

Creamery Department

Butter Makers are invited to send contributions to this department, to ask questions on matters relating to butter making and to suggest subjects for discussion. Address your letters to the Creamery Department.

Improvement Due to Grading

N. J. Kennen, M. A. C., Winnipeg

The output of butter in Manitoba shows a great advancement over previous seasons. This is accounted for in that seven new creameries commenced operations; also that more people are shipping their cream to centralized plants during the summer months. This latter is due to the increased work on the farm and the low price of dairy butter at such times. Prices have been good and are advancing rapidly as the raw material is getting scarcer. The quality has been much improved, possibly owing to the fact that several creameries commenced grading cream.

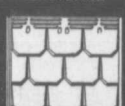
The farmers are becoming more educated in producing a better cream as they are preparing for the improved article. Butter-makers are becoming better educated in handling different grades of cream and in turning their raw material into a better quality of butter than heretofore. As in the cheese business, there is a marked improvement all round. The creamery business is making headway in getting out of the rut into which it had fallen a few years ago.

A New Moisture Test

For some time dairy experts have been striving to secure a moisture test for dairy products, that would be more simple and easier to operate than the gravimetric method. Mr. J. W. Mitchell, Superintendent of the Eastern Dairy School, Kingston, and Mr. W. O. Walker, lecturer in chemistry in the same school, have evolved a test that should appear to be just what is needed to meet the requirements of butter and cheese-making in this particular. Bulletin 167, just issued by the Ontario Department of Agriculture, describes in this test fully and gives complete information as to operating it.

Knowing the increasing demand for a practical moisture test, Messrs. Mitchell and Walker began in October 1907, a series of experiments with the object of evolving something that would meet the needs of the case.

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BRONX, N.Y., April 26, 1908.
We have handled your "Eastlake" Shingles for many months at our New York, Free Library, and other public buildings. We have used very large quantities during the past few years and have never received any complaint, and have been highly satisfied, and have been highly recommended.

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They made a thorough investigation of existing methods and while accurate: they were of such a nature as to require an expert to operate satisfactorily. On this point the bulletin says:

"Being dissatisfied with all the existing methods investigated by us, we undertook to work out a form of moisture test that would prove more satisfactory. We decided that the following requisites were necessary, and we kept them continually in view in our work:

1. A rapid and reasonably accurate method.
2. An inexpensive form of apparatus, both to purchase and to use.
3. A durable form of apparatus and one easy to clean.
4. A method that requires no great amount of attention or care in operating, and that can thus be used by the average factory man.
5. An apparatus that can, if damaged, be easily repaired at small cost.
6. A method equally suitable for testing butter, curd and cheese."

A great deal of time was spent in working out a method that would meet these requirements and success finally crowned the efforts of the experimenters. To facilitate the operation of the test and to simplify the process a reagent is used in a somewhat similar way that acid is used in the Babcock Milk Test. The reagent decided upon as best suited for the purpose is chemically pure amyl acetate. The reliability of the new test was demonstrated by a series of comparisons with the gravimetric method in testing the moisture in different samples of butter, curd and cheese. The results were approximately the same and the tests by the new method were shown to be accurate enough for all practical purposes.

The essential parts of the test are an evaporating cup, a spirit-lamp, a condenser, and a graduated glass receiver. These are made of metal, excepting the graduated glass, and are not easily damaged. There is in addition, a balance for weighing the sample, bottles and a graduated glass for measuring the reagent, a butter sampling cup and a curd and cheese sampler. The test is made fast to a stand beneath which is a drawer for keeping the parts in. There is an outside jacket for the condenser, which is filled with cold water during the testing.

In operating the test 10 grams of butter or 5 grams of curd or cheese, is weighed into the evaporating cup. To this is added the reagent. The cup is connected with its cover and the moisture and the reagent are evaporated by means of the spirit lamp. The vapors are condensed to liquid form again in the condenser, which flows into the graduated glass. As the water is heavier than the reagent, and consequently the two do not mix, the former settles to the bottom of the glass and the amount of liquid can be easily read by the graduated scale on the glass. The scales on the neck of the glass are graduated for reading directly the per cent. of moisture in a sample when either 5 or 10 grams are taken to a test. The time required for driving all the moisture from a sample of butter or curd is from four to seven minutes. The average per cent test is something below half a cent.

The features of the test that should commend it to every maker is its simplicity, its accuracy, the ease with which the apparatus may be cleaned, the small cost of conducting the test, the durability of the apparatus and the low cost for reagents. The test can be used for determining the moisture in flour, bread, breakfast foods, wood pulp, etc. Two prices are quoted in the bulletin for the complete outfit, \$13 and \$14, but the reason given for charging two prices are not very explicit. Outfits can be obtained by applying to the Superintendent of the Eastern Dairy School, Kingston, Ont.



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WRITE FOR CATALOGUE

Making Prize Farm Dairy Butter

Ed. The Dairyman and Farming World:—The following is a brief outline of how the butter I exhibited at Toronto Exhibition, and which won second prize was made. At that time we were milking six grade Shorthorn cows. We use the De Laval Cream Separator. After the milk was separated, the cream was placed in cold water and stirred until cold. We usually leave the cream until the next milking before adding to the stock on hand. We were four days gathering the amount of cream required. We always strive to have enough cream for churning to make the amount of butter required for each section, so as to be assured of even salting and coloring.

We did not use a starter, but kept the cream at a temperature sufficient to ripen it soon enough for the purpose. It was left twelve hours to ripen after the last supply of sweet cream had been added.

Before churning, the churn was first scalded with boiling water and then rinsed with cold water. The cream was put in at a temperature of 60 de-

grees and churned for three-quarters of an hour. As soon as the butter was in small grains, the butter-milk was drained off and the butter washed with plenty of cold water, usually four pails, or enough to make the water come off clear.

We used one-half an ounce of salt to a pound of butter, allowing a couple of ounces to each churning for waste. We use this amount of salt regularly in making butter for packing in crocks. For pound prints we use three-quarters of an ounce to a pound of butter. We work the butter three times.—Mrs. J. T. Hancock, Ontario Co., Ont.

During 1907 the value of dairy products made in the factories of Canada, including cheese, butter and condensed milk, was \$35,457,543. This is a gain of 19.26 per cent. over 1906, when the total value was \$29,731,922.

In Prince Edward Island the production of creamery butter in 1906 was 322,250 lbs., valued at \$118,402. In 1907 the quantity was only 358,422 lbs., valued at \$89,839.

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