

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.

The Preparation and Care of Culture

Concluded from last week

Mistakes are often made in taking too long a time to heat the milk. The cans are placed into a tank or barrel, the steam turned on and let boil for several hours without stirring, which often gives the milk a burnt flavor, also too long a time is taken to cool them to 60 or 75 degrees, from 185 or 180 to 100 degrees. I do not think any serious trouble will start, but I am of the opinion that where cultures are left standing at a temperature anywhere from 100 to 70 degrees for a long time uncovered before being inoculated with the pure lactic acid germ, the undesirable germs have every chance for reproduction. If makers would provide themselves with a good pasteurizing box, also cans as previously described, and have the water heated somewhat before placing the cans of milk in the box, it would not take much time for pasteurizing, and better results would be obtained. I have found that where the making of culture involves a lot of time and work, it is often done in a very haphazard manner.

Good milk selected at the weight porch, pasteurized to a temperature of 180 to 185 degrees, and cooled immediately to 65 or 70 degrees, should give us a medium to be ready for inoculation. We find it necessary to propagate the culture several times before using, and sometimes we find the starter with not the best of flavor and needing further propagating. A possible explanation is, that each organism must become adapted to the medium in which it grows before it gives its characteristic odor or flavor in that medium. The cultures, as sent, contain the organisms in a more or less dormant condition. These organisms regain their vigor and increase their acid-forming properties after several propagations.

No hard or fast rule can be laid down to the temperature or the amount of mother culture to be used. It will depend somewhat on the length of time from making till using, and the temperature at which it is held, but no more should be used than will give the desired acidity. By testing the acidity from day to day, the maker will soon know how much mother culture to add to produce the amount of acid required when ready for use, but I would prefer using a little more mother culture and growing it at a low temperature, than to use less culture and hold it at the higher temperature until ripe. A smoother texture and better flavor will be secured, and there will be less danger of over-ripening.

Liquor and Tobacco Habits

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Consultation or correspondence invited.

We find that when a culture has from 65 to 75 and not over 80, it gives the best results.

We are reminded that the under-ripening of starters is just as important to guard against as over-ripening. Prof. McKay tells us that about the time milk begins to turn sour it has a rather disagreeable flavor.

After more acid develops, the undesirable flavor begins to disappear, and the milk gets a clean acid taste. An explanation is given by Prof. Storch, the well-known authority on cultures; he tells us that the disagreeable flavor is due to the action of undesirable organisms during the first souring stage, and as the souring progresses these germs are subdued and gradually crowded out by the desirable acid-producing types.

Before using a starter, I would remove one or two inches of milk from the surface of the can with a sterilized wire-handle dipper, as the surface is liable to contamination from outside sources, and break up the remainder by stirring well in can. This is the best time to take out a small quantity to propagate the culture for next day. Too many cultures are let set around in cans and pails, also dipper, which can be contaminated before using.

The only vessel that should be used to hold the culture for propagation should be sterilized glass jar, kept air-tight and in a cool place. A good plan practised by some of the best makers is to keep out an extra sample, seal it air-tight and put it in a cool place. Should anything happen to your starter through the night by being upset, or by steam-pipe bursting, you always have a mother culture in good condition. A culture in its good condition when you open the can in the morning and find the whole mass firmly coagulated, no liquid to be found on top, and having a mild, acid flavor, pleasant to taste and smell.

Little oversights are generally the beginning of serious mistakes. The time has come when we must study our cultures more, to know how to do with them, and what they will do for you. If you get a good culture or a poor one, you must know just what you are handling, and what results you are going to get from the operation. A culture properly prepared and cared for, and judiciously used, has been found a benefit to the dairy industry.

Ed. Note.—This paper was prepared by Mr. E. H. Hart, Dairy Instructor, Ingersoll, Ont., to be read at the convention of the Western Ontario Dairyman's Association. Owing to a severe cold, Mr. Hart was unable to read the paper.

Cheese Exporter's Views on Whey Butter

Editor, The Canadian Dairyman and Farming World.—We cannot understand how patrons can be tempted into the manufacture of "whey" butter, unless they want this butter produced for their own table use. No one in the cities would use such butter, even for cooking purposes, if they knew it. We doubt whether the government would allow this, as the tendency would be to injure the quality of the cheese, and therefore the factory might be compelled to brand its cheese "skim" in large letters, according to law. In our opinion, any cheese factory that manufactures its cheese in such a way as to leave sufficient fat on the whey to make into butter, is not making as many pounds of cheese out of the milk as it ought to, and personally we should be afraid to buy cheese from any such factory.

We may also say that we received cheese for a part of last season from a factory whose output we have had for years, and we were surprised to find the quality had deteriorated and



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did not understand it until after we had found that the reason was that they were making "whey" butter.

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Cheese Factories and Creameries of Canada

The finest piece of work that has been turned out by the Dairy Division of the Dominion Department of Agriculture has just come to hand in the form of several maps showing the cheese factories and creameries of Canada. The work is high class and very complete. These maps should prove extremely valuable. Not until one sees them is it possible to gain any idea of the immense number of factories in Quebec and Eastern Ontario. The factories are shown on the map in such a way that it is possible to tell the cheese factories from the butter factories. The Dairy Division is to be congratulated upon this piece of work.

Go Slow on Whey Butter

Dairyman should go slowly in the development of the whey butter business. In Eastern Ontario there is considerable agitation looking to the formation of companies for the manufacture of this product. Our advice is to wait awhile until the question has been thoroughly investigated. While one or two individuals claim to have made a success in this line, it has not been clearly established yet that the business is a feasible or profitable one.

The making of whey butter is not a new idea. Some years ago it was taken up by one or two cheese factories in Western Ontario, and the conclusion reached was that it was not workable, and that the business could not be made profitable for the average factory. If it is feasible at all it must be carried on on a large scale. The high price of butter has given an impetus to the movement. But where would whey butter be un-

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