

Work on soil quick tests is also on hand. Laboratory techniques are being speeded up to reduce the time factor.

Advisory Analytical Services

As in previous years, about 1,000 samples were received by the laboratory during the year, and, although some delay has occurred due to the removal from Wellington to Hamilton, the analyses, apart from soil samples, are well up to date.

Soils.—A large number of samples taken at the Station are now being analysed completely so that a clear picture of the fertility of the experimental area can be formed.

The correlation between observational trials and soil analysis is to be checked by analysis of samples from selected trials from each area. The samples are stored and analysis will proceed as soon as time permits.

The movement of salt in the Ahuriri Lagoon area is being kept under observation and 41 samples were examined during the year. Advice has been given on 33 soils tested for lime requirement.

Fertilizers.—Out of 22 official samples received, 3 failed to conform with the analysis stated on the invoice certificate supplied.

In order that field trials may start on as sound a basis as possible, it has been decided to analyse samples of all fertilizers used. The value of the procedure is demonstrated in the case of serpentine-superphosphates, which are sometimes not correctly made and are therefore useless for trial purposes. Also, in the transfer of materials from one control to another, confusion can arise as to the nature of a fertilizer. Potash salts and nitrogenous fertilizers have been sent in completely mislabelled.

A small number of samples of fused phosphatic fertilizer were analysed in connection with research into producing a satisfactory product.

Limestones.—A large number of commercial ground limestones as well as samples of rock were received during the year. It is desirable that more use be made of lime-testers where these sets are available and that some of the samples tested be sent for check analysis by standard laboratory methods. In general, more frequent testing of commercial limestone is desirable to ensure that a satisfactory product is being marketed, since the quality of rock quarried can be very varied.

As in the case of fertilizers, liming-materials used in field trials are being examined.

Two samples of burnt lime were analysed and found to contain about 20 per cent. of active burnt lime together with about 60 per cent. of carbonate. This is in accord with the generally poor quality of burnt lime sold for agricultural purposes.

Pastures.—Dry-matter determinations on samples from experimental areas were done on 469 samples. Some of these will be analysed for mineral content when opportunity offers.

Weedicides.—The strength of 7 commercial weedicides was determined for the purposes of the weed-eradication experiments. With the introduction of new hormonal types of weedicides under varied trade names, experimental work will be necessary to determine the nature of commercial products and to check the strength of sprays used.

Miscellaneous samples included 6 samples of volcanic ash from the district round Ruapehu. The ash was deposited over a considerable area, but it was found to be relatively insoluble, containing nothing toxic to plant growth.

Summary of Samples :—

Soils	357
Fertilizers	99
Limestones	124
Pastures	469
Miscellaneous	40

Total	1,089
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