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 letters to Creamery Department.

Details of the Cream Trade with U. S.

D. Vass, Huntingdon Co., P.Q.

There are some 20 creameries in the County of Huntingdon shipping cream to the U.S. As in every business, some are successful and others dissatisfied. There are three different systems practised in dealing with the patrons and disposing of the cream shipped. The system which appears to give the best satisfaction is the buying of milk, separating the cream and returning the skim milk to the patrons. This cream is pasteurized and shipped direct to the United States cities for consumption. The prices paid the patrons are 90 cts. to 95 cts. a 100 pounds of milk. The factories shipping in this way are operated by New York syndicates.

Another method is where the cream is being delivered by Canadian factory owners to butter factories on the American side, the cream being tested and the factory paid for butter-fat the same as an ordinary patron. There seems to be considerable dissatisfaction arising from this system. The third system—the system by which I dispose of the product of my factories—is to take the cream across the line, lease the use of a butter factory, employ my own maker, and dispose of my own butter, paying my patrons the net returns, less the cost of cartage and separating.

PROFITS TO THE PATRONS.

My sales from June 6th to 25th, inclusive, were F.O.B. U.S. factory 27¾c, 27¾c, and 27⅞c, the cost of customs duties, manufacturing, storage and cartage for the three weeks, being 2.45-100c, a lb. of butter, making a net price of 25 4-100c, F.O.B. my factories, or practically 3c. a lb. over the Canadian markets. So much for the patrons' side of the profits. In speaking of the manufacturers' side of the profits, I can only speak for myself, and say that the difference in profits of shipping the cream or manufacturing for the Canadian markets, is practically nil. If any, it is in favor of manufacturing for the home market.

REDUCES CUSTOMS CHARGES.

I have the cream separated so as to test 52 to 55 per cent butter fat, thus reducing the customs duties and entry to a fraction under 1 1-8cts. for a pound of butter, the duties being five cents on each wine gallon of cream, together with a daily entry of 30 cts. on each factory of a value of less than $100. Should the value exceed that amount it is compulsory for the shipper to purchase a United States councillor's certificate at a cost of $2.50.

ADVANTAGES OF MAKING IN THE U.S.

There is another small factor in favor of the patrons in shipping cream. By retaining a greater amount of moisture in the butter than is permitted by the laws of Canada, the overrun of the churn is from 18 to 20 lbs., against 14 to 16 lbs. of an overrun in Canada. Our American cousins prefer butter salted at six to seven per cent, while the demand of the Canadian is four per cent., and that of the mother country is from two to three per cent. This naturally increases the average of butter from 100 lbs. of milk. I expect to pay my patrons fully as much per 100 lbs. of milk as cheese factories will pay, returning my patrons skim milk in place of whey. With the high price of pork this means quite an item with the farmer.

Cause of Variations in Tests

Patrons of our creamery are continually up in arms over the way their tests vary. What is the cause of so much variation in the tests? Some have new separators; others have been changing their cream screws. Please give full explanations.—R. F. W., Alberta.

There are so many factors which influence the richness of cream that it is often impossible to state the exact cause of a patron's test going up or down. Your correspondent states that some of his patrons have new separators and these may not be adjusted to give sufficiently rich cream. Others have been altering the cream screw which will of course change the percentage of fat in the cream.

Besides this there are several other factors which will influence the richness of the cream. There may be several cows freshening in the different herds at this season of the year, and if such is the case the milk of the herd would likely decrease in fat content as a separator takes a definite proportion of the milk as cream, say one pound of cream from 10 lbs. of milk, so the lower the milk tests the lower will the cream test.

Any variations in the temperature of the milk, the rate of inflow of the milk into the separator bowl or the quantity of water or skim milk used to flush the bowl, will affect the richness of the cream. The test will be reduced by lowering the temperature of the milk to be separated feeding the milk more rapidly into the bowl, or by using more water or skim milk in proportion to the amount of milk separated, to flush out the bowl, after finishing separating.

Perhaps the most important factor in altering the richness of the cream, other than changing the cream screw is the speed at which the separator is turned. The handle should always be turned as many revolutions per minute as stated in the printed directions sent out by the manufacturer. Lessening the speed not only gives a thinner cream, but causes an excessive loss of fat in the skim milk.

One need not expect exactly the same test from time to time unless all conditions are exactly the same at each time of separating. That is the richness and temperature of the milk, speed of machine, rate of inflow of milk into the machine, and proportion of water or skim milk used in flushing the bowl must always be exactly the same each time milk is separated. This is of course absolutely impossible and no patron, even if doing the most careful work possible in separating need be surprised at variations in the cream test from month to month. And the more widely the conditions under which the separation is done vary the more widely will the test vary.—J. F. Singleton, Creamery Instructor, Kingston.

Renew your subscription now.

Ratio of Milk to Butter

What is the average quantity of milk for a pound of butter in summer?—P. G., Frontenac Co., Ont.

The average number of pounds of milk for a pound of butter is about 25. Strictly speaking, there is no such thing as an "average" pound of milk for a pound of butter. The number of pounds varies according to the percentage of fat which the milk contains, the loss of fat in cream and churning, the amount of salt, curd, and moisture incorporated with the fat and many other points which make it impossible to say what weight of milk is required to produce one pound of butter.—Prof. H. H. Dean, O.A.C., Guelph, Ont.

Falling off in Butter Yield

From two cows I made 74 pounds of butter in May, and only 57 pounds in June. The cows received the same care and feed, but we did not get the results. We use a hand separator. We keep salt before the cows all the time. Would too much salt cause this decrease in butter production?—W. V. S., Lennox Co., Ont.

If the cows are allowed access to salt, they are not likely to take too much unless it has been denied to them for some time previously. It is likely that the cause of the trouble is in having the cream too thin. I should advise changing the cream screw so as to obtain cream with a higher percentage of fat, which would produce a more exhaustive churning and leave less butter in the buttermilk.—Prof. H. H. Dean, O.A.C., Guelph, Ont.

Cover and Cool the Milk

The advice to put the covers on the cans as soon as milking is finished, as recommended by Mr. G. H. Barr, is contrary to what has been the usual practice among the cheese factory and creamery patrons. It has been popularly supposed that the milk should be left uncovered to facilitate the escape of "animal heat," "animal odors," and so on. On the other hand, in the high class dairies where milk is bottled for direct consumption, the practice is to put the milk in a tightly stoppered bottle as soon as possible after milking. Mr. Barr's experiments proved that the best results were obtained by covering the milk. It protects it from insects, dirt, falling leaves, or other dirt, which may find entrance and thus carry to the milk many injurious germs of one kind and another. It also prevents the evaporation from the surface of the milk that causes the formation of a tough, leathery surface of cream, much of which is lost in the process of cheesemaking.

WATER FOR COOLING.

The quantity of water that is required to sufficiently cool a given quantity of evening's milk depends on several conditions, such as the temperature of the water itself, whether the evening is a cool one or a warm one, and at what hour the milk is delivered at the factory in the morning. The latter point is important. Milk that is delivered at the factory at 6 a.m., as is the practice at many factories, does not require as much cooling as it would if delivery were delayed two or three hours.

Generally speaking, if deep well water is available at a temperature of 50 degrees or under, a quantity equal to that of milk will be required. If the supply of water is limited, ice can be used in it to good advantage. One pound of ice has a cooling power in this connection equal to eight to ten pounds of the coldest well water.

As a cooling medium water is a better than air. Thus if the milk cans are surrounded with water at a temperature of 50 degrees, cooling is effected more quickly than if the cans are surrounded with air at the same temperature. Quick cooling is important.