

in inch narrower than specified by the regulations, which necessitated action by the Grader in charge to prevent a recurrence.

Some of the timber supplied to other centres has occasionally been defective, but, on the whole, the quality of the crate timber at other ports has been up to standard.

Cool-store Facilities.—The facilities for the grading of produce are better at some ports than others. Butter-grading rooms, with the exception of the Bluff room for light and the room at Christchurch in a lesser degree, are generally suitable for the work of grading.

The grading of cheese is more difficult at some of the larger ports because of the system of "plugging" in the trucks. In this respect New Plymouth and Patea are under a disadvantage. There is now, however, more assistance rendered by the works staff, also a much better understanding at these ports. At all other grading-stores there is evidence of mutual co-operation, which is beneficial to all parties and the work generally.

BUTTER INSTRUCTION

The more important instructional aspects of butter-manufacture and allied subjects are :—

Manufacture.—The serial system of vacreation continues to be popular in the larger factories. The use of the "pressure head" has been extended, and factory-managers claim improved results following its use. In some cases there has been a fall in grade, due, it is considered, to excessively high pasteurizing temperatures while using the pressure head. A reduction in temperature has brought about an improvement in grade.

The neutralization and vacreation of cream are, on the whole, reasonably well carried out. Because of staff shortages, lack of skilled operators, and inadequate or ineffective plants, temperature control of cream, churning, and working have in a number of cases not received the attention necessary to produce a butter of the desired body and texture. Colour defects which were evident throughout the hot period are considered chiefly due to the above causes.

Several dairy companies have at times discontinued the usual method of washing of butter in the granular stage. This has the effect of increasing the curd content. While we are not aware of any serious deterioration in quality as a result, we are of the opinion that an indiscriminate adoption of this procedure would be dangerous. This matter was discussed at the Dairy Research Institute during Factory-managers' Week last year. In cases of doubtful water-supplies, officers of the Institute were inclined to view the non-washing of butter favourably.

Moisture.—Apart from the fact that some butters showed free moisture due to insufficient dry working, the previous high standard of moisture incorporation has been maintained. As evidence of the degree of skill exercised in this respect, averages of 15.955 per cent. and 15.977 per cent. have been noted for each day's make of nine churnings, and monthly averages up to 15.85 per cent. are not uncommon.

Cream-grading.—Although it is generally found that in areas where there is no competition for supply the grading standard is fairly well maintained, the reverse is the case where competition exists. It is considered that the standard in the latter areas will continue difficult to maintain while competition remains. Where cream is delivered daily, the senses grading, even on a uniformly high standard, concedes an advantage to the supplier which it is considered is more than sufficient.

Milk-treating Houses.—A number of plants and buildings have been inspected. It is evident that there is room for considerable improvement in quality of the raw milk as delivered to treating-houses and treatment afterwards. All concerned, however, have promised full co-operation, which should enable satisfactory results to be achieved.

CHEESE INSTRUCTION

A summary on quality and comments on the instructional aspects of cheese-manufacture follow :—

Cheese Quality.—In most districts the majority of the managers are still striving for quality and any new suggestions made by the Instructors for the improvement of quality are readily adopted. This position is very gratifying, as it is not many years ago that most of the dairy companies in the North Island were concerned more about quantity rather than quality. In the Waikato there are still one or two companies which consider yield more than grade, but I believe this fallacy is gradually being worn down, and from recent indications there is every prospect of the Waikato factories coming more into line with those of other districts.

Cheshire Cheese.—The manufacture of Cheshire cheese has continued during the season at the Dalefield Factory, and, while certain minor adjustments have been made in the technique of manufacture, it is just questionable whether the desired qualities in this type of cheese are being obtained.

Starters.—Owing to better facilities for keeping single-strain starters active, and the fact that at practically all factories these starters are run on the rotational system combined with careful technique