

FOOD RESEARCH

Advisory Committee on Food Composition.—Mr. F. R. Callaghan (Chairman); Drs. Muriel Bell, Elizabeth Gregory, C. R. Barnicoat, B. W. Doak, F. H. McDowall; Messrs. R. L. Andrew, R. A. Calder, E. W. Hullett, and L. W. Tiller (Secretary).

With the end of the war the Food Preservation and Transport Advisory Committee terminated its activities, but in view of the world-wide significance now attached to food and nutrition it was felt essential that attention should be given to the position as affecting New Zealand. A basic requirement in dealing with food and nutrition problems on a world-wide scale is a detailed knowledge of the composition of the food-stuffs produced and consumed in each country. This is recognized by the Food and Agriculture Organization of the United Nations (F.A.O.), and New Zealand as a signatory to the constitution of the F.A.O. will be expected to undertake the analysis of its principal foodstuffs.

Research on food for human consumption in New Zealand is conducted in several widely distributed laboratories—e.g., Wheat Research Institute, Dominion Laboratory, Plant Chemistry Laboratory, Otago Medical School—and the best approach was felt to be to co-ordinate the activities of the various bodies by means of a Committee on which each was represented. The Committee has met and has decided on the broad allocation of the various fields of research that will have to be covered. It is found that fairly complete information is already in existence on the composition of main classes of dairy-produce, and the Dairy Research Institute is undertaking its compilation.

From time to time, general food problems connected with canning, dehydration, and other forms of processing and preservation are referred to the Department and are dealt with by the appropriate officers. It is worth recording that faulty fabrication or closing of tinsplate food-cans has been found responsible for several failures that have been investigated.

FRUIT COLD STORAGE RESEARCH

REFRIGERATED GAS STORAGE OF APPLES

Jonathan.—Work on this variety was completed in the previous season with a further successful demonstration on a 500-case scale. The results can now be confidently translated into commercial practice.

Sturmer.—The studies on this variety were again on the comparatively small experimental scale and were essentially a repetition of last year's work. The same temperatures and gas mixtures were used as in 1944, with the object of verifying the previous good results.

Considerably more breakdown and core-flush developed than in the previous year, especially at the temperatures 38° F. and 39° F. No superficial scald developed during the current year. Wilt was rather more widespread over the samples, but could not be considered commercially significant. No appreciable amounts of any disorder appeared before December, and all gas-stored samples were considerably better than the corresponding air-stored controls.

Two gas mixtures of the sub-normal oxygen type have been selected for trial under semi-commercial conditions. They are 7.5 per cent. carbon dioxide with 7.5 per cent. oxygen, and 5 per cent. carbon dioxide with 5 per cent. oxygen, both at 39° F.

SUPERFICIAL SCALD ON GRANNY SMITH APPLES

Samples of fruit from five orchards reported as consistently producing Granny Smith apples particularly liable to superficial scald were wrapped in oiled paper immediately after picking, subjected to seven variants of pre-storage treatment, and then stored at a temperature of 32° F. The pre-storage treatments consisted of immediate storage after picking and storage after the fruit had been held from one to six weeks at air temperature. No superficial scald appeared in any sample in storage until mid-January—that is, until long after the fruit had passed its optimum storage period. When removed from storage and held at air temperature for seven days, however, practically 100 per cent. of all samples developed scald by November.