

## DAIRY.

## Suggestions on Buttermaking in Competition.

One of the most important features in the Toronto Exhibition buttermaking contests will be the ripening of the cream. Under the old plan of supplying ripened cream at a temperature suitable for churning, the work was largely mechanical. With perfectly sweet cream and a good fermentation starter, there will be a grand opportunity for the display of judgment and skill in the ripening of the cream. Up-to-date buttermakers will rely on the acidimeter, as it will enable them to ripen the cream to the right degree of acidity for churning at the appointed time.

In the preparation of utensils, the energetic management has left very little for the buttermakers to do. As every good buttermaker is aware, wetting and soaking the woodenware is necessary for two purposes: to prevent the cream and butter sticking, and to fill the pores of the wood to prevent anything else getting in. To pour cream in a dry churn would be an unpardonable blunder which should disqualify the person making it.

The handling and coloring of the cream are simple operations, but just here there is opportunity for the display of that neatness and exactness that shows the difference between the ordinary and the skilled buttermaker. The cream should be strained. The usual practice is to have no color used with the first churning, after which competitors are requested to color the butter for home consumption, relying on their own judgment as to shade.

"Temperature" under the new regulations will be an important matter. It would be an insult to the intelligence of those taking part to advise any given temperature. The ripeness of the cream, manner in which it has been ripened, its richness in fat, the fullness of the churn, the temperature of the room, etc., will all have some bearing on the temperature, and any slight miscalculation noticed in the first churning ought to be corrected subsequently.

The stage at which the churning should be stopped is another nice point. I am inclined to think that just here the butter is a little "underdone" by the majority in these contests. Certainly, the churn should not be stopped so soon that there is any appreciable waste of butter in the buttermilk. The ideal condition is to have the butter in firm, close, spherical granules from which the buttermilk readily drains.

In washing and salting, many show lack of skill. As the buttermilk is all sold to help defray expenses, the management would prefer to have it as free from water as possible, and the buttermaker can manage just as well without watering the buttermilk, if he has made no mistake about temperature. Rinsing the butter with a few dips of cold water before washing is a good plan. If the wash water is milky, a second washing is necessary.

The working of the butter is usually hurried and incomplete. Those taking part should ask to see their butter in order that they may be guided by past experience. The weight and richness of the cream being given, it is a very simple matter to calculate the weight of butter for salting. Lifting the heavy churns off the bearing for weighing is not necessary. How much salt to use will have to be left to the judgment of the operator. It will vary according to the moisture content of the butter and the working it is to receive. It will be better to salt in the churn.

A few buttermakers, when cleaning up, manage to spill a lot of water without accomplishing much else. Those who are habitually neat and tidy in their work have a great advantage and are not under so great a mental strain, while those using churns, butter-workers, etc., with which they are unfamiliar are handicapped.

In regard to quality of butter, with so many skilled buttermakers competing, whoever fails to make good butter is practically out of the race.

Occasionally a mistake is made in estimating the color or salt; such mistakes are often due to nervousness, but their is no excuse for not being able to use common scales provided.

Too much stress has, in the past, been laid upon "time" by those taking part in the contest. Every energy has been exerted to finish up the job in the shortest possible time. I have advocated starting the contestants, say fifteen minutes apart, which would do away with this racing feature, would prevent all crowding to get cold water, weigh, salt, etc., together, and would allow spectators dropping in for a few minutes, to see the entire process of making fine butter without spending a couple of hours. It would also allow the judges a better opportunity to make note of what is being done.

Friends who think to help contestants by giving them advice during the progress of the work, injure rather than help their chances of winning a prize. Contestants should keep cool—haste makes waste—and the cool and collected buttermaker with his wits about him, and who looks and acts as if it were an everyday event to furnish this form of entertainment and instruction to the public, has a decided advantage over his nervous and perspiring rival. While dressing in white is not obligatory, it is undeniable that spotlessly clean white garments have an attraction for the eyes of the judges. A few dress rehearsals before the family and neighbors would help those liable to "stage fright," while of course years of intelligent work in the dairy usually bring their reward when the scores come to be added.

Kingston Dairy School.

or being chased by a dog, the maternal instinct to provide food for her young is offset by her own self-preservation; consequently, no milk cells are formed.

The cow must be comfortable. To secure this end they should be sprayed with some mixture to kill and keep away the flies, and also have a comfortable place to lie down, protected from the sun's fierce rays. It is a shame how many herds have to lie down in pastures destitute of a single shade tree. If those whose pastures are devoid of that midday luxury would only allow their cattle to come to the stables, and see how quickly they would take advantage of its friendly protection, and if they would see that the animals were sprayed and had clean beds to lie on, I believe in a very few days they would be convinced that they would be amply repaid in milk for their extra trouble.

W. T. F.

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## Hints to Buttermaking Competitors.

For the information and assistance of competitors for the prizes in the buttermaking contests at the leading exhibitions in the coming weeks, the following hints are submitted. Sweet cream is supplied, and it will be necessary to ripen it. To this end some "culture" of known excellence should be secured and used. The amount of the culture or ferment will depend on the character of the cream and the time available. The ripening should be sufficiently advanced to allow at least six, and, better, twelve, hours for cooling and holding preparatory to churning. The temperature for ripening will depend upon the cream, the temperature of the room where cream is to be placed, and the temperature of surrounding atmosphere. A few folds of strainer cloth wet in water and placed over the can will assist materially in keeping the temperature down if the room is too warm. Seven or eight per cent. of culture and a temperature in the neighborhood of 65° F. will give proper results if carefully watched. In this, as in all other operations, the competitor should keep specially in mind the variations from his usual surroundings.

The per cent. of fat in the cream should be known. If it is not, use your judgment on the first batch and you will not be far out in the subsequent ones. Cream of 30 per cent. fat may be safely churned at 50° F. When scalding the churn do so quickly, and do not get the wood heated through. Cool thoroughly. Use your own churn and worker if possible. If you must use a new churn and worker, scrub, scald and rub them with salt at least three or four times, at intervals, before making the first batch. The printer and ladle should also be very carefully prepared before needed and placed in cold water, or what is better, cold brine.

When churning, have a piece of strainer cloth by you, and when a spot of cream gets on your churn, or your hand is wet, or you wish to draw the plug, you will find it very handy and necessary. In all rich creams it is necessary to add some water at "breaking" time. At this time the temperature of the churn contents should be examined as well as the temperature of the water added. Both these points should be remembered afterward when washing. Be careful to fasten the churn and to raise the lid carefully, that there be no accident and no splashing. If the butter should be a little soft, wash with plenty of water and turn rapidly. Once washing is sufficient. Take the butter from the churn with the ladle, put into a tub and weigh; transfer to the worker and salt—if no directions are given—at three-quarters of an ounce to the pound. Rinse the particles of salt from the churn with cold water.

The worker will have been previously scalded and cooled, and liberally sprinkled with salt, and now all that is necessary is to wash off the salt. The competitor must work the butter by some set method, and must know by former practice how much working the butter needs by his method. Nothing but careful examination of the butter from time to time will settle this question, and this must, of course, be done before competition day. After working, the butter should be left as level and smooth as possible by the lever and a trifle deeper than the mould or printer. The "printing" can be done on the worker, and the wrapping also, by placing the papers on the end next the operator. The parchments will present a smoother appearance and wrap nicer if soaked for twenty-four hours in brine than if water alone is used and that just when needed. Do not slap the butter with the ladle, but press the printer full, if necessary, and trim at one push stroke. Do not draw the ladle over the butter, this makes a greasy appearance.

Neatness of person and tidiness of operations count for much. White linen apron and cap look clean and tasteful. When washing the utensils use water for all small wares, a pail catching the drip. If very careful, no more than a few drops will appear on the floor. Throwing water around is not a mark of skill. Plan your work beforehand, pay no attention to onlookers or competitors and keep cool.

F. J. SLEIGHTHOLM.



IOSCO PRIDE 26595.

Winner of 1st prize and sweepstakes Holstein cow, Toronto and Pan-American Exhibitions, 1901.  
SHOWN BY GEO. RICE, CURRIE'S CROSSING, ONT.

## Heat and Flies.

Farmers all over the country are heard to complain of the remarkable manner in which their cows are failing in their milk. Other years they naturally said it was on account of the failure of the pastures, but this year, with such frequent showers, pastures have continued fresh and green as in May. Still, in one cheese factory the milk supply has decreased from 23,000 lbs. to 16,000 lbs. We naturally seek a cause for this strange phenomena in so stable an animal as the cow. We find two conditions, either of which may be the cause. These are heat and flies.

I believe the principal cause of this failure is the Texas fly. An observing man will soon note the result of this pest on his herd of cattle. They appear to be resting quietly on the surface of the hair, but within a day or two, if allowed full sway, you find they have eaten half through the skin. This annoys the cow very much, and she is constantly switching and kicking to rid herself of her tiny assailant.

If the making of milk by the cow was simply the expending of power, the same as used by the horse in working or the pig in producing fat, a little more and better feed would overcome the force expended in fighting flies, but nature must have her sway. It is the nervous system which aids chiefly in building up the milk cells. The cow must first feed and then lie down quietly in the shade, chew her cud, and allow the nervous system to build up the milk cells. It is the maternal instinct of the cow that makes this provision for her offspring, so that if she is in a state of antagonism to physical pain, annoyance