



GRAIN, LIVE STOCK AND PRODUCE MARKET

Cream Producing Industry

There is one phase of the agricultural industry to which a large majority of farmers pay but little attention. This is the shipment of cream to the large cities. It is a well known fact that in practically every city on the continent there is, nearly the whole year round, a shortage of cream for butter-making purposes. This is especially true of the cities of Western Canada. In every city of the Prairie Provinces there is always a shortage of both cream and milk. It is with the former commodity that this article will deal.

The first point to be impressed upon the farmer who wishes to ship cream to the city creameries is that he should always ship sweet cream. Heretofore this has not always been practical in Canada on account of the discrimination in railway rates against the sweet cream, the rate for carrying which was much higher than for conveying sour. The recent ruling of the railway commission compels the express companies to carry both grades at the same rate. Butter-fat from sweet cream is worth about three cents more per pound than that in sour cream. Butter-fat from sour cream is, at this writing, worth 28 cents per pound, f.o.b. station, and from sweet cream 31 cents. The advantage of shipping sweet cream is obvious.

Should Test Cream

The shipper should provide himself with a Babcock tester, which he may obtain for five dollars. With this he can ascertain the butter-fat content of his cream. The cream should test from 80 to 85 per cent. butter-fat. If the milk is skimmed any closer than this the separator will not skim clean and carriage is paid on milk which does not count in the reckoning at the creamery. The Babcock tester enables the farmer to know at all times just the grade of cream he is shipping.

But a shipper should not think that the butter-fat content is the only thing which sets the value of his shipment. For some time past the competition for cream has been so strong that the creameries would pay a high price for very poorly conditioned butter-fat. But now they state that they are going to grade all cream shipped to them. By observing care in keeping the cream the highest price per pound of butter-fat may be obtained. That is, all butter-fat will be graded and the better the condition the higher the price that will be paid. Thus it comes into the province of an article on the market page to treat of the methods which should be employed to place the product on the market in the best possible condition.

"Cleanliness" the Motto

In the first place, the farmer should adopt as his motto, "Cleanliness," observe the strictest rules of sanitation everywhere—pails, stables, cows, shipping cans, and above all the separator, should be kept absolutely clean. Unless the milk and cream are kept clean there can be no hope of the cream arriving at the creamery in first class condition. Managers of the leading Winnipeg creameries all state that the cream producing industry of the West was given a severe setback by the misrepresentations of many separator salesmen who, in an excess of enthusiasm over the merits of their respective machines, have informed purchasers that it is not necessary to wash them more than once a day. Every farmer should make it his absolute rule to wash the separator every time it is used, regardless of how small the amount of milk that has passed through.

The milk should be separated—in a clean separator—immediately after milking. The cream should go into a can that has been washed, scalded and aired. This can should then be immersed in cool water and the temperature lowered

to 50 degrees Fahrenheit. Then the cream may be mixed with that previously separated, which should also be at the above temperature at all times. Never should warm cream be mixed with the cool batch. The cream should be stirred frequently to keep it at an even consistency.

A Cream Cooler

It is not much of a problem, in this country, to keep the cream properly cooled. Make a water-tight box, large enough to accommodate the cans generally used. Around this place studding of two-by-fours, both at the sides and bottom, and on this studding build another box, not necessarily water-tight. Make also a double cover. Fill between the two boxes with dry mill shavings or sawdust. This forms an insulation from heat. In practically every district of the West the water supply is as cool as 45 or 46 degrees. This is cool enough for keeping the cream. Put water in the inner box to the level of the cream in the cans, put in the cans and put the cover on the box. In the warmest weather it will be found that the water may be left several hours without the temperature rising more than four or five degrees.

The cream shipper should use discrimination in selecting his cans. It is foolish for the farmer who produces a couple gallons of cream per day to invest in ten gallon cans. Cream should be shipped at least every third day, if possible, every other day. Thus the farmer should choose cans that he can fill in that space of time. Also a can should be chosen that is well rounded at all the joints, as it is extremely difficult to keep sharp angles clean. When the cans are emptied at the creamery, they are washed and scalded before being shipped back to the farmer. Many farmers have the idea that this cleaning should be sufficient and that the returned cans are ready for use without washing. This is not the case. The cans come back in warm cars and, in the summer, stand around on hot, dusty station platforms, allowing any bacteria which may have gained entrance to multiply rapidly. Cream put into such cans will sour quickly. Every farmer should make it his invariable rule to thoroughly wash and scald every receptacle he uses for milk and cream. It is the best plan to use cans of a size that can be filled in two days so that shipment may be made that often.

Variation in Tests

Many shippers to city creameries, who do not use the Babcock test on their own cream, are surprised to find the variation in butter-fat content of their shipments. The farmer who tests himself will find that there are great variations in milk from the same cow; many times there is a great difference in the morning and evening milk of the same day. The subject of variation in the test of separator cream was experimented upon last year by the Kansas Experiment station. The results of the work were published in bulletin form. Six causes were given for the variations, any or all of which may occur on any farm, and contribute to the differences that are to be found in the creamery patrons' statements from time to time. The matter of improper reading of tests was not considered among the causes, this being something that can be avoided by exercising proper care. Among the causes of variation are several minor ones, such as that of sudden starting of the separator, difference in quality of morning and evening milk, improper oiling, etc.

The chief six ones, however, and the amount of variation in each case, as determined by the Kansas experiments are as follows:

"1. The temperature of milk makes a

difference of from one to five per cent. in the test of cream at average skimming temperature, greater variation being caused in extreme cases.

"2. The amount of flush water used with average skimming temperatures makes a difference of from one to three per cent., in extreme cases making a difference as great as 10 per cent.

"3. The variation in steadiness of the bowl makes a difference of from two to 16 per cent., depending on the amount of vibration.

"4. The variation of the speed of the bowl causes a difference of from one to 13 per cent. in the test of cream, depending on the variation in speed.

"5. The amount of milk allowed to flow through the separator bowl from one-half to full capacity makes a difference of from one to six per cent., depending upon the divergence from full capacity of the machine.

"6. The amount of acid in the milk causes an irregular variation in the test of cream, depending upon the amount of acid it contains. Where the acid

reaches a high point, 3 to 4 per cent., for instance, and the separator is used continuously for an hour or more, it will eventually clog the same as in the case of cold milk. The cream will then become thicker until the separator is entirely clogged. The extent of the clogging will depend on the amount of acid in the milk and the size of the machine. The higher the acidity and the smaller the machine the sooner the separator will clog."

Markets are Many

The question of the proper market is not a difficult one. The cream producers of Manitoba have a market second to none in Winnipeg. Creameries which supply this big market are located in the city and in Brandon, besides many small creameries at country points. In Brandon there are the Brandon Creamery & Supply Co., Ltd., and a branch of the Crescent Creamery Co.; in Winnipeg, the Crescent Creamery Co. and the Carson Hygienic Dairy Co. All of the above companies are absolutely reliable and can handle all the cream



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