

COLD STORAGE FOR EXPORT FRUIT AND FOR LOCAL MARKETED FRUIT.

The need for improved facilities in Wellington and in some other centres for the preshipment storage of our export fruit, and for the proper cold storage of fruit for the local markets, has been a matter of some concern to the Committee throughout the year. It has endeavoured from time to time, by correspondence and representative discussion, to keep closely in touch with some of the other parties who are directly interested, but, unfortunately, the solution of this important and difficult problem is still in the preliminary stage.

Those who are familiar with the existing conditions appreciate the need for adequate cold storage for fruit which has to be held in Wellington, or elsewhere, while awaiting shipment, and they also realize that if an appropriate modern cool store were provided the locally-stored export fruit would be in better condition when offered in the markets overseas.

At the same time, and in this regard, it is felt that the fruitgrowers in general may not be aware of the efforts of recent years which have been made in their interests, and perhaps they themselves do not yet fully apprehend the need for the early erection of an efficient cool store on the waterfront at Wellington. The condition in which export fruit opens up on arrival in Great Britain is dependent in large measure on the promptness with which it is brought down to correct storage temperature after picking. This entails emphasis on three phases of the export organization—

- (1) Fruit must be handled expeditiously at the orchard and delivered to the inspection and assembly point in the minimum of time from picking.
- (2) Fruit must be given a quick passage through the inspection and assembly point and delivered with the minimum delay to a cool store.
- (3) There must be an efficient large-capacity store available, at a suitable point in the central and in the southern portions of the Dominion, capable of bringing the fruit rapidly down to the correct temperature of carriage.

INFLUENCE OF OILED WRAPS ON APPLES.

To test the influence of oiled wraps compared with plain wraps on the keeping-quality of apples and with a view to determining whether the former were likely to be of economic benefit to the exporter, a trial of eight cases of each of eleven varieties of apples (88 cases in all), was undertaken. All the fruit was grown in the Nelson Province, and the different varieties came from different orchards. The results indicate that, except for the control of superficial scald in susceptible varieties (Granny Smith and Rome Beauty in this series), the use of oiled wraps did not beneficially influence the keeping-quality or the general appearance of the other nine varieties in this experiment—viz., Cox's Orange Pippin, Jonathan, Dunn's Favourite, Lord Wolseley, Ballarat, Statesman, Sturmer Pippin, Delicious, and Dougherty. Their universal use therefore would appear to be more a matter of choice than otherwise.

THE CONTROL OF SUPERFICIAL SCALD ON GRANNY SMITH APPLES.

Experiments on the storage of Granny Smith apples with a view to effecting some improvement in the out-turn from the commercial stores were begun locally in 1934 and have been extended each season since then, but are still incomplete.

The experiments on this variety of apple, undertaken in Auckland during the past season (1937), confirm the conclusions of earlier trials—viz., locality of the orchard is a significant factor, the less mature fruit develops scald earlier than the more mature, and oiled wraps have a controlling effect. In addition, this year's trials indicate that the fruit which was cooled almost immediately after picking was more discoloured than that whose storage was purposely delayed.

USE OF COPPER-SULPHATE-TREATED WRAPS IN THE CONTROL OF THE SPREAD OF GREY MOULD (BOTRYTIS ROTS) IN WINTER COLE PEARS.

All this fruit (fifty-four cases in all) was stored in Wellington at 30° F. to 32° F. within four days of picking, and came from Canterbury, Nelson, and Motueka districts. Half of each lot of the pears was wrapped in plain wraps and the other half in copper-sulphate-treated wraps, while both corrugated all-round linings, and smooth-surface-paper linings with shredded paper at top and bottom, were used in the respective cases.

Much of the fruit which lay in contact with the corrugated wrappers was badly stained, while the plain lining-paper by comparison did not have the same effect.

Very little grey mould was observed in either the plain or the copper-sulphate-wrapped lots—only one pear in the latter and a maximum of 3 per cent. for one lot of three cases for the fruit which was in plain wraps.

From the standpoint of control of grey mould the experiment was not conclusive, and this work is being extended during the current season (1938).

The pears held their condition throughout the period of trial, which terminated on the 6th September, and the fruit was marketed at very satisfactory prices.

RELATION OF NUTRITION TO COLD-STORAGE QUALITY OF APPLES FROM THE RESEARCH ORCHARD, APPLEBY.

(a) *Cox's Orange*.—After two months' storage, fruit from trees which received nitrogenous manure (ammonium sulphate) developed a high percentage of internal breakdown in comparison with fruit from untreated or phosphate-potash trees. The use of potash and phosphate additional