

In connection with studies relating to butter, the aim has been directed towards providing the British customer with an article fuller in flavour than that which has previously been despatched. The trials made in regard to the incorporation of a fuller flavour to butter, and the successful transport of this class of butter to the British markets, have promised well, and would appear to indicate that persistence in this type of work is amply warranted. The trials that have been made with butter so far have also been concerned with the question of the spreadability, and a stage has now been reached when the physical texture of New Zealand butter, as delivered in Great Britain, has been shown to be possible of considerable improvement.

In connection with both cheese and butter investigations the greatest emphasis during the year has been laid upon endeavours to improve the quality of raw milk as delivered by suppliers. The great importance of pure milk-supplies has been amply shown, and measures have been taken with a view to advising methods whereby the average quality of milk and cream received may be raised to higher standards.

GEOPHYSICAL PROSPECTING.

It is becoming increasingly evident that geophysical methods of prospecting could usefully be employed in connection with further developments of the mineral and oil resources of the Dominion. The position is being closely watched, and as much information as possible is being collected from abroad with a view to facilitating the prosecution of a geophysical survey of promising localities.

STANDARDIZATION.

Mr. C. B. Le Maistre, of the British Standards Institute, visited New Zealand in February of this year, and at the various centres discussed the question of standardization with the local interests.

Before Mr. Le Maistre's departure a meeting was called in Wellington representative of the various bodies concerned in standardization, and at this meeting it was decided that a New Zealand Standards Institute should be set up, with an independent status. It was further decided that the Development of Industries Committee of this Department should undertake the preliminary organization of the local Standards Institute.

FRUIT RESEARCH.

The programme of fruit research affords a good example of co-ordinated effort on the part of several organizations—viz., the Plant Research Station, Cawthron Institute, Horticulture Division, and the Cambridge Low Temperature Research Station. This co-ordination of effort has enabled a wide sphere of activity to be covered and fruit research to proceed on regular lines. The research orchard at Nelson is now being fully utilized for a comprehensive series of manurial and spraying trials, while detailed information regarding the yields of each tree is being accumulated in order that the basis of all future experimental work may be sound. Marked advances have been made in the knowledge of fruit-tree sprays during the year, and this is of such a nature that it can be used in the direction of improved orchard practices almost immediately. Rootstock investigations and manurial trials have been inaugurated which will provide ultimately long-range results which will yield important fundamental knowledge to the fruit industry. Steady progress has been made in the study of the more serious insect and fungous pests affecting orchardists. An extensive series of transport and cold-storage trials have been maintained, so that it has been possible to trace the effect of the many influences which play a part in the causation of fruit-wastage. The attention devoted in the past to problems of fruit cold storage and transport has been in large measure responsible for the high standard of quality in which it is now placed on overseas markets.

MISCELLANEOUS.

The amount of miscellaneous investigations conducted by the Department has shown an appreciable increase, and would indicate that trade and industry are paying greater attention to the need for scientific guidance in all their activities. The range of requests received during the year has widened considerably, and has claimed the closest attention from officers of the Department. The qualifications of officers of the Department cover such a wide range that it is possible to render, by means of the measure of co-ordination which can be developed readily, services of a most diversified kind in connection with scientific problems affecting trade and industry.