



We Welcome Practical Progressive Ideas

# FARM AND DAIRY & RURAL HOME



Trade increases the wealth and glory of a country; but its real strength and stamina are to be looked for among the cultivators of the land.—Lord Chatham

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## Making the Best of the Dairy Heifer\*

### Her Value as a Cow Depends Largely on the Way She Was Treated as a Calf

**T**HE best bred calf in the world can be raised into the poorest kind of a scrub. This is perhaps more true of dairy calves than of any other. They can be spoiled either by over or under-feeding. It does not do to over-feed for two reasons. First, it is not a paying proposition, and, second, the calf may be too well fed to develop into the best kind of dairy cow.

We have been doing some experimental work with the object of finding out the best way of feeding the dairy calf. In one experiment a bunch of calves were divided into three lots. The first lot was given whole milk, grain, clover hay, roots and silage, but they became much fatter than was desirable, and we found that they had cost us from \$13 to \$16 per 100 lbs. of gain. The second lot were given no whole milk after 10 days, but were given skim milk and calf meal. These cost us from \$2.20 to \$2.90 per 100 lbs. of gain. The third lot were given only calf meal and water. They cost us \$6.40 per 100 lbs. of gain, and were not nearly so good as the more cheaply raised calves.

#### Getting Youngsters Well Started.

For the first 10 days or two weeks, the calf should receive whole milk. The amount, however, should never exceed 10 lbs. a day. Any more than a gallon is too much for so young a calf. It ruins the digestion and distends the glands. It is best to start with three or four pounds a day and to gradually work up to about a gallon at 10 days of age. About this time it is well to start replacing the whole milk with skim milk. This should be done very gradually, until at the end of three or four weeks, skim milk only is being fed. At the end of this time the calf should be getting about 12 lbs. of milk a day. To take the place of the fat of the new milk there is nothing better than flax seed jelly. This is made by steeping whole flaxseed in water, almost boiling, until a thick paste results. Begin with only a tablespoonful of this, gradually increasing until when the skim milk diet is reached, the calf is getting one or two ounces a day. An excellent calf meal is made from two parts sifted oats, two parts corn meal, and one part ground flax. This mixture is first moistened with cold water, then hot water is added and the whole is covered and left to cook. A supply can be made sufficient for two or three days' feeding. About one-eighth of a pound may be given at first, and this gradually increased, but at no time should the calf receive more than one-half pound of it a day. In the meantime the skim milk ration is being increased until at four months of age is 16 to 20 lbs. is being fed each day. At no time should the skim milk ration exceed 20 lbs.

At three weeks of age it is well to start giving the calf a few whole oats to nibble at. At this

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age they are not digested, but the crude fibre helps to slough off the rennet stomach. They soon start to digest, however, and are recognized amongst the very best of calf feeds.

From four to five months of age it is well to begin weaning the calf and to supplant the skim milk by dry grain and roughage. At this age the

calf should be receiving good clover hay, oats and bran, from which to build its frame. Let us here emphasize the value of feeding the calf carefully during these first months of its existence. This is the time when the biggest and cheapest gains are made. The gains made are mostly bone and muscle, and these are much cheaper than gains in fat. In the early period of its life, calf gains can be made for from two to three or four dollars a cwt. Skim milk fed intelligently has a value that varies from 36 to 94 cents a cwt. fed to calves under different conditions. There is no way in which it can be utilized to better advantage than in being fed in proper proportions to growing calves.

In order to develop strong, full-blooded young stock, abundance of succulence is required. For this purpose, turnips are the best, to be replaced later by ensilage. At the present time we have 46 heifers that are getting no grain whatsoever and very little hay. They are being fed roots, ensilage and clean straw, and never more than four pounds of hay.

#### Freshening the Heifer.

Heifers should not freshen before they are 30 months of age. Before freshening care should be taken to put lots of fat on them. It will mean much more money in the pail at a later date. A young cow is like a toboggan on an elevation 20 feet high, it will go much further than if started from an elevation only 10 feet high. Start the young cow off at a high level and she will toboggan much longer. By putting her in the best of condition her milk flow during the first lactation period can be increased as much as 46 per cent, and her fat production 50 per cent. This is the only time I know of when you can materially influence the per centage of fat in the milk. Her calf will also be much healthier than the calf of the cow who has wintered around the straw slack. I find that the calf of the poorly wintered cow is predisposed to stomach trouble.

Previous to freshening the heifer should be fed plenty of grain. It is best to put plenty of inflammation into her udder. I am not now alarmed when I see a heifer swelling right up to her forelegs. The time to make the difference in the size of the udder is when it is flexible. Just at freshening time, however, it may be wise to use cooling foods, such as bran mash and roots. During the first lactation period, the young cow should be given the habit of milking for a long period. Teach persistency the first fall and winter by giving her a full 12 months of good, hard work. If methods such as these are followed in raising the dairy female, and she does not turn out to be a high and profitable producer, the trouble must have been with her breeding. Given a well bred heifer, fed along the lines outlined, the result will be a profit-producing dairy cow.



### Increasing the Dairy Income

**T**O come right down to business, why do we keep cows? Surely it is in order that they may contribute handsomely towards income. If you are already satisfied on that point, well and good; but, one excellent result of cow testing is the solid fact that it helps men to increase their income considerably; that is one main objective point reached. The same story is repeated in all provinces in the Dominion, it runs something like this: From a man at Barrington, Que.—"My cows average almost two thousand pounds of milk more than two years ago," or again from a man at Peterburg, Ont.—"I have increased fourteen hundred pounds of milk per cow, and hope to go up another fifteen hundred," or this, from a man at Hagerville, Ont.—"My herd is pretty near double in three years by weeding out," and once more, from St. Boniface, Que.—"My seven cows brought in \$145 more this year, my records showed me it paid to care for them better."

It is only after keeping a complete record that one finds such a strange contrast as that of two five-year-old cows in one herd, both fresh the same day, both dried off the same week, one gave 5,464 pounds of milk and 213 pounds of fat, the other gave only 2,570 pounds of milk and 153 pounds of fat. Most probably the owner would not have taken on a bet at the beginning of the season that the one cow could bring in over twenty-two dollars more than the other, but she did.

In another section, of two cows the same age, one gave 8,430 pounds of milk and 362 pounds of fat, but the other gave only 1,690 pounds of milk and 67 pounds of fat. Is there a difference of eighty-eight dollars in the earning power of any two cows in your herd?—C. F. W.

\*From an address given before the Victoria County Dairymen's Convention, Lindsay, March 8.