

SEED - POTATOES.

EXPERIMENT AT WERAROA REGARDING SIZE, ETC.

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THE object of this experiment was to obtain data as to the most profitable and economical size of cut or whole potato for seed purposes, and at the same time to test the best depth at which to plant the seed as a preventive against blight. Particulars of the variations of seed used will be found in the table on next page.

A level piece of land of even quality throughout, with a good average depth of soil, was selected for the experiment. The soil in question is rather heavy alluvial, with a porous subsoil. It had been laid down in grass from 1912 to 1918, and continually used as a night paddock for draught horses. Prior to 1912 it was heavy bush land.

On 1st August, 1918, the land was ploughed with a three-furrow plough drawn by an oil-tractor, at a depth of 6 in., turning a 12 in. furrow. On 30th August the land was disked twice. On 5th September it was again ploughed, a double-furrow plough being used, at a depth of 8 in., turning a 10 in. furrow. The soil was then given a thorough cultivation and brought to a loose and friable condition. A few loose tufts of grass were showing, indicating that not sufficient time had elapsed to permit of them rotting before the second ploughing. On 12th September the land was moulded up in ridges with a double mouldboard plough, at a depth of 8 in.

The potatoes were planted on 13th September. The seed chosen was the Up-to-Date variety, procured from the Ashburton district. To all appearances the tubers were healthy and sound, but on being cut some were found with signs of disease. The manure used was superphosphate, 5 lb. 7 oz. being applied to each drill, equalling 1 cwt. 3 qr. 27 lb. to the acre. The drills were 6 chains 28 ft. in length and 2 ft. 6 in. between rows. The sets were graded and planted as follows: 339 sets in each drill, planted 14½ in. apart, and covered with soil to an average depth of 8 in. The weather conditions at time of planting were perfect, and the land was in good order.

During December, when inspecting the different rows of potatoes, it was specially noticed that there was little difference in the growth of each row. As regards blight, although the haulms seemed badly affected during part of the growing-period, the tubers were comparatively free from disease. In my opinion, the unusual depth at which the potatoes were planted prevented the disease from spreading to the tubers. The crop was sprayed with bordeaux on 6th December.

The potatoes were lifted with a potato digger on 23rd April. The proportion of table and seed sizes yielded were two and one respectively.