

Precast Concrete Floor Units.—During 1944 and 1945 three types of precast concrete-floor construction have been subjected to a laboratory loading test, and all three methods of construction complied with the strength requirements as laid down by the New Zealand Standards Institute Code for domestic buildings. The results of these tests have been compiled into a report for publication.

Testing Properties of New Building Materials.—In collaboration with the School of Engineering, a number of commercial products such as precast building blocks, slabs, &c., were tested. The results of these tests were required ultimately for the information of the Departments of Housing Construction and Public Works.

Information supplied to Industries manufacturing Building Materials.—Technical literature and references on manufacturing processes and techniques have been supplied to a number of manufacturers engaged on producing a variety of precast concrete blocks and other items for domestic building.

Acoustic Testing of State Houses and Flats.—Tests were made on the sound insulation properties of various methods of construction used by the Housing Construction Department. The results of these tests indicate that in certain cases the sound insulation properties do not comply with those as recommended by the Department of Scientific and Industrial Research Building Research Establishment, England. A study has been made of these results with a view to making recommendations for improvements.

The equipment used for this testing required to be designed especially for the purpose and was readily adaptable for the testing of many types of building construction.

DAIRY RESEARCH INSTITUTE (N.Z.)

Dairy Research Management Committee.—Mr. A. Linton (Chairman); Sir Theodore Rigg; Messrs. T. C. Brash, R. A. Candy, G. A. Duncan, H. E. Johnson, A. J. Murdoch, W. Linton, W. E. Scott, G. M. Valentine; Dr. E. Marsden (Secretary); Professor W. Riddet (Director).

The Committee met at approximately two-monthly intervals during the year to review work in progress and projected. At each meeting the officers in charge of Departments discussed their work with members.

Particular attention has been devoted not only to problems experienced by the dairy industry, but also to problems that may arise from post-war conditions. In the prosecution of this, the Institute has had the ready co-operation of the Dairy Division of the Department of Agriculture, and it is especially indebted to the Division's Grading Officers at Wellington and Auckland for giving detailed opinions on the quality of both fresh and stored produce. It is also greatly indebted to the Division's United Kingdom officers for detailed reports on cheese exported.

A brief account is given herewith of projects undertaken during the year. A summary is also given of papers published during the year that relate to work completed in previous years and that could not be published earlier because of war conditions:

Land-cress Taint in Cream and Butter.—It has been confirmed that cream from cows that have consumed land-cress, if added in the raw state to pasteurized cream, does not cause land-cress taint in this butter. This is, however, more of theoretical than of practical interest, since the addition of raw cream to pasteurized cream for buttermaking is not legal, as it defeats one of the main principles of pasteurization—viz., the destruction of pathogenic organisms in the cream—and it lowers the keeping-quality of the butter. Reports from a commercial factory that "cressy" cream can be treated at 180° F. in two vacuators in succession (instead of the more usual single treatment at 200° F.) without bringing up the cress taint have been checked by laboratory scale experiments, and by buttermaking trials at the Institute factory. The reports of the commercial factory have been confirmed, but it has been found that there is a critical temperature range at 170–185° F., and the actual effect of heating is dependent both on the time and the temperature of heating of the cream. An investigation is being made of the effect of the treatment of cream, at lower pasteurization temperatures, on the efficiency of pasteurization, and on the keeping-quality of the butter.