

designed to extract vitamin-rich flour from certain pollard streams so as to improve the nutritive value of flour. Acting on the Institute's advice, millers have used it to extract practically all the flour that usually goes into pollard. Other means to this end were also used, but many millers found that they could not reach the desired extraction rate without the detacher, especially since they could not get additional machinery of the usual kind.

Production of the machines was arranged by the Institute, on behalf of the Flourmillers' Society and with the help of the Defence Development Section of the Department in Christchurch. Within a few months almost all mills had the machines installed.

Analyses showed vitamin content of the flour was considerably increased. The rise in vitamin B<sub>1</sub> from 1.8 to 3.1 p.p.m. is considered by the Nutrition Research Department to have given the average consumer the full requirement.

The increase in extraction left little margin in the baking-quality of the flour, and millers made full use of the testing service of the Institute. The wisdom of this became the more apparent when, in February, it showed that imported wheat was giving inferior flour at 80 per cent. extraction. In consequence, it was possible to warn bakers of the need for special care and to issue advice to them.

A close collaboration was maintained with the Wheat and Flour Controller in order to assist him in distributing the flours to best advantage.

*Chemical and Research Work.*—In addition to routine chemical examination of the 80 per cent. flour, the chemical staff began a study of the factors which lead to its darker crumb.

#### EXTENSION WORK

*Short Courses for Servicemen.*—The first of a series of refresher courses in baking for returned servicemen was held in September. These courses were arranged in conjunction with the Rehabilitation Department, which gives the men an allowance and travelling-expenses.

*Wheat Review.*—The Institute has published this illustrated eighty-page booklet containing articles on many aspects of the wheat industry and of the work of the Wheat Research Institute.

#### VISITS OVERSEAS

The Chief Executive Officer attended an inter-State conference of Australian cereal-breeders and geneticists held at Roseworthy College, South Australia, in August.

At the request of the bread-manufacturers of New South Wales, the Chief Chemist spent the month of March in Australia to consult with Dr. D. W. Kent-Jones, the eminent English cereal chemist, who had been brought to Australia by the New South Wales bakers.

### CAWTHRON INSTITUTE

Director: SIR THEODORE RIGG

The following reports relate to land-utilization, chemical work, and tomato investigations carried out by the Institute. Other work is published under the headings "Tobacco Research" (see p. 31), "Fruit Research" (see p. 18), while entomological work is included in the report of the Entomology Division (see p. 73).

#### LAND-UTILIZATION

Maps showing the present use of land in the Wakefield-Belgrove sector have been prepared, indicating some 102 acres of tobacco, 78 acres of hops, and 7 acres of small fruits and tomatoes.