

prepared for publication. A comparative study of the digestion of shark livers, with water and with dilute alkali respectively, showed that dilute alkali yields more oil with higher vitamin A potency without adversely affecting the rate of deterioration of vitamin A in storage.

In accordance with a request from the Marine Department, the German "Eiweiss" process of making an albumen substitute was tested, and it was found feasible to convert shark flesh into a satisfying product as judged by baking tests.

MISCELLANEOUS

Of considerable theoretical interest is the work on the depot fats of the horse. In contrast to depot fats of sheep and cattle, horse fat contains considerable proportions (*ca.* 20 per cent.) of octadecadienoic and linolenic acids, which are major components of pasture glycerides. A paper on this subject is being prepared.

Technical advice has been given on various matters relating to oil and fat technology.

Early this year the Director went to Australia to accompany a British Mission which had been sent to study the beef industry.

FRUIT RESEARCH STATION

Director: Mr. J. D. ATKINSON

A new branch, known as the Fruit Research Station, was formed in October to take over from the Plant Diseases Division the investigation of fruit problems other than those of disease. Investigations formerly controlled by the Fruit Research Officer have also been transferred to the new organization. Fruit Research has temporary headquarters with the Plant Diseases Division in Auckland, and outlying research orchards at Oratia (Auckland), Havelock North (Hawkes Bay), Appleby (Nelson), and Earnsclough (Otago). A block of 24 acres under grass has been purchased in Havelock North for development as future headquarters.

Fruit storage investigations, carried out for some years in Wellington, have been drastically reduced, because a further attempt to make the semi-commercial store gas-tight was unsuccessful. Additional modifications are not practicable as the main framework of the store has decayed.

New buildings and equipment obtained for the outlying orchards have considerably improved facilities for field experiments. Development work has proceeded rapidly at Earnsclough, and trees available are now carrying a full programme of experiments.

POMOLOGY

A new series of woolly-aphis-resistant rootstocks, from dwarf to very vigorous, has been received from East Malling, England. New trials of rootstocks for peaches and Japanese plums were planted at Oratia, and trials of stocks for apricots and English plums were set out at Earnsclough.

After extended trial, six new apple varieties of English origin have been released to the New Zealand Fruitgrowers' Federation for commercial trial. Five peach varieties, selected from sixty introduced from Australia in 1940, have also been released.

A preliminary trial of commercial hormones for preventing pre-harvest drop in apples demonstrated significant differences in efficacy. Foliage was damaged by any preparation containing 2, 4-D. An officer has been appointed to investigate hormone effects on fruit, with the ultimate objective of extending the certification scheme to cover these substances.