## NOTES.

Dairymen simply turn their pocket books wrong side out every time they take poor milk to the factory, and get it accepted.

Don't forget that milk can be kept on the farm overnight pure and sweet without the use of ice. All you have to do is to aerate it and aerate it and aerate it thoroughly. No half way business, remember.

By taking good care of your milk you are earning money just as fast as by making your cows yield more of it.

We often meet dairymen who profess to have no faith in the Babcock test. They are generally owners of poor cows, who patronize creameries where there is talk of paying for the milk according to the test. Their very argument against it proves that it is a good thing.

Any dairyman who had a fourth or third more cream in his milk than his neighbor does not like to divide it up with him by taking a common share from the factory returns. The Babcock test prevents unjust robbery, and no truly honest dairyman can find fault with it.

We often hear it advised, 'Milk your cows regularly, or they may shrink in yield." That statement should be put a little more positively. You must milk them regularly or they will shrink every time.

Dairymen often imagine that it is optional with them to do thus and so. They should all understand that there is a right way and a wrong way, and that the first always means profit and the latter always means loss.

Did you ever think that when milk is once tainted or in any way spoiled you can no more make it good milk again than you can rotten apples sound? A chemical change takes place that ruins the milk forever. That is the reason why all intelligent butter and cheese makers lay such stress on its care.—Exchange.

## AS TO ACIDITY.

Acidity is a natural change, and one necessary in certain parts of cheese and butter making. However, dairymen should not take it upon themselves to ripen milk for the manufacturer.

That is the last thing that the cheese and butter maker requires. Milk must be delivered sweet, and then the manufacturer can ripen it to just the degree necessary to produce the best results.

## PURIFYING MILK.

Our personal practice for some years in preparing milk for bottling showed conclusively that the passing of a current of cold pure air, washed in the way suggested from every particle of dust or impurity, did have a good result, which was proved by the fact that milk is air washed, as we might say, kept sweet, in the equally well prepared for four days longer than the unaerated milk. This practical evidence of the advantage of proper aeration and cooling, by pure, cold air, goes to show that if well done, in a scientific manner, the aeration of milk is useful for this purpose at least; and if so, it may well be belived that it will be found useful for the buttermaker. —Country Gentleman.

The cheesemaker can make a pound of cheese from one-half pound less milk if the milk is promptly aerated and cooled by the farmer. At least $500 a year can be thus saved to a factory making up one million of pounds of milk, and such cheese is better flavored, longer keeping, and higher priced.

Above all, farmers must understand that good butter and cheese cannot be made from dirty or tainted or unaerated milk. This is the law and the prophets.

"Prevention is better than cure." It is better to keep dirt out of the milk than to strain it out, however carefully done.

# Points Most Needful of Care in Handling Milk for the Factory.

## Canadian Dairy Commissioner in His Third Annual Report.

(By PROF. J. W. ROBERTSON.)

1. Only the milk from cows in good health and apparent contentment should be used.

2. Until after the eighth milking it should not be offered to a cheese factory.

3. An abundant supply of cheap, succulent, easily diggestible, wholesome, nutritious food should be provided.

4. Pure cold water should be allowed, in quantities only limited by the cow's capacity and desire to drink.

5. A box, or trough, containing salt, to which the cows have access every day, is necessary for the keeping of cows profitably.

6. Cows should be prohibited from drinking stagnant, impure water, the responsibility for giving effect to that beneficial prohibition rests entirely with each individual farmer.

7. Cows should be treated with invariable kindness, and should not be driven fast.

8. All the vessels used in the handling of milk should be cleaned thoroughly immediately after their use. A washing in tepid or cold water, to which has been added a little soda, and a subsequent scalding with boiling water, will prepare them for airing, that they may remain perfectly sweet.

9. Cows should be milked with dry hands, and only after the udders have been washed, or brushed clean.

10. Tin pails only should be used.

11 All milk should be strained immediately after it is drawn.

12. Milking should be done, and the milk should be kept in a place where the surrounding air is pure, otherwise the presence of the tainting odours will injure the milk.

13. All milk should be aired immediately after it is strained.

The treatment is equally beneficial to the evening and morning messes of the milk.

Neglect to air it will increase the quantity of milk required to make a pound of fine cheese.

It has been found to be impracticable to make strictly first-class cheddar cheese, from milk that has not been aerated.

14. In warm weather all milk should be cooled to the temperature of the atmosphere after it has been aired, but, not before.

15. Milk is better by being kept in small quantities over night, rather than in a large quantity in one vessel.

16. Milk stands should be constructed to shade the cans or vessels containing milk, as well as to shelter them from the rain. Swine should not be fed near the milking stand.

17. Only pure, clean, honest milk should be offered, and it should be paid for according to its quality and quantity.

## TURNIPS, RYE, RAPE, AND APPLES A CAUSE OF LOSS.

I now want to draw attention to some important features of our business in regard to which I think a great many improvements may be made upon our last season's work. I cannot for my life understand why patrons who are supplying milk to cheese factories and butter factories will persist in feeding improper food to milch cows, knowing at the time they are doing so that the flavor of the butter or cheese made in the factories will be impaired thereby; and that with such food as turnips, rye, rape, apples, etc., etc., cheese will depreciate in value all the way from a 1-2 cent to 2 1-2 cents per pound. If our farmers may grow food such as turnips, rye, apples, or anything which will injure the flavor in milk, butter, or cheese, why not feed it to the other stock on the farm and not to the milch cows? I think I am within the limit when I state that I know of at least forty factories at which cheese have been rejected, and then resold at a reduced price of all the way from 1-2 cent to 2 1-2 cents per pound because the patrons of those factories would persist in sending to the factory milk from cows which had been fed some of the above-named foods. All patrons of cheese factories are manufacturers, inasmuch as our factories are co-operative; and it should be to their interest to stop such practices, which injure our good reputation for fine cheese and reduce or lessen their profits.—A. F. McFarlane.

## UNCLEANLY METHODS.

Many dairymen would feel greatly insulted if told that the strictest decency and cleanliness did not reign over their methods, but unfortunately filthy is a term which applies to the conditions under which milk is obtained in, I venture to say, over ninety cases out of a hundred. For the present we will draw attention to the sources of contamination which proceed from the cow herself and the person who milks her. The coat of the cow is filled with dust, to which quantities of bacteria are attached, and during the process of milking, the continual shaking of the udder dislodges particles of dust, filth, and hair, which fell into the pail. During the winter, when the cows pass a considerable portion of the day in stalls or yards, their under parts become considerably soiled with excrement. That a large amount of soiled matter falls into the milk can be easily proved by allowing the milk to remain for some few hours in the pail, when a deposit will be found at the bottom. Of course, all milk is generally passed through a strainer, and this process removes most of the solids, but the germs introduced with the solids into the milk are washed off by the fluid that cannot be retained by any strainer. Much can be done toward lessening this source of contamination, by keeping the udder, flanks and under part of the body generally well brushed, thus removing most of the loose hair and dirt. but this grooming alone is not sufficient. So long as the surface is dry, particles of dust are easily dislodged, and a continual shower of them falls into the milk pail. If, however, the udder is washed and the under parts of the body moistened, the misplacement of dirt and its accompanying germs will be reduced almost to a minimum from a moist service, except by very violent movements.'

## EFFECT OF RUSTY TINWARE.

At the dairymen's meeting at Aarhus, Denmark, Dairy Counsellor Boggild told how he got a sample of milk from a creamery manager. it was not sour though three or four days old, but had a half rotten smell and a horrible, tallowy taste. He went to the creamery and examined the milk from the patron in question. The can was clean (indeed, the patron and his wife had a reputation for cleanliness), but very rusty inside and barely half full. As he had met a similar smell and taste at another creamery in milk which came in a rusty can, he induced the manager to buy a new can and send it to the patron, with the request to use it instead of the old one. The patron sent back the new can empty, but bought one himself (huffy, much like some of our American patrons), and sent half the milk in this and half in the old one. The milk was perfect in the new can, and as bad as before in the old rusty one.

When the dairy counsellor wanted to borrow the old can for further experimenting he was refused, and had to buy it at the price of a new one. He then continued his experiments with milk from other farms, and got the same result—a beastly smell and a tallowy taste. Analysis showed the milk to contain considerable iron, and the trouble was worse when the can was half full than when full. Butter made from this milk was "tallowy."

The can had been cleaned in the usual manner on the farm, with boiling (?) water, and to prove that the trouble was not in "spores" left in the can—it was steamed and re-steamed before using, but the result was the same.

A city milkman in Copenhagen had similar trouble, and there can be no doubt that here is the danger which we must be on the lookout for. Many hundreds of rusty cans have we seen in use, and the demand for cheap cans has induced manufacturers to use poor tin. Will our readers heed the warning?

This is the one of the most important "points" given to dairymen.

## A FEW HINTS.

First of all banish the dog. He has no place in the dairy. He is a relic of brutal barbarism, and no civilized cow will tolerate his dogoned nonsense. For kindness must reign in the dairy, next the stables must be warm, well lighted and properly ventilated. For the cow must be comfortable at all times.

Then be regular in all things about the dairy, feed regular at the same time and in the same way. Milk regular and in the same order, for the dairy cow is a very orderly animal.

And the dairyman who takes an interest in his occupation and reads a good dairy paper and tries to improve himself, depend upon it, his herd will improve, and when you find a man of this sort you will find that he has

"Corn in the corn-crib,
Chickens in the yard,
Meat in the smoke-house,
A tub full of lard.

Cream in the cream pitcher,
Molasses in the mug,
Honey on the buckwheats,
And cider in the jug."

Milk in the dairy,
Butter by the load,
Coffee in the box,
And sugar in the gourd."

E. O. Adee, in Monrad's Dairy Messenger.

Hauling the milk requires also some care. The cans should be full, and in warm weather they should be covered with a wet blanket, with a dry one on top. In cold weather cover them to prevent freezing. Promptness in delivering the milk is highly desirable, if it is done by a hired milk hauler. The milk producer should visit the creamery now and then to consult with the butter maker.

Fifteen or twenty minutes spent on taking the proper care of the milk may improve the butter or cheese to the tune of thousands of dollars at a factory during the year. Where the combined aerators and coolers are used the only time lost is in cleaning them.

The Butter Maker can do much toward improving the flavor of his butter by the prompt aeration and cooling of his milk. Aeration removes strong food odors, and the reduced temperature checks the growth of the common scouring bacteria, thus allowing the flavor making bacteria to develop, making perfect flavored high priced butter.

## CHEESE MAKERS

Wishing some of these Bulletins on the care of milk, to give to their patrons, will be furnished them at the following rates: 10 for 10c.; 20 for 15c.; 30 for 20c.; 40 for 25c.; 100 for 40c.

Address The Canadian Cheese and Butter Maker, Williamstown, Ont.