

PERSISTENCY REWARDED.

HOW LUCERNE WAS ESTABLISHED ON AN UNPROMISING MEDIUM.

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THE land upon which this experiment was carried out is a light loam about 8 in. to 10 in. deep, upon a medium heavy subsoil—the property of Mr. B. Morris, Rangokokako—typical of the soil found upon the lower slopes of the hills in the district.

The land was ploughed and well cultivated, which fact was testified to by the freedom from weeds of the crop grown. Lucerne was drilled in on the 27th November, 1910, with 2 cwt. of slag to the acre, in 7 in. drills. On the 23rd February this was cut for hay. Subsequently the crop made little or no growth, and on portions of the area, where perhaps conditions were less favourable, it started to disappear.

Upon examination no nodules were discovered upon the roots, neither had the roots penetrated to the depth they should have done in the particular soil. Later on the crop which had made a good stand, became very patchy, irregular, and sickly. The opinion formed upon examination was that the roots had found the subsoil too raw and too poor in available plant-food. The crop had proved a failure, and consequently it was decided to plough it in.

Mr. Morris, however, prefers to farm his land rather than permit it to farm itself. The land had clearly proved itself incapable of growing lucerne. He adopted, therefore, a suggestion made to him to endeavour to make the land suitable for lucerne. In 1911 he put half the area into carrots, after liming it at the rate of 6 cwt. per half-acre, and using 158 lb. per half-acre of super, blood and bone, potash, and gypsum with the crop. The other half-acre was sown in swedes, 6 cwt. of lime being applied, 85 lb. of a mixture of super, bonemeal, potash, and gypsum being sown with the seed. The carrots yielded a very fair crop, but the swedes proved a failure, owing to the fly.

According to the scheme, the land was to be ploughed to a good depth about October. Previous to ploughing, 2 cwt. slag and 1 cwt.