

FRUIT COLD STORAGE.

Fruit Cold Storage Committee.—Messrs. W. K. Dallas (Chairman), H. G. Apsey, W. Benzies, F. R. Callaghan, J. T. Cross, F. W. Grainger, J. L. Mandeno, A. Powell, Sir Theodore Rigg, A. M. Robertson, H. E. Stephens, L. W. Tiller, and H. C. Heays (Secretary); the late Mr. J. A. Campbell acted as Chairman of this Committee up to the time of his death in October, 1938.

The Committee desires again to acknowledge the invaluable service rendered by officers of the Department of Scientific and Industrial Research in England and by the staff of the New Zealand Government Offices in London. It wishes to record appreciation of the assistance given by the administrative and other officers of overseas and local shipping companies, the New Zealand Fruit Export Control Board, the Fruitgrowers' Federation, the Wellington Harbour Board, the managing directors of certain commercial cool stores, and, also, the helpful co-operation of the Horticulture Division of the Department of Agriculture, the Primary Products Marketing Department, and other Government Departments.

INFORMATION FROM ABROAD.

During the year up-to-date information relating to fruit and vegetable production, transport, storage, preservation, and research was made available to the Committee and proved of much interest to individual members.

EXPERIMENTAL COOL STORE.

The refrigerated gas-store which was specially constructed and equipped in 1937 for research work on a small scale has been continuously loaded to full capacity. Within the limits of space it has given every satisfaction, while the experience gained and the results already obtained indicate beyond question that more extensive work of this nature and also other experimental cold-storage research on New Zealand fruit should be undertaken so soon as may be possible.

EXPERIMENTAL CONSIGNMENTS TO ENGLAND.

No special experimental or demonstration consignment of fruit to England was made in the 1938 season, but, by arrangement with the respective shipping companies, thermographs are to be used to record the temperatures at selected stations in the hold of each of two vessels, one carrying a commercial consignment of pears to London and the other a shipment of apples; both lots of fruit are being picked later in the 1939 season.

COLD STORAGE FOR EXPORT FRUIT.

In the report for 1937-38 reference was made to the provision of improved facilities for the pre-cooling and storage of export fruit in Wellington and other main terminal ports. Negotiations along these lines have been continued during the whole year, and the Committee is hopeful that adequate provision of storage facilities for all export perishable foodstuffs will be made in the near future and that in the complete scheme provision will also be made for research facilities such as will help to maintain and improve the quality of these exports.

STAINING OF PEARS BY THE WRAPPING-PADS.

Pears of the Winter Cole and Winter Nelis varieties were specially packed for experimental purposes in bushel cases with all-round protective pads of four different kinds, and upon examination after a relatively short storage period showed that much of the fruit in contact with the wrappers was stained by ordinary corrugated pads in which sodium silicate is used as the adhesive, but not by pads treated with dextrin, nor by contact with either plain white lining-paper or shredded white paper. The effect of the plain cardboard pad remained uncertain.

USE OF COPPER-TREATED WRAPS IN THE CONTROL OF THE SPREAD OF GREY MOULD IN WINTER COLE PEARS.

The experimental work on copper-treated wraps for Winter Cole pears, which was described in last year's report, was extended by the special storage and examination of eight cases at Hastings. The fruit was picked and packed on the 12th March, 1938, was placed into a local cool store the following day, and was first examined after fourteen weeks' storage, and again after eighteen and twenty-two weeks. As was the case the previous year with similar pears from the Canterbury, Nelson, and Motueka districts, there was no development of grey mould (*Botrytis* sp.) in these Winter Cole pears, and so the experiment was terminated and the fruit sold.

Another small-scale test was independently carried out by the Fruit Research Officer as a check upon the previous experiences with Winter Cole pears in "copperized" wraps for the control of contact-spread of grey-mould fungus, and in this case equal opportunity for infection in all the test fruit was ensured by placing it adjacent to fruit artificially inoculated with an active culture of the fungus. Over a storage period of approximately seven months it was found that the control fruit in untreated paper became completely infected, while the treated paper (a standard commercially prepared sample) reduced the amount of contact-spread of the mould to a low figure.