

ing rooms reached the consumer in better condition than non-cooled cheese. The buyers, however, should encourage such methods. Last year, in Prince Edward County, they had paid one-quarter cent extra for cool-cured cheese, but recently little or no distinction was made.

Mr. Herns.—The construction of cool-curing rooms in Western Ontario seems to be at a standstill. Patrons will have to bear at least half the cost. Under present conditions, the proprietor runs a great risk, as he may lose patrons by one cause or other, and then not have enough cheese to make adequate returns from cool-curing.

DISTRIBUTION OF WHEY.

As to pasteurizing whey, it was pointed out that many patrons objected to paying for pasteurization, and then get no whey. Something should be done to guarantee every patron his share. It was not fair to turn all this work of looking after the whey over to the maker. The patrons should attend to the distribution of the whey. Some factories had a man to deal it out properly, and then wash the tanks.

ALKALINE SOLUTIONS.

The difficulties that arise by the use of alkaline solutions not being of uniform strength were mentioned by Mr. Herns. It was suggested that arrangements be made to provide a standard solution to makers. A local maker advised that those interested make their own solution. He had made his own alkali, at low cost, and had no trouble during the past season. Mr. Herns stated that some had urged that district instructors provide the solution. They could then be absolutely sure that no damage would result from the use of solution of wrong strength.

Instructor Geo. Travis, of Tillsonburg, considered that a competent maker need not be fooled by alkali solutions of wrong strength for very many days. There were three or four times in a day a man could know the situation. The acidimeter was commendable, but too much confidence should not be placed in its use. The hot iron, also, could be used to advantage. The frequency of mistakes in the strength supplied by druggists led those present to favor the purchasing of the solution from reliable sources, and taking every precaution to avoid errors that had resulted from one cause or another.

Discussing defects in cheese during the hot weather, Instructor Travis referred to the small round holes so frequently found. He said that methods should be followed that would avoid the defect, but it was a difficult matter to discuss them in such a way as would equip the maker always to overcome the difficulty. It was, however, largely due to drawing down the whey to surface of curd too soon. The best plan was to leave all the whey in the vat until the curd was fairly ripe, and then, by means of a large siphon, remove it as quickly as possible.

Mr. Parsons.—Would you advise the use of the quarter-inch knife?

Mr. Travis.—Yes, particularly for fast-working curd.

Robert Green, of Cayuga, Instructor for the Brantford district, said he would not be without the quarter-inch knife. In the spring, he had found difficulty in inducing makers to purchase one, but before the season was ended all were convinced it was the proper thing. One of the makers said he would not be without one in his factory if he had to pay for it out of his own pocket.

APPRECIATE INSTRUCTOR'S SERVICES.

As a slight token of appreciation of the good work done in the Simcoe District by Geo. Travis, local instructor, and also of the Department of Agriculture in supplying such instructors, the following letter, signed by the proprietors and the makers of the district, was read:

"Inasmuch as the Department of Agriculture has shown its deep and practical sympathy with the dairy interests of our country, in setting aside a grant to provide for further instruction and education along this line, and we have been favored with the experience and abilities of our esteemed instructor, Mr. Geo. Travis, whose energy and counsel has already told so favorably on the dairy interests of this district, we, the proprietors and makers of the cheese and butter factories of Simcoe District, desire to place on record our approval of the above-mentioned course of the Department of Agriculture, and express our thanks and satisfaction for the benefits received through the services of our instructor."

KNIFE BETTER THAN EXPECTED.

Your valuable premium to hand all safe. It is a first-class knife, far better than I expected. Wishing your valuable paper and staff every success.

WM. SUMMERS.

Wentworth Co., Ont.

The annual convention of the Nova Scotia Farmers' Association is to be held at Digby, N. S., January 26th, 27th and 28th, 1909.

PROBLEMS OF THE DAIRY.

By Laura Rose.

CREAMING MILK.

To get all the profit that should result from the dairy, each separate step must have intelligent care.

It really seems too bad, after the proper care has been given to the cows and the milk, that often in the method of skimming a serious loss of butter-fat is sustained. When a person expresses regret at the loss, the old-time excuse is still given: "Oh, well, the skim milk is good for the calves." To be sure it is: too good, from the pocketbook standpoint. Butter-fat is worth from 20 to 30 cents per pound, and we want to get just as much as possible of it out of the milk, and substitute a cheaper fat for the calves.

The oldest method of creaming milk, and the one which recommends itself the least, is the shallow-pan system. There is such a surface of the milk exposed that the danger of contamination from the dust and odors is great.

It is a pretty sight to look into a clean, white-washed milk-room and see the rows of bright, shining tin pans filled with rich milk, but too often the pans are found in the fruit-and-vegetable cellar, or on the pantry shelves off from the kitchen, where the milk gets the full benefit of the cooking fumes, etc. If we want fine-flavored cream, the surroundings where the milk is kept must be clean. I have tasted the night's milk decidedly musty in the morning, from being kept overnight in a cellar which had no ventilation. The milk should not be more than three inches deep in the pans, and should set at least twenty-four hours before being skimmed; but the cream should be removed before the milk thickens. To skim, loosen the cream from the pan, lift the pan to the top of the cream can, hold back the cream with a knife to allow a little of the skim milk to wet the edge of the pan, then quickly glide the sheet of cream into the can. Do not use the old-fashioned perforated skimmer. If the cream is not thick enough to glide off, then skim it with a large spoon or shallow saucer.

Good skimming should not leave more than .3 to .4 per cent. of butter-fat in the skim milk. Where only one or two cows are kept, the shallow-pan system is the most convenient.

Before the advent of the cream separator, the deep-setting system was much in vogue. To get the best result from the deep cans, the milk should be immediately strained into the cans, and the cans set in water as far up as the milk reaches. The effectiveness of the creaming depends on the temperature of the water and the length of time the milk stands before being drawn off. Unless the cans stand in a running spring, with the water below 50 degrees, there should be ice kept in the tank with the cans all the time, summer and winter. The water should be kept at a temperature between 40 and 45 degrees, and the milk should stand twenty-four hours before the skim milk is drawn off. To set the cans in a tub of well water, or outside in the air, or on the cellar floor, and draw off the milk at the end of twelve hours, simply means a loss of about half the cream. Under favorable conditions, not more than .3 per cent. of fat should be found in the skim milk, but this means the cans must stand in ice-water twenty-four hours, and be carefully handled, so as not to mix the cream with the milk.

Where a sufficient number of cows are kept, a separator is the proper thing to have. It is hardly necessary, in these times, to enumerate the advantages of a separator over the other methods of creaming milk.

I cannot help your readers in the selection of a machine. There are many reliable makes, doing equally good work. The more important part is to make a study of the machine you do buy, so as to properly care for it, and get the best work from it.

Put the machine up in a clean, convenient place. Have the foundation level and solid. Use only the best of oil, and see that all the necessary parts get plenty of it. Get up the speed slowly. Put a little hot water through to heat and wet the bowl before turning on the milk.

The milk should not be allowed to get below 90 degrees. To overheat it does not matter, but clean skimming cannot be done with cold milk. The speed should be evenly maintained throughout the run. Give a few extra turns of the handle per minute, rather than fall below the tabulated number. I think many do not keep up the speed of their machines, and so lose an unnecessary amount of fat in the skim milk. Flush out the bowl with warm water at the end of the run, to remove all the cream from the bowl. Unless the machine is provided with a brake, do not try to check it when running down.

The machine must be cleaned each time of using. Rinse in tepid water all parts which have come in contact with the milk, then thoroughly wash in hot water containing some good washing powder. Scald well and let drain, and dry well.

the framework of the machine, and cover with a cloth to keep out the dust.

The care and ripening of the cream I will treat of in my next article.

FEEDING COWS WITHOUT SILAGE OR ROOTS.

How shall I feed my cows for milk. I have no roots, no silage, and no clover hay. I have plenty of oats, and abundance of good clean timothy hay, also good oat and wheat straw. Would you think it a good plan to feed these whole, and bran and chop dry, or would you cut and mix? I am very desirous of feeding to the best advantage.

YOUNG FARMER.

As the straw and timothy hay are distinctly carbonaceous feeds, it will be necessary, for best results, to supplement them with some more strictly nitrogenous concentrate than oats, although oat chop may constitute half of the meal ration. We would suggest as roughage, say, two parts hay and one part straw, preferably oat straw. Of course, the proportions may be varied at the discretion of the feeder. With this, feed a mixture of two parts, by weight, of oats, one part bran, and one part oil-cake or cottonseed meal. The amount of the meal ration per cow may be varied according to response. Six to eight pounds would probably be about right for a cow giving a fair flow of milk. It is a question whether it will pay, in the long run, to bother mixing feeds. If the feeder has time to spare, it might, in the absence of roots or silage, be worth while cutting a part of the hay and straw, mixing in a tight box provided with a lid, and steaming by pouring hot water over the mess, and then covering to keep in the steam. A handful of salt, and a proportion of the meal ration corresponding to the minimum fed to any cow, might be advantageously included with this steamed feed, the rest of the daily meal allowance to the other cows being thrown on top after each cow's moist feed has been deposited in the manger. There is no doubt that the steaming and mixing of part of the feed in this way will stimulate the milk yield somewhat, especially for a time, though the permanent effect may not be enough to pay for the labor involved. The writer has prepared cut cornstalks and clover chaff in this way, apparently with marked results the first season, but the second winter it did not seem to be of so much advantage. Probably some of the assumed effect the first year was due to better and more regular care of the herd, accompanying the adoption of the above idea.

DAILY VERSUS INTERMITTENT RECORDS.

Editor "The Farmer's Advocate":

The question of keeping records is a very important one for all owners of cows. This is recognized by the Dominion Government, and the Department of Agriculture has been doing good work in encouraging this work, by the assistance given in the formation of cow-testing associations. C. F. Whitley, who has charge of this work, has been very active and enthusiastic in urging dairy-men to form such associations.

In April of last year the Milton Cow-testing Association was formed here, with about twenty-three members, who all obtained their outfits. With the exception of paying for the necessary outfit, all other expenses are paid for by the Government. We fully expected that within the year many more would join, and the association would double, at least, its membership. No intelligent dairyman will dispute the usefulness of such work as is done by these associations. No one can carry on dairying successfully without keeping only good cows, and the only way to be sure of your cows is to weigh the milk, and test it, as well. Little time is taken, and one knows exactly the value of each cow.

Our surprise is great, then, to find that, in place of increasing its membership, the Milton Cow-testing Association has lost, and now can number only about ten members. This opens up a question for thought: Is this the history of other such associations? It would be interesting to your readers to have a list of all the cow-testing associations formed in the Dominion, number of members in each at formation, number at end of one year, and number now, together with a list of those (if any) which have gone out of existence. Then we will have facts upon which we can judge as to the popularity of these associations. If others are as little appreciated by the dairyman as our is, then we should inquire into the reasons and seek out a remedy. Those who remain as members here are well satisfied, and desire to continue, and it may be that soon others, if any, have felt it necessary to dispose of their unprofitable cows at any price. It may be that they have no such cows, or it may be that all such cows are not entered into the records. Nor have many, if any, started to keep daily records.

We consider the desired results of all the efforts and all the assistance of the Department should be: First, the keeping of daily records by the dairyman himself; second, the weeding out of his herd. This year will surely bring about the