

CREAMERY BUTTER

The average grade of creamery butter graded during the year under review was 93.245 points, as compared with 93.402 points for 1944-45. Of the 107,582 tons received for grading, 86,373 tons, or 80.28 per cent., was classed as finest grade, 20,971 tons, or 19.49 per cent., as first grade, and 238 tons, or 0.22 per cent., as under first grade. The comparative percentages for 1944-45 were 84.72, 15.10, and 0.17, so that butter qualifying for the finest grade decreased by 4.44 per cent. while that in the first-grade class increased by 4.39 per cent., so that the percentage below first grade remained about the same.

As indicated by the average grade figures, butter quality generally was not quite so pleasing as for the previous season, especially for the months of January, February, and March, and in the Auckland Province, where the bulk of our butter is produced. The reason is to be found in the drought. Comparatively early in the new year, because of the consequential drop in production, herds were in many cases milked only once daily and cream collected less frequently, which combined with the hot weather, resulted in a poor-quality cream being produced and a very noticeable drop in butter quality.

In most of those districts not affected by the drought average quality was more satisfactory, though generally the cold and wet conditions during the spring resulted in the desired standard for premium butter being reached a little later than in average seasons.

Due to the absence of the usual flush of feed during the spring, feed flavours gave less trouble than is usually expected at this time of the year. Land-cress flavour, however, was reported from most districts of the North Island. Taken as a whole there was perhaps a little less trouble than usual from this source, though in some districts the trouble was fairly persistent and lasted later in the season than usual, due, no doubt, to weather and pasture conditions.

A new flavour which came to be known as "mountain ash" made its appearance in butter from several creameries situated in central North Island for varying periods during the eruptions of Mount Ruapehu. It seems to have been fairly definitely established that this ash had an effect on butter flavour which may have been through contamination of water or through being taken in with grass by stock grazing in the affected areas. Its presence created some difficulty in buttermaking between the periods of eruption until there were sufficient rains to wash the ash away. The investigational work carried out in connection with this mountain ash was not finalized by the time Mount Ruapehu became quiescent.

pH Testing of Butter.—This test is used to determine the relative acidity or alkalinity of the butter, and assists in discovering the addition of excessive neutralizer to cream. During the past year or two the tendency to over-neutralize the cream has revived, especially in certain districts. The resulting butter is more alkaline than it should be, and this can be easily determined by the "pH test." To ensure the reliability of this test a new set of pH colour charts has been prepared by Mr. G. C. Death, Assistant Chemist in the grading store at Auckland. The colours for these charts have been very carefully verified by a reliable electrical method applied to a series of samples, and the new charts should enable Instructors and Graders to check the excessive use of soda neutralizer. The number of pH tests made during the year at the various grading stores were: Auckland, 1,993; Gisborne, 60; New Plymouth, 859; Wanganui, 181; Wellington, 1,351; Lyttelton, 273; Dunedin, 126; Bluff, 24; a total of 4,867. The previous year's total was 4,097.

The bacteriological and chemical examination of butter was continued, the number of samples from the various grading stores being as follows: Auckland, 1,810; Gisborne, 209; New Plymouth, 732; Wanganui, 225; Wellington, 1,341; Lyttelton, 371; Dunedin, 21; a total of 4,709. The previous year's total was 4,664. All samples from ports other than Auckland were forwarded to the Dairy Laboratory at Wallaceville for examination.

Testing for Moisture and Salt.—Churnings of butter tested for moisture totalled 112,265, of which only 0.35 per cent. was found to exceed the legal limit of 16 per cent.