheats, were first grown in this country at the Marton plots, from whence seed was distributed to farmers.

The soil immediately around Marton Junction is of poor quality and of shallow depth, being immediately imposed upon a stiff yellow clay. The position is exposed and very wind-swept. This fact, together with the lack of drainage, renders the period of growth a very short one on account of the low soil-temperature, since the spring growth starts late, and droughty conditions usually make their appearance on the advent of summer. On such a soil and under such conditions it is normally only possible to successfully grow such crops as wheat, oats, &c., which make much of their growth in late autumn and early spring, and complete their growth before hot summer weather and droughty conditions set in.

In order to correct the natural errors in this soil, and thereby to render it fitted for the production of satisfactory crops other than cereals, it appeared to be necessary to drain the land thoroughly, to lime it to correct acidity, to improve its texture, and to plough in green material to increase the humus-content and increase the porosity of the surface soil itself. By such means it was intended to render the soil sweeter, better drained, warmer, sooner workable after rain, less subject to drought, and consequently give it possession of a longer growing season, which would alone result in enabling it to grow satisfactory crops of many kinds which make their maximum growth