

Cheese Department

Makers are invited to send contributions to this department, to ask questions on matters relating to cheesemaking and to suggest subjects for discussion. Address all letters to The Cheese Maker's Department.

Cooling Without Stirring Preferred

Editor, Farm and Dairy.—In the Dec. 15 issue of Farm and Dairy I was wrongly reported as having disagreed with Mr. Geo. H. Barr, Ottawa, on the value of stirring in cooling milk. When speaking on this subject at the cheese meeting, I expressed myself as being very favorable to the plan of cooling the milk as advocated by Mr. Barr instead of dipping and airing it as has been the practice heretofore. The plan advocated by Mr. Barr has given us the very best of satisfaction. When our patrons commenced this plan of cooling and keeping their milk I used to get up on the milk wagons in the morning to examine the condition of the milk from the different patrons. I knew those who had adopted Mr. Barr's plan of cooling and found in condition of the milk much better in those cases where the milk had been cooled without stirring and airing than it was in those which I knew had been stirred and aired. There was no cream visible in the cooled milk whereas particles of cream could be seen on the stirred and aired milk, which was liable to be lost on the strainer.

We were not sure of getting a correct sample for testing in separated milk as the small particles of cream were likely to float off the small sampling dipper and be lost for testing. I am satisfied that Mr. Barr's plan is all right and our patrons are pleased with it.—A. B. Bell, Tavistock, Ont.

The Value of the Home Market

J. A. Buddick, Dairy Commissioner, Ottawa

The receipts of both cheese and butter at Montreal in 1910 show an increase over the previous year of 2,000,000 pounds of cheese and 2,303,000 pounds of butter. In addition to this, there have been much heavier shipments of both articles to the west, and most important of all, the increase in the cream shipments to the United States is equivalent to over 15,000,000 pounds of cheese. If to these actual figures we add the general increase in the consumption of milk, cream and butter in all localities, it will be evident that the industry has made a very substantial growth during the past year. After careful calculation I estimate that the value of such home consumption of milk and its products was \$30,000,000 greater in 1910 than it was in 1909, and that the total annual production reached the enormous value of something like \$100,000,000 or \$20,000,000 more than in 1903 when the exports reached the maximum. This should be sufficient answer to the supercilious conclusion arrived at in some quarters that the Canadian dairy industry is declining because our exports have decreased to the extent of about \$10,000,000.

THE MARKET OUTLOOK

In regard to the market outlook, there is nothing in sight which should be discouraging to those who are prepared to increase their production. In

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the first place, our home market is growing at the rate of over \$2,000,000 a year, and it is already by far the most important one that we have in point of volume, as it takes fully four times as much as there is surplus for export.

The production of milk in the United States now falls short of the requirements in that country, and they must either largely increase their output or look to other countries for the additional supply. Canada is the natural source of that supply. As a matter of fact, the United States has been a large customer for butter during the past two years, to say nothing of the large quantities of cream for which that country has been a good market. The quantity of cream exported to the United States in 1910 is equivalent to 14,000,000 pounds of cheese, or 6,000,000 pounds of butter.

I do not wish, in any way to have respecting the extent of our home trade or the trade with the United States to minimize the importance of the export trade with Great Britain. As long as there is a surplus for export, the value of the whole production is determined very largely by the price which is obtained for that surplus. We should guard very carefully, therefore, our interests in this connection and see to it that nothing is allowed to injure the high reputation which our cheese especially has attained on that market.—Toronto Globe.

Moisture Content of Cheese Curds

As a result of careful experimenting at the Wisconsin Experiment Station, the following conclusions are drawn as to the factors influencing the moisture content of cheese curds: "Variations in the fat content of milk, within ordinary limits, influence very slightly the rate at which whey separates from curd, the presence of more fat tending to retard the process."

"Variations in the percentage of casein or water in milk within ordinary limits have a corresponding influence on the rate of moisture separation, the tendency being always toward the production of cheese with uniform moisture content. The addition of water to milk does not increase the moisture content of the resulting cheese, as the curd from watered milk gives up moisture more rapidly after cutting."

"The loss of moisture immediately after cutting is rapid, but decreases in speed as time passes. The rate is increased when the curd is taken out of the whey and piled. After this it is rapidly decreased and is again increased when the curd is salted. The loss of moisture, per pound of moisture in the curd, is greatest at the time the curd is taken out of the whey and piled."

"High acidity and high temperature induce rapid separation of the whey immediately after cutting. If the surface layers of the cubes are dehydrated by too rapid initial separation, so as to form a skin covering an interior pulp, the subsequent separation of whey is delayed. The yield of cheese is decreased, due to an excessive loss of whey through the broken curd walls, when such curds are taken out of the whey. Curds from overripe milk should be heated later and more slowly after cutting than curds from sweet milk, in order to avoid the skin-and-pulp condition, to insure complete removal of whey, and to avoid unnecessary loss of fat."

"During ripening the acidity of whey within and under rises much faster and higher than that of the whey surrounding the cubes, because the principal set of acid formation in the cheese vat is in the curd; whey gains most of its acidity from the curd."

Money Back in Four Years

Geo. H. Barr, Chief, Dairy Division, Ottawa, Ont.

Any cheese factory can pay for a cool curing room in four years' time on the profits made on saving on the shrinkage alone. Many factories can do it more quickly. How many years does the average factory patron expect to live? If a cool curing room can be paid for in four years and then we have that sum coming back to us without additional outlay for the rest of our lives, where is there anything else that affords as good returns?

If the cheese is held only a week, a cool curing room would pay. If our dairymen were right up-to-date, we would have more cool curing rooms.

Makers to Blame.—I do not mean to lay all the blame on the milk producer for the poor quality of some of our cheese and butter. The cheese or butter maker who receives bad milk is worse than the patron who sends it. How are we to get the goods that will command the highest prices if we do not care for the milk during the warm weather? Letter than many have done in the past? As I visit the factories, on Monday morning especially, I find that if one would reject all that was not fit to make finest cheese, we would not have much left. The fact remains clear to me that in those cases the makers have taken such milk previous to this and did not complain and many patrons not knowing the necessity of having sweet milk have gone on and on in the wrong way of caring for it. Makers who take milk like that must make it up at a great loss, both in quality and quantity.—F. T. Morrow, Dairy Instructor for Prince Edward Island.

I believe that patrons generally know how to take care of milk. Poor milk is due to carelessness. Good patrons should force the careless ones to take better care of the milk since they, the good patrons, are the losers.—R. W. Ward, Peterboro Co.

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