

Quality of Cheese.

So far as the quality of the cheese manufactured for the season is concerned, it can be said that some improvement has taken place. This applies more particularly to the cheese manufactured from the beginning of September to the end of December. During that time many of the factories produced a uniformly good-flavoured article, and a lesser number continued to do so to the end of the period to which this report refers. The cheese from these factories was well made and practically free from blemish of any material kind, and must therefore give full satisfaction alike to merchants and consumers. As soon as the warmer weather set in, however, a considerable quantity of the cheese then manufactured was found to be faulty and irregular in flavour, the consignments from many of the factories possessing a flavour that was decidedly objectionable and altogether foreign to cheese made from milk which had been handled in a careful and cleanly manner on the farm. While the percentage of ill-flavoured cheese has not been large in proportion to the total quantity received, it is essential in the interests of the industry as a whole that steps be taken to further reduce the quantity by every practical means at the disposal of those who are immediately concerned.

As regards the body and texture of cheese, for which the factory-managers have to accept the greater part of the responsibility, it may be said that little or no fault could be found in many of the consignments offered for export, the cheese being close in body and possessing the right degree of firmness which is so characteristic in a well-made cheese. On the other hand, numerous consignments came forward which were more or less defective in body and texture. For instance, looseness and openness in body, which is always looked upon as a serious fault in cheese, was altogether too common. Where this irregularity was general, and in an acute form or attended with other defects, it was necessary to classify the produce as second grade, which represented a loss of $\frac{1}{4}$ d. per pound to the producer, to say nothing of the harm resulting to the industry when such cheese is placed on the market. Although a remedy which will completely overcome this fault in cheese under all conditions is not yet available, it can be greatly minimized by close attention to the process of manufacture recommended by the Instructors of the Division.

Over-acidity, which interferes with the appearance and also with the food value of the product, came under notice to a greater extent than usual during a part of the season, but was quickly corrected by the factory-managers after their attention had been drawn to it by the Instructors or per medium of the grading-certificates.

Taking the year's work as a whole, and making due allowance for the irregularities referred to above, the cheesemakers of the Dominion generally have carried out their duties in a careful and competent manner, and have given evidence of anxiety to manufacture a product which would be up to the standard desired.

Cool Storage of Cheese.

The New Zealand cheese-producers are now in the fortunate position of being able to forward their cheese direct from the factory to an approved cool store at every grading-centre in the Dominion, where it can be held in first-class condition up to the time of shipment and transshipment. The temperatures of these stores—with one exception—have been controlled in such a way during the season as to ensure the safe preservation of the produce and prevent anything in the nature of excessive shrinkage in weight. The lower temperatures have also had the effect of preventing the serious development of the mite pest which occurred in former years, and which necessitated the fumigation of the stores for the destruction of the mites when cheese was held for a lengthy period awaiting shipment.

At the end of the 1918-19 season there were no less than 474,754 crates of cheese in stock, and it was feared that sufficient cool-storage space would not be available for the output of the incoming season, but early shipments were made and continued with unexpected regularity through the year. Consequently this fear was not realized to any material extent, for although there has been a shortage of space in the cool stores at Auckland this did not occur until towards the end of the year, and the weather being then much cooler no damage to the produce is anticipated.

The only weakness in the storage for cheese that now exists is in respect to the transshipments forwarded to Wellington from Patea and Wanganui, and occasionally from New Plymouth. Room cannot be found for these transshipments in the Wellington cool stores, as it is required for the cheese from the nearer provincial factories and those in the Nelson and Marlborough districts. As long delays frequently take place before transshipments of cheese can be loaded on the ocean-going steamers, the cheese which has previously been cooled at the district stores becomes overheated and more or less spoiled. Such treatment is grossly unfair to the buyers of the produce, and must also seriously affect the reputation of the dairy companies concerned. Therefore it is imperative that means be provided whereby all transshipments of cheese can be immediately cool-stored on arrival at Wellington. If that can be accomplished it will bring the storage of cheese in New Zealand up to date and in keeping with the importance of the industry.

Pasteurization of Milk at Cheese-factories

As a cheese-producing country New Zealand leads the way in respect to the application of the principle of pasteurization to this branch of the dairy industry. Its introduction has been the means of greatly improving not only the flavour of the finished product but also its keeping-quality. Factories from which cheese of indifferent flavour was being turned out year after year are now producing an article which is usually sound in flavour and altogether superior to that formerly made from unpasteurized milk. The demand for regenerative pasteurizing-machines—which is invariably the type used—has been greater than the supply. As additional plants are imported or manufactured locally they are eagerly purchased by dairy companies which have decided to adopt this system of treating the milk for the manufacture of cheese. The number of factories at which these machines have already been provided is 155, and the total quantity of cheese manufactured from pasteurized milk amounted to 32,200 tons, equivalent to 53 per cent. of the year's production.