

# Practical Butter-making

## How to Pack for Shipping

Butter-making on the farm is an industry in which every farmer of the West is interested to a greater or lesser degree. To some, butter-making is a valuable by-product, but the majority of the Western farmers, as yet, simply keep sufficient cows to supply the needs of their own tables. There are various reasons why the products of the dairy do not receive the great attention from the average Western farmer. In the first place, perhaps one of the greatest disadvantages he has to contend with is the poor markets for such by-products, and secondly, the farmer has not the time to devote to such an industry, in these days of extensive wheat raising. The long, cold winter is also a drawback, to a certain extent, as the average farmer is not in a position to build barns for the accommodation and proper care of the dairy herd.

Although the average Western farmer does not produce butter for the markets, he should at least produce sufficient for his own table, and the quality of such should be of the best. It is a striking fact that much of the Canadian marketable butter is deficient in quality.

### Cleanliness Essential

The first essential of good butter-making is cleanliness. To begin with, if the cows are milked in the barn, the building should be kept clean and wholesome, having an abundance of fresh air. Nothing in the food line is so easily contaminated as milk, and heavy odorous vapors will affect it as surely as if poison were put in the milking pails. It is the general custom during the summer months to milk the cows in the open air, but too often the cows stand in a filthy corral which is little more conducive to cleanliness than a stomp, unkempt stable. Besides having the cows in clean places at milking time, the milkster should be cleanly dressed and use a sanitary pail, which eliminates the chances of dirt getting into the milk to a great extent.

It is a matter of taste whether or not the cream is separated by the use of the cream separator or the deep cans. The former system is the most economical and also one that insures the dairyman getting all the butter fat that is in the milk. If deep cans are used, the milk must be kept in a cool place, and even then it is difficult to get all the butter fat. In this latter respect, unless the milk is kept in an absolutely clean place there is great danger of it becoming contaminated. If cooled in a clean running stream it is all right, but too often the cans are set in an old well or some spot where there is stagnant water, where the milk surely becomes tainted.

The cream when separated should be kept as much as possible in an even temperature; between sixty and seventy degrees is about right. During the process of ripening the cream undergoes a change, there is an increase in the number of bacteria and a reduction in the amount of milk sugar due to the formation of acid. For this reason the cream must be kept in a fresh place, absolutely free from poisonous germs. The cream also becomes thicker and sour to the taste. A characteristic aroma and taste are developed which is essential to good butter.

### Ripening Cream

Frequently it is the case when churning is done every day to ripen the cream by the aid of commercial starter. By this means the growth of lactic acid bacteria and the formation of lactic acid can be controlled. Thus the growth of undesirable bacteria can be almost entirely prevented; there is thus less difficulty in making a uniform quality of butter, the butter keeps better and the flavor is usually greatly improved. Commercial starter is prepared by obtaining a small bottle containing a culture of lactic acid producing bac-

teria. Instructions are usually sent with these, but the following method is the one usually followed.

Take one quart of clean, sweet milk in a sterile glass jar. Heat the milk gradually in water until a temperature of two hundred degrees Fahrenheit is reached. Hold at this temperature for at least one hour. Then allow the milk to cool to sixty degrees Fahrenheit, being careful not to place too suddenly in cool water. As soon as sixty degrees Fahrenheit is reached the contents of the bottle is carefully added to the milk and mixed thoroughly. The mixture is now allowed to cool to seventy degrees Fahrenheit and then retained at this temperature for twenty-four hours, when it should be sour. This is called a "mother starter," or "starter line," and is to be used in ripening the cream. But in preparing starter for the following day, take one hundred pounds of clean, sweet skim milk in a previously sterilized can and heat it to at least two hundred degrees Fahrenheit for at least one hour. Then cool rapidly to seventy degrees and add the contents of the quart jar prepared the day previous, mixing it thoroughly through the milk with a sterilized dipper. Hold at seventy degrees for twenty-four hours, when it should be sour, coagulated and clean in flavor. A small amount of this is saved out to inoculate the starter for the following day, and process can be repeated and carried on in the same manner from day to day. A great mistake is often made in holding cream too long when it is ready for churning, as the longer it is held the more the flavor and the quality of the butter suffers.

### Churning

Just previous to churning the temperature of the cream should be lowered. The higher the temperature the sooner the churning process will be completed. Higher temperatures cause the butter to come in soft lumps instead of in firm granular form. The high temperature also causes too much butter milk to remain in the butter and thus mottles are left in it, and its keeping qualities are also impaired. On the other hand, too low a temperature at churning causes difficult churning by increasing the viscosity of the cream, often, too, the granules become so hard that the butter takes up salt slowly and is difficult to work. Another defect is that, if the granules are too firm and cold, too much water is lost from the butter in working, thus decreasing the overrun.

Under normal conditions the cream should be churned between fifty to sixty degrees Fahrenheit and the churning should be completed in at least one hour.

### Preparing New Churn

In preparing a new churn for use it should first be washed out with plain warm water. Then rinsed with hot salt water. Then salt water should be left in the churn for at least twenty-four hours, so that the pores of the wood become closed and filled with salt. If desirable, the churn may be steamed on the inside before being soaked in salt water. After this treatment the churn is rinsed in cold water and is then ready for use.

The churn should be kept in a clean, sweet condition. After use it should be rinsed with warm water, then rinsed again with hot water, and finally rinsed again with hot water in which some lime has been dissolved. Sometimes steam and salt solution are used for the final rinsing, but they are not so satisfactory as hot lime water. Nothing will do more to preserve the sweet, fresh condition of the churn than this simple method. The churn should be kept in a dry place, and before using again it should be thoroughly washed with hot salt water.

To determine when cream is churned enough, the granules should be about the size of corn kernels, and the buttermilk should be thick in color, the butter floating well up in the milk. When cream is churned too long the granules become too hard and contain too much buttermilk, which is difficult to remove, and thus there is a danger that too much moisture will be incorporated in the butter. If the cream be of poor flavor the excessive moisture and buttermilk injures the keeping quality of the butter. By not churning long enough the granules are too small and many of them are lost in the milk. There is also difficulty in holding moisture in the butter and in many cases leaky butter is the result. In order to churn properly the cream must not be too thick nor too thin, and must be of correct temperature; also the churn must not be overloaded.

Frequently cream has a frothy appearance. This is often caused by the cream being too fast at churning and the overchurning of the churn. For immediate treatment a little warm water should be added around the outside of the churn, and perhaps a little may be added directly to the cream. If the churn is allowed to stand for a time the froth may settle and the churning can then be completed.

### Washing the Butter

Just as soon as the fresh buttermilk can be removed the butter should be washed at a temperature as near as possible to that at which the cream was churned. When too cold water is used the butter is chilled, thus the escape of the buttermilk is hindered. Too cold water also may cause a fatty appearance in the butter. Too warm water also injures its texture, causing it to become greasy and soft. Sometimes one washing is enough, but usually two or three washes must be used. The last water should run away perfectly clear. If the granules of the butter are very soft the last water may be cooler than the first, but, in order to retain a high moisture content in the butter, the water must not be too cold. Sometimes when the flavor of butter is not good, excessive washing is resorted to, but this does not usually have a very beneficial effect, especially if the bad flavor is of bacterial origin. Some volatile food flavors, however, are materially decreased by washing in good water.

### Salting Butter

As soon as the butter has been properly washed the salt should be applied by passing it through a fine-meshed sifter in order to prevent lumps of salt entering the butter. The salt should be given plenty of time to dissolve before the butter receives its final washing working. The amount of salt put in the butter depends upon the time the butter is to be kept, and upon the market requirement; also the moisture content of the butter and the amount of working the butter receives.

Frequently butter is brine salted, that is, the butter is soaked in salted water. There is, however, an increase of labor in this system and also too much moisture is liable to get into the butter; sufficient working is not given. The average salt content of butter is two per cent. Excessive salting causes gritty butter. The average composition of good butter is as follows:

Pat ..... 84.60 per cent.  
Water ..... 12.73 " "  
Card ..... 1.3 " "  
Salt and ash ..... 1.97 " "

### Packing Butter for Shipment

There are few things of greater importance to the general public than good milk, good cream and good butter and cheese. If all producers of milk for town and city consumption could only realize that the very lives of the children in cities, towns and villages depend very largely upon the purity of milk

supply, they would not do some things they do, and would do some things they do not do.

The producers of milk and cream have great responsibilities, because milk which is not treated properly within half an hour after it is drawn from the cow will never be in the best condition for consumption or for making cheese and butter. Leaving out the subject of cleanliness, proper packing has a great deal to do with the matter of obtaining a good price for butter. After careful inquiry the writer has come to the conclusion and is assured by retailers that it is correct: It will pay a producer of real good dairy butter to work up a connection with a city retail house, but the one who produces a medium or poor grade butter will do better to trade it in the country store.

### Will Pay Cash

There are many reasons for this. Perhaps the one that will carry the most weight with the producer of fancy butter is that the city retailer will pay cash for each shipment as it is received, and the producer will get as high a price as the quality of the butter warrants. That is, the shipper of the "fancy" butter will get more per pound than one who ships butter that grades only "good." This is not the case at the country store. The country dealer, in practically every case, pays one flat price for all the butter he purchases, and that price is necessarily figured on what he can get for straight runs for stock; thus, while a few get really more than their butter is worth, many of the traders at the store get less. The reason for this is obvious. The country dealer is not simply a purchaser of butter; he is, besides, a retailer of household goods. He must keep his trade in these and treat all customers alike. If he pays one more than another, he makes an enemy who will carry his trade to the rival store. Hence, in order to keep everybody satisfied, he must pay each the same price, and that price low enough to assure him that he will lose nothing, even if the quality of the butter is poor.

The larger city retailer labors under no such condition. He is not dependent upon the country for the sale of his wares. He also has a strong demand for the best kind of butter and, in order to supply this demand he is willing to pay good prices. And, besides, he pays in cash, not in trade, so most of the country stores. Butter should be shipped in one-pound prints or one-gallon crocks. One-pound prints are always popular, while the one-gallon crocks always appeal to the housekeeper as it will go into the ice chest and not take up much room, while a larger crock is much more cumbersome. The prints should always be covered with clean, white parchment paper, while a piece of the same should cover the crocks. A good plan is to have the parchment paper printed with the name of the farm and the producer, thus:

### FORESTDALE FARM BUTTER

Mrs. B. B. Blank

Blankton ..... Man.

Then if the butter is really good, the purchaser will ascertain the name on the package and always demand the same. Indeed, there are a number of shippers who deal with retail firms in Winnipeg whose shipments are sold before they reach the store. These shippers can get any price within reason for their produce, and this reason has been reached by simply having their name printed on the wrappers, while if the paper had been plain the trade would never have been built up. But after such a good reputation has been built up the producer should be very careful to keep up the standard, for only one shipment of poor stuff is

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