

Another introduction in which the Division had a part during the year was vacuum bottle-filling. The result of the work will be clearly evident over the years in satisfactory reduction in milk wastage in bottle-filling operations in milk-treatment stations.

In the period under review milk-tankers have been introduced into the market-milk scheme. The Wellington City Council now has two articulated stainless-steel road tankers operating between its country depot at Otaki and its milk-treatment station at Wellington. It is probable that this method of bulk cartage of market milk will increase, particularly in Wellington, but to a less extent in some of the provincial areas where balancing quantities of winter milk are drawn by town milk-treatment stations from nearby country creameries or cheese-factories.

Major remodelling and re-equipping have proceeded during the year at Palmerston North, and a new depot in Hastings is almost ready for the installation of the new equipment. Major re-equipping of existing premises has taken place in New Plymouth (bottle-washing, bottle-filling), Gisborne (pasteurizing plant, bottle-washing, bottle-filling), Wairoa (bottle-washing), Balclutha (bottle-washing), Tauranga (pasteurizing, bottle-washing, bottle-filling), and Stratford (bottle-washing, bottle-filling). A small depot was completed in Opotiki.

*Milk Quality.*—No further progress has been made in the formulation of a grading scheme for market milk and a practical and universal scheme has not yet been introduced to interested parties. To a certain extent lack of adequate laboratory facilities in milk-treatment stations has caused the delay. During the year, however, efforts have been made to have milk-treatment-station operators carry out more frequently the methylene blue test on producers' incoming milks. It is to this testing that much of the credit for the improvement in the finished product can be attributed, particularly as a closer degree of co-operation with the Live-stock Division has resulted in the results of such tests leading the live-stock officers toward those producers whose methods of production have been unsatisfactory.

The appointment by the Live-stock Division of a Supervising Dairy Inspector has assisted this closer co-operation, and this use of the methylene blue testing system should be of some assistance in the introduction of the market milk grading scheme.

Although not directly related to quality of the milk, a general shortage of caustic soda has had an effect on the washing of bottles and thus on milk quality. In many cases when complaints were made about the sterility of the washed bottle the excuse offered was that the shortage of caustic soda prevented a satisfactory job being done in the bottle-washing machine. More caustic soda is gradually becoming available.

*Liaison with Milk Division, Marketing Department.*—A close liaison has been maintained between this Division and the Milk Division of the Marketing Department.

*Technical and General.*—Last year's report referred to the increasing tendency to change over from Batch pasteurization to the high-temperature short-time (or H.T.S.T.) method. At present fifteen milk-treatment stations in the Dominion are operating H.T.S.T. plants (six having changed over from the Batch system during the year), eighteen are operating the Batch system (it is expected that four of them will change over during next year to the H.T.S.T. system), and four plants still operate the continuous holder method.

The Dairy Division and trade interests have discussed tentatively alternatives to the caps formed from aluminium-foil. A weakness in this method of aluminium-cap making is that the cap press is mounted directly on the bottle-filling machine, where it is vulnerable to damage by water, steam, and hot detergent. Development would appear to be toward a pre-formed paper-lined steel or aluminium cap being supplied direct to milk-treatment stations in pre-packed cartridge form.