

## ROOT CROPS AT RUAKURA.

WITH the absence of sufficient moisture the root crops at Ruakura Farm of Instruction are not bulbing as well as they otherwise would have done, but on the whole are very creditable. In the mangel crop the subsoiled portion of the field is giving better results than either the late or early ploughing at the ordinary depth of 7 in. In the swede manurial experiments the plots manured with a double dressing of basic slag and kainit carry at the present time the heaviest crops of roots, and present a great contrast to the plots receiving half the quantity of the same mixture. The plots dressed with basic superphosphate and sulphur, superphosphate and bones, guano and sulphur, and basic superphosphate and basic slag stand well to the front, the last named being the most even and healthy plot in the whole paddock. The no-manure plot can be classed only as an absolute failure; the crop will not be sufficient to pay for even a half of the cultivation. Plots dressed with phosphates and potash alone are better than those dressed with nitrate of soda in addition at an increased cost of 11s. per acre. Cross-dressings of lime have as yet shown little result. This field is of great interest to the numerous visitors.

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## SULPHATE OF IRON.

ON the 6th October last a quarter of an acre on the face of the Big Hill pasture at Ruakura Farm of Instruction was top-dressed with sulphate of iron at the rate of 1 cwt. per acre. As far as the eye can judge, the dressing has been beneficial, and at the present moment the plot is a brighter green than any other portion of the paddock. The growth of clover has been stimulated, and moss, which is prevalent on adjoining portions of the paddock, has to some extent been eradicated. On the other hand, sulphate of iron applied alone (with the seed) to a plot sown with rape-seed at the same rate per acre as above caused an entire failure of germination.

As the amount of sulphate of iron required by plants is exceedingly small, it is difficult to account for the beneficial results obtained in the pasture land, unless that it may be of benefit as a fungicide. A portion of No. 4 paddock (also pasture) was top-dressed on 25th February last, and this will be carefully watched.