

summer, gives a good winter growth—although it may become somewhat dry during the summer months—it is well watered with lakes, and is easy to road.

Cultivation is easy and excellent root crops can be grown. Rape can be grown successfully, and a large area of the country gives one the impression that it would be excellent sheep country, especially for fat-lamb raising.

#### ACKNOWLEDGMENTS.

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#### REFERENCES.

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## COBALT-FEEDING EXPERIMENT AT AROHENA.

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IN the latter part of 1936 an attempt was made to get representative farmers on the different volcanic showers of the centre of the North Island where bush sickness exists to carry out drenching trials with cobalt. This was considered necessary in order to find out whether there was a response to cobalt in the North Island similar to that found by workers of Cawthron Institute in the South Island at Glenhope.

Farmers in all areas where bush sickness was known to exist in cattle or sheep had become accustomed to feeding out limonite-salt licks, and on this account were rather loath to undertake the additional work which a drenching experiment would entail. An experiment became possible in two areas, however, the one the Government farm at Mamaku and the other the property owned by Mr. A. R. Weal, Arohena. Mamaku experiments are not yet sufficiently advanced to report. These two farms represented two different volcanic showers, that at Arohena being on the large Taupo shower. Mr. Weal, who had had considerable trouble with bush sickness in his sheep in the past, very kindly offered to place ewes with lambs at the disposal of the Department of Agriculture and to carry out the necessary drenching of the sheep and lambs.

Four groups were decided upon:—

- (1) Four ewes to be dosed twice weekly with 3.5 c.c. of a solution of cobalt sulphate at the rate of 1 mg. of the cobalt salt per day; four lambs to receive 3.5 c.c. of the same solution once a week.
- (2) Four ewes to be drenched with a solution of similar strength weekly, in doses of 7 c.c.; four lambs to receive 3.5 c.c. once weekly.
- (3) Four ewes to be dosed once a month with 30 c.c. of the stock solution, while four lambs received 15 c.c. once a month.
- (4) Nine ewes and nine lambs to be left as controls.