

Importance of Good, Pure Milk for Cheese Factories and Creameries.

BY PROF. H. H. DEAN, O. A. C., GUELPH.

New competitors from Australia, New Zealand and Africa, to which latter place a travelling dairy has recently been sent from Great Britain, will make it all the more difficult to sell Canadian dairy goods at a profit. Australian grass-fed butter comes into direct competition with Canadian fodder butter, and as a result large quantities of creamery make have been returned from British ports and sold in Halifax and Montreal. A large exporter told me yesterday that about 4000 packages of Canadian butter had been returned this season. This butter, he said, if sold in the foreign market would not have netted more than 16 or 17 cents per pound, while it brought from 19 to 21 cents in the Canadian market. What does this teach? Two things, at least. First, that we have been seeking a market a long way off, while we have a better one at home, and will continue to have, for fresh creamery, for some years yet to come. Canadian people want good butter, and are willing and able to pay for it. Butter has brought from 25 to 30 cents per pound most of the winter in our larger towns and cities. Second lesson—All export butter should be of the finest quality; none other should be sent across the water.

At the present time where do we need to direct the improvement forces, that fine cheese and fine butter may be made in Ontario, both for the home and export trade? I say, without hesitation, towards the place where the milk is produced, and at the persons who are responsible for the milk sent to be manufactured. Our cheese and butter makers, as a class, are well up in their professions. As a rule they are live, energetic men and women, and were every other class who have to do with the dairy industry as well posted and practised, there would be a marked improvement before long. Do not understand me to consider them perfect (for who is so?), but the means now in use, and which are being brought into use, are quite sufficient to educate this class. Why not educate the producer, and have the procession all move together?

WHAT THEN NEEDS TO BE DONE?

1. The dairymen of this country need to be impressed with the fact that a cow which produces less than 6,000 pounds of milk or 250 pounds of butter in a year is not worth wasting food and labor on her carcass.

2. Every feeder of cattle should know what foods are cheapest and best for milk production. For summer feeding nothing will equal good grass, with as great a variety as possible. Too many pasture fields lack a variety, and consequently we do not get those fine flavors produced on natural pastures. In addition to this the following might be fed: Bran, cottonseed meal (not over two pounds a day to a cow), green peas and oats, tares and oats, and clovers, and in early autumn green corn. Winter feed should be cheap and succulent. During the past winter we have fed ground wheat with good results. Bran, the oil meals, sugar beets and carrots may be profitably fed. It will be noticed that turnips and rape are left out of the list. While not willing to condemn these last two without further trial, I am almost ready to say that turnips must not be fed if we wish to produce fine butter. Various schemes for avoiding turnip flavor have been suggested, but my impression is that with the average feeder, no matter how the milk or cream is treated, an expert judge will be able to detect it. I hope to be able to retract this harsh judgment, but speaking from this winter's experience with milk from farmers in different parts, we are all led to exclaim, "What can be done to this milk, that buyers will not say, 'rooty'?" The probabilities are that next year we shall have to refuse all milk from parties who will feed turnips.

3. It will pay every owner of a factory to send some one around to the patrons at the beginning, the middle and the end of the season, and instruct them how to care for milk. We had to do this, and it would possibly have made us several dollars, have added to our reputation, and saved a great deal of worry and trouble, if we had done this sooner. A marked improvement in the quality of the milk, cream, butter and cheese was noticed after this was done. There are plenty of people who have a very faint idea of how to care for milk properly, and are willing to learn from those who do know. There are some, however, who will not be taught anything in reference to this, and they and their milk should be let alone. Let every owner of a factory send some one to instruct the patrons how to care for milk. (Greater care should be exercised in the selection of this person than in selecting a cow.) Failing this, have a copy of "Hints on the care of milk for cheese factories," which is being published by the Department of Agriculture, Toronto, along with other matter prepared by the dairy students of the O. A. C., sent to each patron of the factory at least twice during the season. It will not cost more than two or three dollars to get these printed, and it may be worth several dollars before the season is over. In the meantime it would be well to emphasize the need of:

1. Food for the cows that has no bad flavor.
 2. Water that is pure enough for your hired men to drink.
 3. Straining and aerating the milk as soon as drawn from the cows. A simple pouring or dipping of the milk will effectually aerate it if continued long enough. If a patent aerator is used, be sure that it is kept absolutely clean. Look around the cracks and odd crevices to see that nothing lurks there. Morning's milk needs aerating as well as the evening's.
 4. Keeping the milk where there are no bad smells.
 5. Leaving the milk at the temperature of the atmosphere, except in very hot weather; then it may be cooled slightly.
 6. Emptying and washing the can as soon as it returns home. Drivers should put a pail of cold water in each can before leaving the factory. This is better than whey.
 7. Of rinsing pails, cans and all milk utensils, first with cold or lukewarm water; second, wash with hot water, and finally scald, allowing the utensils to dry themselves in a pure atmosphere. *Never wipe a can or pail.* It gives a dish-cloth flavor.
- If patrons of factories would observe these few rules during the year 1903, there would be better cheese and butter made this year than during any year since the industry started.

POULTRY.

Poultry on the Farm.

BY MRS. IDA E. TILSON.

March and April chicks lay early the following winter, when eggs command holiday high prices. Those hatched in June begin at January, and continue through spring and summer. May is a good hatching month for farmers. Grass, upon which chicks half live, is still tender, our weather is generally quite settled, and such birds, if well tended, will, as I know by experience, oftentimes lay in December. Raise your own fowls, unless you can buy of an experienced person. Last year I purchased some large, fat Plymouth Rock pullets of an amateur. At the same time and price, from a veteran poultry woman, I obtained other less plump or showy birds. Every month has emphasized their difference. The first lot were corn-fed, hence soft, easily run down. They were used to roosting in trees, where summer's thunder showers had dropped seeds of chills and bowel complaint, which I must constantly meet and destroy by care in feeding. The second lot, more muscular, laid early, and have continued right on merrily as everyday, working, business hens. A greenhorn is defined by Webster as a raw youth. But greenhorns are really of any age under a hundred, and found in every pursuit, poultry culture included; therefore, beware of them. If experimenting must be, you can do it for yourself cheaper.

I always have a few extra or substitute cluckers, so if I find a setter like the "Heathen Chinese," with "tricks that are dark and ways that are vain," I can, by my system of movable nest boxes, transfer the whole "plant." Generally speaking, however, my biddies are faithful to me if I am to them. Even when a separate sitting-room was used I superintended the daily exercise of its inmates, because some showed short memories, and would fight for or occupy another's nest. Now that my cluckers are set in the hen-house itself, I must, when they come off, and until the very moment of their return, keep their nests closed from the investigation of my numerous White Leghorns—mischievous like all non-setting birds and idle persons. Excited by a nest full of eggs, the whereabouts of which they always discover, these spry Leghorns will, in a jiffy, kick eggs around, probably break one, scratch the nests to pieces, and send off out of punishment's reach, singing, "I knew it, they're my own eggs." Some setters instead of stepping into their nests fly upon them, and may thus crush an egg. These suggest ways in which hens learn to break and eat eggs. If a clucker is disposed to exercise twice a day I encourage her, because she thus keeps in better order, and it really makes little or no difference with her eggs, as her stays are shorter than when she comes off but once. If eggs were fresh when set they will be hatching the twentieth day. Our finders do ache to feel under biddy and find how many chicks she has, but all experienced poulterers agree in a "vigorous letting alone." Biddy has her own way of working chicks to the centre, and likewise shells to the edges. If these accumulated shells are in sight or nearly so, I remove them. The hen may be offered a little food by hand or dish, but do not provide chicks anything for at least twenty-four hours. The very last part of an egg to become chicken is the yolk absorbed into the little creatures' bowels, thus constructed by Providence, and insured against want of food till strong enough for foraging. Newly hatched chicks can digest nothing additional. Don't be in a hurry to see them eat. The chicks will "see you later," and fully satisfy you about their eating capacity before half grown. Two broods hatching April fifth this year were actually left undisturbed till noon, April seventh, when the

weather was still cold and rainy, but off they must come then; actions said as loud as words could. Their coops were put in a warm stable. Fine, dry June grass for bedding was taken in a basket to the house and warmed by the fire. The little flat-bottomed, hay-lined basket in which these chicks would be moved was also warmed, and a woolen cloth to lay over them while on their way. Being hurried, I actually took off my own cape for their covering, which equals what a Scotchman, in an old song, pledges his sweetheart:

"O, wert thou in the cauld, cauld wind,
On yonder lea,
My plaidie fra the angry blast
I'd shelter thee."

And really one must love his animals as truly as his friends, if he would see and keep their best qualities. In taking off a hen I reach over her, grasp the upper portion of each leg, and swing her to a safe position under my left arm, which pinions both wings, so I can then hold her by my left hand alone. She is placed in her destined coop, the basket of chicks gently turned on its side before her, so the little creatures can themselves answer their anxious mother's invitation, and run under her protecting wings.

Feed as early and late as possible; breakfast in the middle of the forenoon and supper middle of afternoon make such short days that chickie has hardly time to grow. Feed little and often, say five times a day for a month. If the chicks leave some food, brush it away before soiled and a cause of sickness. One woman, talking with me, declared she neither could nor would feed her little chicks over three times a day, which must do them. In a short time I learned forty of them got along without any meals at all, since they were dead and buried. I wastellinganother woman how difficult it was to get my poultry articles done, when hens and chicks themselves take so much of my time, and she innocently replied, "Why not throw out something, and let them go while you are writing?" But I informed her I would soon have on that plan no chickens to write about. The toughening process so often recommended for both children and animals kills off all but the very hardiest. It is a modern "survival of the fittest." I have lately heard of a poulterer who cannot feed his little chicks bread and milk; but I think their diarrhoea may have come from chills, or he has found some peculiar kind of milk. I often see boiled milk recommended, but no feeder has thought to state how long he boils it. Any one who raises pigs or calves soon learns scalded milk is a sort of liquid leather or young cheese very constipating and dangerous. Milk simmered twenty minutes or more, and really cooked, as in custards and puddings, is wholesome for people, and such dishes are good for chicks. I give them sweet skim-milk to drink, or reduce new milk with a little warm water, and find either is safe without heating.

How Many Eggs to the Pound.

I see you invite criticisms on your publications, and what I have to say is more of a correction than a criticism. Ida Tilson, in her article on poultry for February 15th., says that "it takes a dozen large eggs to make a pound, some kinds would fall below." Such a statement is misleading, to say the least, as we always calculate eight ordinary eggs to the pound, but, on reading the article, we tried our eggs. Seven of our ordinary Plymouth Rock eggs exactly weighed a pound, and twelve eggs weighed one pound eleven and a-half ounces. One is apt to discredit people's statements after finding one error.

CECIL SWALE.

To Prevent Hens Eating Eggs.

Dear Editor,—I noticed in the ADVOCATE several enquiries re prevention of hens eating their eggs. I have found that boiling a little lime in feed for a few weeks is a good plan. My plan to prevent hens eating their eggs is to save all the shells during the summer and feed them to hens in winter. I know there are some who will say that it teaches the hens to eat the eggs, but I do not believe it. When my hens get all the shells they want to eat, they never bother the eggs.

PRACTICAL.

To stop hens from egg eating, get three or four china eggs, place one in the nest, and put the others on the floor for the hens to pick; they soon tire and give up in disgust. This is also sure. I have had occasion to use them more than once, and always proved successful.

Yours respectfully,

R. W. CASWELL.

The "Advocate" Is Appreciated.

I think my subscription ran out a few months ago; enclosed you will find another year's subscription. I have been a subscriber to the ADVOCATE for about twenty years. I have a pile of ADVOCATES, some dated 1872, up to the present time. I am very sorry I did not get them bound. I like to look over them yet, and compare times then and now. What a difference in prices for grain and thoroughbred stock; just a short time ago, I came across the sale of Senator Cohen and Mr. Craig, in Toronto, where cattle went up into the thousands; one heifer, twenty-three thousand. Our children growing up like to look over the old papers and make enquiries, and think they would like such times to come again. I am pleased to see you are publishing twice a month. Hoping you may still keep it as an independent journal, in the interest of the farmers and country at large.

ARNOLD DUNN, Mount Albert P. O., Ont.