

Analyses of soil-samples have been made of the soils where the trials are being carried out at Waihi. The following table shows the results of the analyses, type of soil, and the potash response obtained for each experiment:—

Experiment.	Percentage present of Available Potash.	Potash Response.	Soil Type.
16/1/299	0·018	Good ..	Sandy loam.
300	0·025	.. ..	..
301	0·098	.. ..	..
302	0·037	Very good ..	..
304	0·029	Good ..	..
306	0·018	.. ..	..
303	0·053	Nil	Alluvial loam.
305	0·047	.. ..	..
307	0·140	Slight ..	Peat over alluvial loam.

That there is no correlation between response to potash in the field to the potash content of the soil is quite apparent from a study of the above table. Soils from experiments 16/1/301 and 16/1/307 are extraordinarily high in available potash and yet show a response to potash. Analyses were taken from the top three inches of the soil. The only conclusion that can be assumed is that soil analysis is as yet a very poor guide to the need for potash applications to the soil.

(To be continued.)

BROWN-HEART OF SWEDES.

DRY-MATTER AND SUGAR CONTENT OF AFFECTED ROOTS.

FIELDS DIVISION.

FROM some of the trials carried out with borax on the control of brown-heart in swedes, details of which were published in this *Journal* (August, 1936), at the suggestion of Mr. J. C. Neill swedes showing brown-heart infection and sound swedes were forwarded to the Dominion Analyst for examination.

The following notes are extracted from the Dominion Analyst's report on the samples submitted:—

“The swedes were sampled by cutting a section longitudinally from each root, the whole section being then pulped by passing through a mincer, and weighed portions of the pulp used for the estimation of the moisture and sugar contents. Sugars were determined chemically, the polarimetric method being unsuitable owing to the presence of reducing-sugars. The figures given for sugar in the tables of results represent the total reducing-sugars after inversion calculated as sucrose. Moisture was determined by drying to constant weight at 70° C. in an electric oven, but in some cases by the Starke and Deare process. The results show consistently that, when compared with sound swedes of the same variety, those affected with mottled-heart contain an appreciably lower percentage of sugar in all cases.”