

It is generally agreed that the adoption of standard specifications of dimensions, material, and method can be usefully applied in many branches of industry, with resulting national economies, and with advantage to industry. The move in this direction in Britain and the other Dominions has been accelerated in recent years. As a result of the conference, arrangements were initiated by which the Dominions' standardizing agencies are to be consulted before final publication of British Standard Specifications. The Dominion representatives generally advocated the basing of their local specifications on those of Britain, with local variation where necessary. Recommendations also were made regarding the marking or branding of materials and equipment, which thereby are guaranteed by the makers to comply with National Standard Specifications.

It was decided that, in addition to consideration of standardization in regard to dimensions and materials, and simplified practice, it was desirable that reasonable agreement should be aimed at regarding regulations and codes, and that these questions should be considered by the local standardization agency, since they have a direct bearing on manufacture. It was recommended that the local standardizing authority should be established as an independent body, comprising representatives of manufacturers, technical men, and users, but assisted by Governments, with close liaison through appropriate Departments. The British Standardization Authority, which started as an Engineering Standards Association, is in process of reorganization as a National Standards Association with four coequal and largely autonomous main divisions for engineering, chemistry, building, and textiles.

The incidence of standardization in agricultural products, &c., was not discussed at the Standards Conference, but the Research Sub-conference discussed certain aspects of the subject, particularly with regard to certain standards under consideration by the British Ministry of Agriculture, and arising from work financed by a grant of £40,000 per year from the Empire Marketing Board, and the following resolution was passed :—

"Agricultural Standards.—The Research Committee of the Imperial Conference desire to draw attention to the assistance which might be rendered to intra-Imperial trade in certain agricultural commodities by reasonable uniformity of standards or grades, and urge that those responsible for formulating regulations of this character in each part of the British Commonwealth of Nations should bear this aspect in mind."

Discussions took place with manufacturers and the Cotton Research Association regarding the setting-up of standards for cheese-cloths and mutton-wraps as a basis of tender. This would involve careful trials of the most suitable types, but would avoid the aspect of the alleged claims of unfair competition from certain foreign countries.

FRUIT RESEARCH.

During the year, thanks to the co-operation of the Fruitgrowers' Federation and the Empire Marketing Board, an experimental orchard has been secured at Appleby, Nelson. Located on typical Mouere Hills soil, and containing some 29 acres of mixed export varieties of apples and pears in full bearing, together with a large vacant area to be used for further planting, this orchard will serve admirably for dealing with the major problems confronting the fruit industry. With a view to commencing manurial and spray trials at an early date, yield records of all of the trees have been kept. The work at this orchard will be associated with the investigations carried out at Cawthron Institute and at the Plant Research Station, and the field work of the Department of Agriculture, so that fruit research work will be proceeding in all of the main orchard areas of the Dominion. The general programme already decided upon, and in part commenced, will deal with rootstocks, manurial and cultural methods, the control of insect and fungoid pests, and cold-storage trials. The cold-storage investigations at Cawthron Institute are steadily revealing the best range of temperature and humidity for each variety of apple in order to reduce to a minimum the amount of wastage during storage. A limited amount of overseas-transport investigation was conducted during the year, initial trials indicating that the adoption of all-round wraps, using corrugated cardboard linings in ordinary fruit-cases, reduced the amount of damage due to bruising.

MISCELLANEOUS.

As a result of visits to European linoleum and other factories, a valuable report has been prepared by Dr. Hosking on the types of gum required and their uses. The report indicates the value of further study of our kauri resources with a view to providing a product more in accordance with the requirements of manufacturers. In view of the inroads made by the use of synthetic gums in this industry, the need for protecting our national product by scientific methods has become all the more pronounced.

In co-operation with the Department of External Affairs, work is being carried out in Samoa on the distillation of essential oils and bases for perfumes from some of the more promising plants indigenous to these islands. Samples have been forwarded to prominent manufacturing works on the Continent for estimation of value. There are distinct possibilities in this direction.

Work has been carried out on the ripening of bananas received from Niue and Samoa. Laboratory experiments would indicate that the best humidity to ensure ripening without mould-growth is about 80 per cent., and the best temperature 64–72° F., but these have yet to be confirmed upon a larger scale. An addition of about 1 part in 2,000 of coal-gas or acetylene to the air in the ripening-room ensured a better colour to the product and better ripening. The experiments carried out by us at the Dominion Laboratory are being continued.

Apart from specially organized activities, the Department during the course of the year has received hundreds of requests for scientific information on matters concerned with the primary and secondary industries of the Dominion. There can be no doubt that in this field, in so far as its resources will permit, the Department has met a definite want.