

bought the machines and provided for the major portion of the cost of their installation, and the industry, through the New Zealand Dairy Board, having allocated an initial sum of £10,000 toward the cost of the trials.

The Alfa plant began operations late in October, 1947, and since has been working almost continuously. As was expected, a number of difficulties have been encountered in applying the process to local conditions. New Zealand buttermaking practice ensures a very close degree of moisture control, an important factor in the economy of butter-manufacture. The Alfa plant did not enable a fine control, but modifications of the technique of operation have made more satisfactory results possible. A satisfactory method of packing the butter has not yet been found, and this has delayed to some extent the preparation of export shipments of the butter.

Because of the fundamental differences in butter-production, Alfa butter is different in body character from the standard New Zealand product. The texture is very smooth, which may be an advantage, but the body condition is such that the butter has a tendency to become oily at summer temperatures. Whether this characteristic is an advantage in a cold climate when standard New Zealand butter lacks spreadability to some extent has yet to be determined. A shipment for export to Britain is now being assembled, which will make possible an assessment under existing trading conditions of the factors novel to Alfa butter. Quality is continually being assessed locally and also through storage trials. As yet the economic factor has not been measured, but in the meantime, apart from the question of operation of the plant under New Zealand conditions, it is important to obtain a clear picture of Alfa butter compared with standard New Zealand butter in order to determine whether there are advantages in this butter which would justify attempts at modification and adaptation of this process of butter-manufacture to New Zealand factory practice.

An outstanding fact emerging from this season's experience is that the Alfa concentrator in its present form will not deal with high-acid home-separated cream, quick sludging of the bowl having resulted during the early autumn, when a portion of the intake of cream was in this condition. The plant has been proved to deal quite well with factory-separated cream and daily collected farm separator cream during the spring and early summer when acidities are low. The trial of the Alfa process is proving of great interest, especially from the technical aspect, but from results up to the present it would not appear that, for the immediate future at least, there will be sensational developments in existing buttermaking technique.

The Sem plant will be installed at the Tirau Factory of the New Zealand Co-operative Dairy Company, Ltd., and will be operated concurrently with the Alfa plant at Waharoa.

CHECK ON YIELDS AND OVERRUNS

All butter and cheese passing through grading ports is analysed for fat content in addition to other constituents, and this analysis forms the basis of the assessment of butterfat received at dairy factories as compared with the amount credited to suppliers. Though there are apparent short credits at some factories, the position as a whole is not altogether unsatisfactory. There is at present some trend away from short credits, and the question is continually receiving the attention of Dairy Instructors, who are guided by the monthly returns and are consequently in a position to take up the subject with the dairy companies concerned. The whole question is somewhat involved, particularly with regard to sampling of milk for butterfat testing. During the year several detailed milk-sampling investigations have been carried out. The results of these investigations are encouraging and justify further work on the problem. The dairy companies concerned have freely co-operated in this work, and in general the necessity for correct crediting of butterfat is recognized by dairy companies and their officers.