

**Dairy Farming.**

[Synopsis of an address by Prof. Dean, at the East Middlesex Farmers' Institute annual meeting.]

The outlook for dairy products early this spring was anything but bright. Dealers lost heavily on the latter part of last season's operations, so decided to recuperate themselves this year, hence the low prices of cheese, but from now on we may expect the cheese market to improve. Dairy farmers, however, must study how to produce economically. Sometimes one wonders that with all the opportunities for improvement, why farmers are not more advanced in their methods. One thing all must do, and that is read all the up-to-date literature on their business.

Dairy farming is without doubt the most intricate of the many branches of farming. To profitably convert the raw materials of the farm into such highly-finished products as butter and cheese requires the exercise of no small amount of intelligence. To do this, one is required to know the comparative values of crops for the production of milk and the sustenance of life. In Wisconsin, farmers claim that a ton of alfalfa hay is of equal value for the production of milk to a ton of bran. If this is true, how much are the dairy farmers of Ontario losing by not fully appreciating the value of alfalfa? Then, there is the old reliable crop of corn; but there is corn and corn, and farmers cannot afford to grow anything but the best-yielding varieties, both of grain and fodder. For summer feeding, there is nothing that can equal well-cured ensilage. In the rush of our farm work, no one can afford the time to mow green feed and cart it to the barn, and to throw it over the fence is not a profitable method of feeding.

Then, the dairy farmer must be a liberal feeder. There is a point in feeding cows just where the amount fed is sufficient to maintain the animal in fair condition, but anything fed over this amount is devoted to increased production of milk. Too many farmers just feed to this point. In winter, they seem to feed with the idea of tiding their cows over until grass comes; then they look for profits, but when the grazing season arrives the best growth of the pasture is required to recuperate the cows after their winter treatment, and by the time they are in good condition the pastures are brown and dry. In some respects, Canadian farmers can take a lesson from those of the Jersey Islands. On one large farm there (forty acres) a man will keep thirty cows, a large herd of swine, and employ five or six hired men. It's a serious charge against our farmers to say their farms are too large. Sometimes a man is too small for his farm. There is one thing about dairy farming that has received a lot of attention, and that is the stable. No stable is clean as long as it has wooden floors. Nothing but concrete floors should be used, neither should there be any manger in a dairy stable, and do not neglect the ventilation.

The dairy herd should be a constant study. Never try to conduct a dairy farm without studying the individuality of every cow. In the College herd, the best cow produced, last year, \$76 worth of butter-fat, and the poorest \$33 worth, and required just about as much feed as the former. The best cow gave 10,000 pounds of milk, and in the near future we hope to raise the average yield of the whole herd to 8,000 pounds. Two things, however, must be considered in valuing a cow—the quantity and quality of her product. In every stable or milk-room there should be a spring balance, record chart and sample bottles. It is a good sign to see a dairy farmer have several cows to sell each year, for it is certain that all his cows are not as good as the best, and he should always be looking for something better. The farmer should follow the example of a celebrated English breeder of dogs who attributed his success to the fact that he bred a great many and hanged a great many. Among all the breeds there are good cows, but no one can tell by the breed or appearance of a cow whether she is a first-class heavy producer or just a medium-good cow.

**Shall we Abandon Cream Ripening?**

J. H. Monrad, the noted dairy expert, has the following to say on "a cream-ripening experiment" reported by Prof. Dean:

"If the result is to be accepted as conclusive, it ought to revolutionize the art of cream ripening. Two lots of butter made from pasteurized cream were judged. One of these was cooled immediately after separating, culture was added, and it was churned at once; the score for flavor was 42 out of 45. The other lot was ripened the usual way, and scored 41.5 for flavor. It was another illustration of the practicability of omitting the ordinary process of cream ripening, and yet securing good flavor."

"In spite of the indication given by Prof. Dean that this was the second test along this line, it seems to me a little hasty coming from an investigator. If it had been reported by a layman, I should have read it with interest and passed it, but coming from Prof. Dean, I must call for more facts and proofs, in order to accept

the dictum that it is practical to get as good or better flavor (as indicated by the score) without the ordinary process of ripening.

"Have we all wasted our labor in watching the ripening of the cream, not to speak of testing the acidity so as to churn at the most favorable moment? If so, I propose that the younger generation of buttermakers erect a statue to the honor of Prof. Dean!—just think of the convenience of being able to churn just after separating and cooling the cream, and get the butter from the morning's milk into the refrigerator by 3 or 4 p. m.

"The extractor, accumulator and radiator advocates did not go quite so far, as they wanted to soak the butter granules in the starter for some hours, but even they do not seem to have conquered the market. It remains to be seen what the Prof. Dean method will do, but, pending a more exhaustive line of experiments with close commercial scoring of the butter, I must advise my readers to continue the orthodox method of ripening."

**The Influence of the Hand Separator on Dairying.**

A dairyman of note, well known to many of our readers, Prof. G. L. McKay, of the Iowa Agricultural College, has the following to say in the Drovers' Journal regarding this important and timely topic:

The introduction of the creamery system has largely done away with buttermaking on the farm, as greater quantities of a uniform quality of good butter are made at creameries or central places, hence better prices can be paid. The introduction of the little hand-separator on the farm promises to bring about additional changes; it has already greatly depreciated the quality of creamery butter. This is largely due to the unfamiliarity of patrons with the new conditions that confront them, as well as to the practice that some creamerymen have of requiring the cream to be brought in but two or three times a week. If the cream had been properly cared for it could be delivered every other day in good condition.

One of the first considerations is to thoroughly cleanse the separator every time it is used. The desirable and undesirable bacteria growth depends upon the cleanliness observed. The putrefactive species, or those that cause ordinary decay and undesirable flavors, are commonly associated with filth. In cleaning the separator, first thoroughly cleanse the tubes and intricate parts with warm water. After all the milk has been removed, thoroughly scald all parts that come in contact with the milk. When purchasing a hand-separator, simplicity of construction should be one of the first considerations in influencing the buyer.

Cream should be aired and cooled as soon as separated; fat is a poor conductor of heat or cold, and must necessarily be stirred while cooling. If cream has been treated this way it will keep sweet in a cool

place for two or three days. Warm cream should never be added to cold cream until it has been reduced to the same temperature.

Cream will keep sweet much longer than milk, if properly cooled, as it contains less milk serum or food for the action of bacteria. It should be kept where the surrounding atmosphere is pure, so as to prevent it from taking up flavors by absorption. If cream is kept in a cellar the walls should be whitewashed a couple of times a year, as lime is a great purifier. Vegetables should never be put in the same room with cream. It is well to ventilate the cellar during the night, and close it during the heat of the day.

The writer WHEN SCORING BUTTER IN VARIOUS PARTS OF THE COUNTRY HAS FOUND THE MOST COMMON FAULT WITH DAIRY BUTTER IS THE LACK OF GOOD FLAVOR.

Most of the flavors are those acquired by absorption, taken up from foods and decaying vegetables kept near the cream. There is no reason why as good or better butter cannot be manufactured by the individual dairyman on the farm as in the creamery. The little separator, if properly cared for, will greatly facilitate the work.

I would advise skimming about 80 per cent. and cooling it immediately, as recommended above. As soon as sufficient quantity is obtained for a churning, the entire lot should be warmed to 65 degrees F., and about five per cent. clean flavored sour milk added to it. The cream should be held at this temperature until it begins to thicken and has a pleasant acid taste. It should then be cooled to churning temperature, preferably 52 degrees or 54 degrees, depending somewhat on the locality.

If the cream is very thick it should be churned at a lower temperature to insure a good firm body. Butter should gather in about twenty-five or thirty minutes, and should be churned in granules about the size of wheat. The buttermilk should then be removed, and the butter washed once with water at about the same temperature as the cream. About the same amount of water should be used as you had of cream. As soon as the butter has been drained, an ounce of salt, or three-quarters of an ounce, as market requires, should be added for each pound of butter.

If the butter is in granular condition, as it should be, the churn can be revolved a few times to thoroughly mix butter and salt. The butter should be permitted to stand in this condition from thirty minutes to an hour, so as to permit the salt to dissolve. Butter should then be worked until all the loose moisture is expelled and it loses its gritty feeling, or assumes a massy condition, and then it is ready to pack.

Several readers who have lately sent in questions to be answered in the Farmer's Advocate forgot to comply with our rule which requires the full name and P. O. address to be given in every instance. We can pay no attention to anonymous communications or enquiries. Please read and observe the rules of the "Questions and Answers" Department.



In the Chilliwack Valley, B. C.

Barn and part of herd of Ayrshires and Jerseys, property of A. C. Wells, Sardis, B. C.