

tion of cheese during those months, and I think it is admirably adapted for the growth of calves and the manufacture of butter during the winter months. If we will make our cows come in at the proper time, and make butter from their milk, the most profitable part of our dairying season will be from October until April, and not, as now, the best from April until October. You would find this plan to have many advantages, some of which I will now try to enumerate, over the system at present practised in this province. First, you will have a longer working season. No man can afford to go idle for six months in the year. I want to make that plain. No man can do without earning anything for six months. When I was making cheese, not so many years ago, I had work only six months in the year, and earned from \$100 to \$120 a month wages. I had to live on that in the winter. I did some things during the winter, but not much in the way of earning. Well, then, I was working in the summer merely that I might consume in the winter. A man should have employment to keep him occupied the whole twelve months of the year, and if a man finds it necessary that he should have employment the whole year, he should also give his dairy and his cows employment twelve months of the year, that they also may produce. Thus he will give himself employment for a long season in a manner which will be highly remunerative to him; that is the first advantage I claim for making cows give an abundance of milk in winter time, and making butter, and feeding, and rearing stock at that time of the year. The second advantage is that by making their cows calve in October, the farmers of this province will have better stock than by having them calve in April. An April calf is expensive to rear, and a June calf is simply a burden and expense upon the man who owns it; it is very hard to rear, and hard to winter the first year. I would not own a calf that did not thrive the first winter; I would make a present of it to some man I didn't like, and try to get him to keep it afterwards. If a man will rear his calves, having them begin their lives in October, he will find it possible to spare the skim milk they need, and he will find that they will thrive upon that with some added meal, and at four months begin to eat fodder, roots and meal, and when the fresh grass comes in May or June they will be anxious to get out and see how well they can do for themselves. The next year they will just grow two pounds a day for one pound of the calf that came in April. I would rather have a two-year-old that came in in October than a three-year-old that came in in June. Now, I think we should grow steers. I think no dairyman understands his business who does not make money from beef stock raising. A dairyman keeps cows, first to give milk, then to give stock, and then to make beef—milk, stock and beef; and a man who has them in that order will make more money from them all three than if he had begun the other way about it. Another advantage is that the winter is the period when high prices rule for the product of cows, and butter will bring on the average one-half more per pound from October until April than it will from April until October, and yet you could afford to sell a pound of butter for less between October and April than you could between April and October. That, then, is the time when you ought to be in the business. The average price from October to April is one-half more, and you can afford to sell for less. If a man makes

butter from his milk in summer, it is about the only valuable product he derives from the cow. The skim milk becomes partially sour, and he feeds it to the pigs, which grunt, but do not grow, or to a calf that grows hair—and little else. His butter is about the only valuable product he derives from the cow; the skim milk goes for little, as a rule, not because it is worth nothing, but because a man who follows summer dairying doesn't know enough to make the most of it; which is not very complimentary to the man. But a man who carries on his dairying operations in winter, grows the best calves, and keeps the best pigs, in warm, dry, well ventilated quarters, will make nearly one-third as much from his skim milk as he will from his butter; and if he does that he can afford to sell butter cheaper in winter than in summer. He will not require to do that, hence he will have a larger profit, as, by the use of fodder corn and the silo, the cost of production during the winter will be actually less than during the summer.

The Care of Cows.

The season of the year has now arrived when many of the cheese factories will close for the season. Many farmers will have a considerable quantity of milk for six or eight weeks to come, from which to make butter, and in order to assist them to make the most of their milk by making finest butter, it will be necessary to observe carefully the following points.

1st. They must have clean and well ventilated stables for their cows. Unless cows have pure air to breathe, their milk will be impure, and so will be the butter. When cows have plenty of pure air to breathe, their blood is purified, thereby when pure air is inhaled into the lungs and comes into contact with the blood, it acts as a purifier by the blood absorbing part of the oxygen of the air inhaled, and by the air absorbing carbon, or what may be called carbonic acid, which the blood, in passing through the lungs, throws off and is carried away in the breath. It will be easily seen from this, if a cow has not pure air to breathe, she cannot have pure blood, and consequently cannot have pure milk. A great many of the causes of bad butter begins in the stable with the cows, hence the necessity of having well-ventilated stables—either by having ventilators well up in the side walls as near the ceiling of the building as possible, which keeps the draft off the cows and carries off the exhausted air. This is better than to have the ventilation low down, effected by a door or a window by which some of the cows get the cold draft, and the other parts of the stable not properly ventilated. The best way, where it can be done, is to have one or more ventilators from the ceiling of the stable, carried up in a box or pipe, to the ridge of the building. This acts like a stove in drawing the warm air up and out of the house. If the heated foul air gets out there is no fear but the cold fresh air will get in. There is not the attention paid by farmers to this there ought to be, and until this matter is attended to properly there will be no fine butter where there is no ventilation in the stable.

2nd. Cleanliness.—Cow stables should be cleaned twice a day so long as there are any cows giving milk kept in them, and it would pay to use some absorbent of the ammonia to fix it in the manure. Any dry, light substance will absorb; some use gypsum, some plaster of paris, and some dry black earth (moss or swamp earth dry), even saw-dust, where it is easily gotten, but many use nothing at all, but allows the urine from the stable to go to waste and pollute something else outside.

The manure heap should not be piled up against the side of the building to rot the boards and pollute the stables with foul air and gassy vapours, and when the rain comes the manure heap is sure to get a washing down, if nothing else should.

There should be a dungstead formed at some convenient distance from any building where all the manure about the place can be easily wheeled with a hand-barrow into it, and all mixed together; it would make better manure.

3rd. Feed.—The cows should be fed with good, sweet, clean food, and plenty of it. It is a well known fact that food has a good deal to do with the quality and character of the milk which the cow gives; certain kinds of food imparts certain kinds of flavor to the milk. Any kind of food that has a strong or rank flavor in itself will impart it to the milk unless the food is cooked. Food for milk cows should be well seasoned with salt, or at least in some way let them have all the salt they wish, and so ought horses to have salt as regularly as the cows.

4th. Water.—Cows should have all the pure, clean water they desire, and of easy access, not from a hole cut in the ice and the water about a foot below the level of the cows feet. It is now very well agreed upon by dairymen of experience, who have tested it frequently, that milk cows should be confined to their stalls all the winter, and their food and water all given to them inside; they give more milk on the same feed. This point is worth something, if correct, and I believe it is. They do not get chilled with cold, and if the water is warm so much the better, it is like feeding warm water into a boiler, you can raise steam with less expenditure of heat, and be sure the water is pure. The cows food may be ever so pure, but if she has to drink impure water it pollutes the whole system. The food she eats, in order to prepare it for digestion, is steeped in the water she drinks in her paunch, and so the food partakes of the character of the water she drinks, and hence impure food, impure blood and impure milk.

These four points I have given, not from a scientific standpoint, but from experience, which, I hope, may be useful to others, and I intend giving a few hints about taking care of good milk and how to make good butter from it in your next. DAIRYMAN.

Old and New Ideas.

A lady who had read a fine dairy department in an excellent farm journal for years, recently made enquiry as to the cause of her butter going "off flavor" so quickly. She set the milk in open pans, churned the cream one day, and worked over the butter the next, but success was not hers. Taking a sample of the butter and pressing the edge of a case knife down into it, the milk showed in minute drops. She could then see the cause, but, said she, "I work it over and over again to get it out." "What? Work it!" "Yes, I do; I never dared wash butter. Mother never did, and she said it injured butter to wash it." There it was again; no faith in an idea, or an apparatus unless it came over in the Mayflower. The sweet cream of which this butter was made, by lack of ripening, had in it not less than four or five per cent. of actual cheese. Had this butter been washed at least three times in weak brine the greater part of this cheese would have been dissolved and separated from the butter. The working could not expel it. The mixing of the butter only incorporated the cheese in the 15 per cent. of moisture more thoroughly. There was fully one per cent. of milk sugar left in the butter; which set up a ferment and made lactic acid, and then the rancid taste quickly followed. She washes butter now.