

Ayrshire.

The Importance of Good Cows

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We think that Canadian dairymen do not realize sufficiently the importance of having good cows on their dairy farms and the value of keeping none but good cows. Some one may ask, what is a good cow? The question may be answered in various ways. Some consider that goodness in cows is largely a question of beauty—animals that can win in the showing, chiefly make up their conception of a good cow. Others again consider that a cow capable of giving a large quantity of milk is a good cow. Others base a cow's value on her butter production, while others again value a cow for the stock which she produces.

SHOULD MAKE ANNUAL PROFIT OF \$25

In the judgment of the writer a good cow should earn for her owner not less than \$25 a year above the cost of her feed, assuming that her calf, by-products, and manure will pay for the labor expended on her. We should like it to be understood that this is the least amount dairymen should be satisfied with. Where milk is sold for an average of 4 cents per quart, a good cow should earn \$100 a year above the cost of her feed. The best cow in the dairy herd at the O.A.C., in 1904, gave a profit of \$17.77. This cow produced milk at a cost of 30 cents per 100 lbs. or 3 cents per gallon. To show the contrast between a good cow and a poor one, we may mention that our poorest cow, in 1904, produced milk at a cost of 79 cents per 100 lbs. or 79 cents per gallon. The average price of milk at cheese factories during 1904 was probably about 60 cents per 100 lbs. or six cents per gallon. A farmer who kept many cows like the one just mentioned would evidently be considerably out of pocket before the season was over.

The cost of feeding and caring for a good cow is not much greater than the cost of feeding and caring for a poor one. This is seen in the food cost of the two cows previously mentioned. The best cow cost \$2.80 to feed for a year. The poor cow cost \$20.77. In neither case was the labor considered. The chief difference in labor was in the milking of the two cows and this difference would not be very much.



Jersey.

FIND OUT THE GOOD AND BAD COWS

Each and every dairyman owes it to himself to find out the good and bad cows in his herd. This can only be done by weighing and testing the milk from each cow at regular intervals, say on two consecutive days of each month during the lactation period. Multiply the average daily weight of milk given on these two days by the number of days in the month and the farmer knows quite closely how much milk is given by the cow during that month. For example, suppose that the milk from each cow is weighed on the 9th and 10th of May, and samples are taken from each milking and kept sweet for two days for testing for fat. Suppose a cow gave 30 lbs. on the 9th and 34 on the 10th. Her average daily production is then $32 \text{ lbs. } 32 \times 31$ (the number of days in May) = 992 lbs. milk for the month. Suppose that the composite sample for the two days tests 3.6 per cent. fat, then the cow produced $992 \times 3.6 \div 100$ or 35.71 lbs. fat during the month. To find out its equivalent in butter, add one-sixth to the fat, which is 5.95 lbs. or $35.71 \times 5.95 = 4.66$ lbs. butter. If the milk sold for 4 cents per quart it would be worth \$15.87 for the month. If the feed cost \$3.00, then the profit over cost of feed would be \$12.87. If the milk were sent to a cheese factory or creamery and netted 70 cents per 100 lbs., then the profit would be \$5.32.



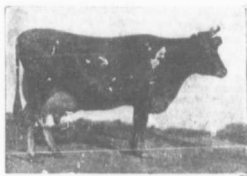
Holstein.

\$3.94. If made into butter which sells for 20 cents per lb. the profit would be \$5.32.

We have gone into this question somewhat in detail because we believe it is the foundation of profitable dairying.

Feeding and Milking Dairy Cows—The English Method

For a long time it was popularly supposed that to obtain a large supply of rich milk from a cow was a question of feeding. That idea is now very properly discredited and it is generally admitted that we cannot feed fat into milk to any appreciable effect. The quality or richness of milk in butter fat depends almost entirely on the breed or individuality of the cow and no amount of feeding will ever convert a 2 per cent. cow into a 4 per cent one. While there is no recognized method of feeding fat into milk it does not necessarily follow that improper feeding has no influence on the quantity and quality given. This may seem paradoxical, but the explanation is simply this: If the cow does not receive a ration sufficient for the upkeep of her body and the production of milk the quantity and quality will suffer in consequence. It is only when she is receiving a full and sufficient supply of the



Guernsey.

proper kinds of food that she is able to produce the largest amount of milk and butter she is individually capable of doing.

BALANCED RATION

The question then arises, what is a well balanced ration? and here there seems to be some misapprehension. To take a practical illustration we all know that we cannot live upon potatoes alone, any more than we would expect a bullock to fatten on straw alone, simply because potatoes and straw are largely composed of carbon-hydrates and lacking in other essentials. A balanced ration then is one in which the feeds are mixed in the right proportion in order to provide the necessary constituents of food in the most favorable proportions.

It has been found by experience that a cow weighing about 1,600 lbs. live weight should be supplied with about 25 lbs. of dry matter per day. Of this quantity of dry food there should be $\frac{2}{5}$ lbs. of digestible albumenoids, $12\frac{1}{2}$ lbs. of digestible carbohydrates and fully $\frac{1}{2}$ lb. of digestible fat, but these quantities must be varied according to the yield of milk.

MILKING

In the practice of dairying the point next in importance to having a good cow is to see that she is properly milked. No matter how great her secretion of milk, if she be improperly milked her yield rapidly diminishes and her milking period is considerably shortened. Many persons consider it inadvisable to change milkers, as they hold that less milk is obtained by this method than when certain cows are always milked by the same person. This has not been borne out by actual experiment, for it has been clearly shown that where all are capable milkers there is no difference either in quality or quantity.

The more irregular the hours of milking the greater will be the difference between the morning and evening's yield and the percentage of fat. This is all the more marked with heavy milking cows. Why the milk should be poorer in fat after a long period between milkings is difficult to explain. Various theories have been advanced, but what actually happens is not understood. It would appear that the secretion of fat is suspended after the udder has become distended with milk or that the fat is re-absorbed.

TEMPERATURE OF COW HOUSES

During an experiment carried out by the West of Scotland Agricultural Col-



Shorthorn