

CAWTHRON INSTITUTE, NELSON

Trees treated with magnesium compounds are still showing to advantage over trees not so treated.

A considerable amount of detailed information has now been accumulated on the plant-food status of the permanent manurial block at the Appleby Research Orchard and Dougherty leaves and apples at the Annesbrook Orchard. This is being prepared for publication and release to the fruit industry.

The value of nitrogen and phosphate in maintaining growth of raspberry-canes and increasing yield of fruit has been clearly shown.

Cox's Orange trees in the Tasman-Mariri area are being increasingly affected by a disease known locally as "collar-rot." Initial investigations have been concerned with the identification of the disease organisms involved.

Additional studies have been undertaken on (i) zinc and minor-element deficiencies, (ii) chlorosis of Delicious trees, and (iii) raspberry and Cape gooseberry diseases.

MISCELLANEOUS

The Plant Chemistry Laboratory has examined the packaging of dehydrated apples and has found that a moisture-vapour-proof cellophane overwrap is an important factor in preventing the loss of sulphur dioxide from the product.

The Chemical Engineering Section of the Dominion Laboratory is engaged on the design of equipment for the mechanical filling of dried apple slices into cartons.

HOPS RESEARCH

During the year representatives of the Hop Marketing Committee and the Brewers' Association of New Zealand (Inc.) approached the Department with a request for the establishment of a research organization. Hop crops were being seriously threatened with disease, and other specialized problems needed attention.

A Hop Research Committee has been formed with representatives from the above two initiating bodies, together with the Department and Council of Scientific and Industrial Research, Department of Agriculture, and Cawthron Institute.

Land is being sought to establish a Hop Research Station, and a Director has been appointed. The latter has now proceeded to United Kingdom to gain specialized experience.

Preliminary surveys have confirmed that root-rot disease is a major immediate problem, and a programme of research commenced.

An officer of the Dominion Laboratory (Chemical Engineering Section) made an initial survey of hop-kilns in New Zealand, and a visit was made to Tasmania to study hop-curing practice. Indications are that considerable improvement should be possible in the efficiency of current drying methods.

The research programme also envisages work on improvement of varieties, cultural methods, manurial practice, and soil surveys.

INDUSTRIAL PSYCHOLOGY DIVISION

RESEARCH

The report, "Girl Workers in New Zealand Factories," has been published and favourably received both locally and overseas.

A survey of the present trend towards decentralization in New Zealand industry has been commenced.

The use of psychological techniques for the selection of personnel in some of the skilled ground-staff trades of the R.N.Z.A.F. has been investigated. Analysis showed a very high degree of validity for the technique employed.