

The low average temperatures, especially night temperatures, recorded during the summer helped considerably in the prevention of the development of acidity and undesirable flavours, but by checking the growth of grass forced the cows to consume the weeds which were available. This was the cause of an increase in the weed flavours in the cream, and in the butter made from it which have been reflected in the reports received from Great Britain. These have frequently referred to feed-flavours in butter which was made from cream which had been subject to the most stringent treatment in an endeavour to remove them.

With the advent of the dry weather a serious shortage of water was experienced on many farms, and as a consequence the cleaning of the milking plants was not as thorough as it should have been, with the result that the quality of the cream suffered.

Under these circumstances there was a rapid fall in production, and once-a-day milking was resorted to at an early stage, with a consequent drop in the quality of the cream.

Reports from Instructors and Graders refer to a lack of character in both cream and butter which was noticed more or less during the whole season.

It is also reported that there is an inclination on the part of dairy companies to exercise less care in the segregation of cream which is not of the highest quality, and this probably accounts for the slight increase in the percentage of first-grade butter produced compared with the previous year.

It has also been noted that a number of dairy companies seem to be reserving their best butter for sale on the local market, with a consequent reduction in their average grade.

Reports on the quality of unsalted butter as seen at the London end lead to the belief that less care is being exercised in segregating the best of the cream for that purpose, and the experience of the previous year pointed to the danger of carrying on its manufacture after the flush of the season had passed. The quantity made for the year under review amounted to 3.16 per cent. of the total graded, compared with 4.91 per cent. for the previous year.

P_H TESTING OF BUTTER.

The testing of butter samples for alkalinity by the p_H method has been continued, and these total 3,048 at Auckland, 887 at New Plymouth, 123 at Castlecliff, and 1,048 at Wellington, a total of 5,107, compared with 7,547 for the previous year. The decreased number is accounted for by the fact that as the result of this work the neutralization of cream has been placed on a much better footing, and it is now almost rare to find a sample which has been over-neutralized.

The reduction in the p_H work has made it possible to devote more time to the bacteriological and chemical examinations, and in Auckland these amounted to 2,526 samples, compared with 816 carried out at that port during the previous year. Samples from other ports were examined at Wallaceville.

PHOSPHATASE TEST.

In addition to this work, the Division has co-operated with Mr. K. W. Griffin, Government Analyst at Auckland, and has furnished him with a very large number of samples of butter from most of the grading-ports for examination by the phosphatase test for efficient pasteurization of the cream used in its manufacture. The results of this work have not yet been finalized.

TESTING BUTTER FOR MOISTURE AND SALT.

Following the established practice, all churnings of butter forwarded for grading have been tested for moisture and salt. The total of the former was 143,350 churnings, of which 0.34 per cent. were found to exceed the legal limit of 16 per cent. and were returned to the owners for reworking. The average moisture content of the churnings below 16 per cent. was 15.606 per cent.

Salt tests carried out during the year totalled 134,831 samples, and of these 0.44 per cent. which were outside the legal limit and had not been manufactured under special permit were withdrawn from shipment by the owners.

BUTTER-BOXES.

During the year the task of consolidating the regulations published in 1926 and the numerous amendments subsequently made was completed. These were gazetted on 20th July, 1938.

One of the most important is No. 28, which provides for the use of only one type of box for packing export butter "except with the prior written consent of the Minister and subject to such conditions as may be prescribed in such consent."

As stated in last year's report, it was the general opinion of those concerned in the manufacture and sale of our butter that it was necessary to adopt one style of package, and as the one which had given general satisfaction was the substandard box bound with two wires this one was chosen. It is now referred to in the regulations as the standard box, and should not be confused with the heavier type without binding which was formerly known by the same name.

It will be realized that it was necessary to give a certain amount of latitude in order to allow for using up the boxes which were already in hand on the date when this regulation came into force, and had the season been a normal one the position would have been reached where the only box in use during the coming year would have been the standard box made of white-pine. Due to the causes mentioned, there will be a small carry-over of Swedish-pine boxes of the same type which were imported by the Dairy Board during an anticipated shortage of New Zealand timber in the 1937-38 season.