

part of its cream-yielding power, but that can be remedied by heating it up again the next morning to about 85 or 88 degrees.

*By Mr. Trow :*

Q. Why not heat it up to its natural temperature? A. We find that an excess of caseous matter is encased in the cream of heated milk, and the higher the temperature the more caseous matter is found in the cream.

*By Mr. Fisher :*

Q. If you collect the milk but once a day, you must keep a portion of it over night till the next morning. Do you think you get as much butter by keeping it over night and heating it up afterwards to 88 degrees? A. Yes, we have worked on that plan during the last three years, and we have obtained more butter from the same quantity of milk than any other creamery in Canada. We have obtained on an average for the whole season four and a-half pounds of butter per hundred pounds of milk. Of course, you must take into consideration the fact that all this milk comes from those little French cows which give very rich milk; and we are confident that we can get from 10 to 15 per cent. more butter by this system than by any other.

Q. Do you separate the cream as you collect it that same afternoon? A. We get the milk in the morning, and we start separating as soon as the milk comes in. We generally receive it in a vat large enough to hold the quantity expected. Then it is heated by a special heater, which receives the milk in sufficient quantity to feed the separator.

Q. You put it into the separator from the heater? A. Yes.

Q. At what temperature? A. At about 88 degrees. It goes right into the separator and comes out directly, part cream and part skim milk.

Q. What do you do with the cream after it is separated? A. It must be cooled down to about 45 degrees. I would advise cooling it even lower than 45, because cooling the cream counteracts the deleterious effect of the previous heating. A certain amount of caseine has been retained in the cream, and the cooling has the effect of separating it again. For that operation we have a specially constructed cooler, although it can be done by cooling with water and ice, in the ordinary way. We let the cream remain in the vat until evening. The cream vat is built just the same as a cheese vat, with similar heating appliances, and in the evening we prepare the cream for churning, which takes place next morning.

Q. You do not let the cream ripen long? A. We do not keep it longer than 24 hours. We want to have it right for churning every morning at about the same temperature, and in order to have it so we sometimes use artificial means. We lay great stress upon having the cream in good condition for churning.

Q. At what temperature do you keep it? A. The proper temperature at which the cream should be kept depends some upon surrounding circumstances. In ordinary weather we would have it at about 60 degrees; if it is cool, we would heat it up to 65 degrees; and in the fall, when the weather is still cooler, we might use about 10 per cent. more or less of sour milk, or sour buttermilk, to produce the souring process in the cream. Experience, only, can determine the point to which it should be kept.

Q. You think that to use these separators you must also have heating and cooling apparatus to regulate the temperature of the cream? A. In the factories, yes; but not necessarily in the private dairy, because in a small dairy you can dispense with the heating and cooling of the milk and cream.

Q. You say you would require to have your cream cooled down to about 45 after it has been separated from the milk. How would you do that in the small dairy unless you have cooling apparatus? A. In a small dairy you would not heat the milk, and there would not therefore be so great necessity for cooling it down.

Q. In the ordinary process, after the cream has been separated, it would require to be ripened. Supposing that in a private dairy the cream is separated from the milk in the way you speak of, it is perfectly sweet? A. Yes.

Q. Do you not think it ought to be ripened before churning, or is it best to churn it sweet? A. That all depends on the market. If you are making for the local market we like to have butter with an aromatic flavour, as do all northern