

(2) Sucking enlarges the glands and thickens the skin around the waddles, which is equally objectionable.

The most successful method I have found in feeding is to give the calf an adequate supply of new milk for the first two weeks, gradually increasing it as the calf advances in age, being careful not to cause indigestion.

Should indigestion occur, I immediately stop the milk and reduce the quantity and quality either by adding water or feeding skimmed milk until the stomach becomes strong enough to proceed as before. I have found the following of great benefit in cases of indigestion: Three teaspoonfuls of Castoria at a dose each day until better of the complaint.

From two weeks on I would feed sweet skimmed milk, adding a small amount of ground oil cake for health and to develop a good skin, but not in sufficient quantity to educate fat. The milk supply should be reasonably increased until the calf is five or six weeks old.

At this age I feed a small quantity of oats, gradually increasing up to six months of age. As soon as it will eat grass or hay, feed a liberal supply of either in order to develop the stomach and barrel.

In winter, feed a liberal supply of roots and coarse fodders, and also a little oats or oat chop. Where ensilage is used, lessen the supply of roots.

The weaning should be done gradually by mixing water with the milk, increasing the water and lessening the quantity of milk until the calf drinks all water readily.

I would have her become a mother when about two years old, as it tends to hasten an early development of the milking qualities, which is the result wished for in all dairy types.

In regard to raising bull calves, since the sire should have points identical with that of a heifer, the treatment should be much the same for the first six months, with the exception that he should have a small quantity more oats or oat chop for bone.

Paramount to all other errors in raising calves is that of careless selection of those which are to form the nucleus of a dairy herd. The cows or calves to be made part of the herd cannot be selected with too much care. As in all nature, like has a tendency to beget like, think you that dame nature has forgotten her incontestable law in the cow byre? No. There is nothing more susceptible to right handling and right breeding than the calf which so soon becomes a cow and mother. Not only should the cow, calf or heifer to be selected be of good dairy form individually, but above all their breeding should be of some well-known reputable as well.

Two other very objectionable errors are overfeeding and underfeeding. Feeding should be a gradual education. When at school we learn addition, subtraction, multiplication, and division, and we gradually go on to the most intricate problems. So with the dairy heifer; the early education is absolutely necessary to her higher development and best attainments. Do not overfeed by giving too liberal a supply of fattening compounds or preparations, such as linseed oil cake, cotton seed meal, etc., as the development of the fatty tissue in the system wages war against the milk-producing qualities, and consequently results in pecuniary loss. While I am against overfeeding, I do not wish to be understood as saying they should not have a liberal supply of strong, nutritious foods. For the development of bone and muscle I can find nothing better than oats or oat chops and roots fed regularly, with a liberal supply of fodder morning, noon, and night, and water at least twice each day.

The food, care, and management of a dairy cow from October 1st until June 1st is a very important subject. In the early part of October grass begins to fail, and as a cow is a mere machine, she should have something out of which to manufacture her natural product; and we cannot get something from nothing. In order to have success we must begin to supply food and care. I would recommend feeding a supply of corn fodder, or some other nutritious food, along with bran or oat chop, or a little pea meal mixed with bran, say, in quantities ranging from four to six quarts, every night and morning.

All cattle are susceptible to atmospheric influences, and, consequently, when a cow is exposed to the elements, cold, raw winds, and the damp ground as a bed, it can be readily seen how important a factor exposure to the atmosphere figures in drying up or reducing the milk flow in any dairy cow. From actual weighing of the milk, I have known one cold night in the spring, after the cattle had been turned out on grass, to reduce the milk flow

from two to three pounds. Even, although a cow may for some cause have become reduced in the flow of milk, she may be restored by feed and care, but rarely, if ever, improved. So, as the old adage has it, "An ounce of prevention is worth a pound of cure," she should be fed, housed at nights, and cared for, so that she becomes established in her winter quarters with her usual flow of milk intact. Once established in winter quarters, along with their usual supply of coarser fodders, I would feed a liberal supply of roots at least once a day, with from four to six quarts of bran or chop at each meal, in proportion to size.

Cows in the dairy should have an adequate supply of pure water at least twice daily, but after receiving such should not be allowed to shiver in the cold. The water given should not be too cold. One can easily discern when this is the case by inserting the bare hand and wrist, for at least one minute, into a pailful of water which is being imbibed, when, if it be too cold, the hand will be unpleasantly cold, in which case a little warm water should be added to remove the chill.

On cold, blustery or windy days the cows should be kept indoors, but on fine days should be let out to freely exercise. Above all, do not allow them to become chilled, either by too copious draughts of cold water or by careless and indifferent care.

In spring the cows need the same precautions and care from storms, cold winds, and the wet ground for their bed, as they did in the fall. Spring time—the usual calving season—also demands some special care. The dairy cow should be dried up about six weeks before her calving time. This gives the system ample time to recuperate and undergo the change necessary as a new milch cow. During this six weeks she should be fed a small quantity of oil-cake, two or three times daily, along with her usual quantity of food. She should also be fed half a pound of salts every alternate day from three to four weeks previous to becoming a mother. This has a twofold purpose. It not only keeps the cow loose and healthy, but it also has a tendency to cool the blood and greatly reduces the liability to contract milk fever, which has been so prevalent in the season just past.

Hoping my experience may be of benefit to your readers. I am, yours truly,

R. B. SMITH.

Arkona, Ont.

## PERMANENT PASTURE.

### EXPERIENCE WANTED.

Editor of FARMING:

SIR,—Wanted, information from any party who has successfully laid down land to permanent pasture. How many years has it been laid down? Explain the methods pursued, and give list of grasses sown.

I am thinking of laying down a field of clay to permanent pasture, and would like to see some correspondence on the subject in FARMING from those who have had some experience with permanent pastures.

Yours truly,

JAMES H. MACLELLAND.

Laurentian Stock and Dairy Farm,  
North Nation Mills, Que., Oct. 26th.

[This is an important question, and we would be pleased to have those who have tried permanent pasture give us their experience for the benefit of our readers.—ED.]

## RAISING AND FEEDING DAIRY STOCK.

Editor of FARMING:

SIR,—As soon as the calf is dropped and licked by the dam, I take it away and feed it milk from the dam for ten days. Then I gradually feed skim-milk, so that by the end of three weeks it will be taking all skim-milk. Keep a little good hay where it can get it to eat; also feed a little chopped oats, bran, and oil cake, using judgment, and feeding according to size of calf. Keep the calf growing, but do not keep it fat. At six months old it can be taught to drink water, and if the pasture is good turn it out a little. Do not put it out on grass all at once. When in the field, if the calf is nervous, pet it if it will allow you, but do not use force, for it will in time get quiet, and a little coaxing will teach it to have confidence in you. Breed her at one and one-half years old; if large, you might breed a little sooner, but when bred young she should have great care, as you will spoil her growth.

In regard to errors in calf feeding, I think the milk should not be hot one meal, cold the next, and warm the next, but it should be milk warm every time, to avoid stomach trouble. Do not over-feed, but give plenty of rough food so as to develop a good constitution. Feed plenty of roots in winter, in a warm stable, for a cold stable and an animal shivering with cold in an unprotected yard means a loss to both animal and owner. If the heifer is kept fat from a calf she has a tendency to make a beef instead of a dairy animal. Bull calves should be fed and managed the same as heifers, except that they should be kept away from cows or heifers. Give them a chance for exercise. In summer let them have a run in a pasture field, if convenient.

As to the care of a cow from 1st October to 1st June, if weather is fine and the pasture good, I let them run and feed night and morning in stable. I feed bran, chopped oats and peas, and oil cake, mixed equally by weight, or if any of them are too dear I feed what will give the best results for the cost. When the nights are cold I keep them in the stable, and do not turn out while the frost is on the ground or when the wind is very cold, as they want comfort. In winter I feed roots, corn fodder, hay, straw, mixed chop, and beans. If an early spring, I turn out by May, doing so a little at a time, gradually taking the feed away as they get used to grass, but I do not depend on grass until it is good.

Feed well and be kind to the cows and they will be good to you. Do not try to force a cow with feed when near or just after calving, but rather let her go a little short in her food. I give a dose of salts about a week or ten days before a cow calves, and salts, molasses, and a little ginger after calving. Do not allow a newly calved cow to be exposed to cold nor allow her to drink cold water. Great care should be taken of her for a few days after calving.

I am, yours truly,

Hickory Hill Farm,  
N. DYMONT.  
Clappison's Corners, Ont.

## HEIFER COWS FOR THE DAIRY.

Editor of FARMING:

SIR,—When a calf is dropped we leave it with its dam until it is perfectly dry and on its feet. We let it suck the cow perhaps once or twice, then remove it either to a box stall by itself, or tie it up along with other calves, but never close enough so that they can suck one another. If tied, the calf must have exercise at least once a day. It is fed its mother's milk, with perhaps ten per cent. skim-milk from the cooler. It is always fed sweet, and at a temperature of 90° to 94° Fahr.

When the calf is about two weeks old we commence feeding a little meal (ground oats 60 per cent., wheat bran 30 per cent., and flax-seed meal 10 per cent.), and all the good clover hay it wants to eat. When we commence feeding meal we break off new milk and gradually substitute skim-milk sweet from the cooler, warmed to a temperature of about 92° Fahr. This is continued until the calf is about three months old, when it gets cold skim-milk for about two months longer, with a supply of the mixture of meal mentioned before. Coarser food is also given, such as cut corn fodder and roots (or, in summer pasture), and lots of pure water to drink.

When about, say, from eight to twelve months old (according to size), the heifers are bred. They are kept in a good, thriving condition, never stinted, but not fed to fatten.

Some of the worst evils in raising calves are the neglect to use a thermometer in preparing the calves' milk when the milk is set in ice water, lack of exercise, irregular feeding, dark, ill-ventilated stables, and stinting or over-feeding.

Bull calves are raised exactly the same as heifers until about eight months old, when perhaps a little more concentrated food would not be amiss to fit them for service.

Yours respectfully,

Freeport, Ont. GEORGE LATSCH.

## CARE OF A DAIRY HERD.

Editor of FARMING:

SIR,—During the month of October the rations for a cow should be as follows: about 10 lbs. of grain per day, composed of oats, corn and pea-meal, equal portions. During October there should be enough pasture without feeding hay. She should not be stabled either night or day except in severe changes of weather, when the stable is better. Except when it is rough weather give your cow all the fresh air she can get and all the fresh

water she can drink, with all the exercise she needs.

In November the stable becomes a necessity, especially at night, although there are plenty of fine days for exercise. During November, December and January the rations for your cow should be about 12 to 16 lbs. of grain per day, viz., corn, peas and oats, with the addition of about 8 lbs. of bran and about 12 to 15 lbs. of hay, corn and roots pulped, cut and mixed together. You must use your common sense, as no two cows will need the same feed; some will eat more than these proportions, while others will use less. Your cow is a machine, and as long as she is digesting what you give her only so long is she profitable.

From the end of January up to the first of June her rations should be about 10 to 12 lbs. of grain per day with about 6 or 8 lbs. of bran; ensilage, hay and roots, cut and mixed, about 15 to 20 lbs. In April and May have her out in the open air as much as possible. Keep your stable well ventilated and fairly warm, with plenty of fresh water. Your cow should be kindly treated, and well brushed and combed, and by the first of June she will have paid you handsomely for your winter's attention. We are, yours respectfully,

SAMUEL WICKS & SON.

Buttonwood Farm, Mount Dennis.

Oct. 29, 1897.

## KEEP MORE SHEEP.

Editor of FARMING:

SIR,—You are harping on the right string when you say "keep more sheep." It is advice which, if put in practice, would enable the average Canadian farmer to increase his income by from \$50 to \$100 per annum, without in any way interfering with the other operations of the farm. A flock of from fifteen to twenty breeding ewes can easily be kept on a one hundred acre farm, even after it is apparently carrying all the horned stock it will support. Sheep are expert scavengers, and seem to have the happy faculty of picking up a living from the waste places of the farm. They can be wintered over fairly well on good pea-straw, supplemented with a little clover hay towards spring, and in this way will convert into a useful source of income that which would otherwise have gone to waste.

I am not prepared, however, to admit your contention that the wool from a flock of ewes will pay for their keep for a year, leaving the lambs as a clear profit. That, I think, is claiming a little too much; but assuming that half the lamb crop is clear gain, the advice to "keep more sheep" is well worthy of our consideration.

They require the investment of very little capital. The buildings required for their winter accommodation may be of the plainest and most inexpensive nature. In fact, the plainer and simpler the better. All that is necessary is a good dry floor and freedom from draughts. The labor of caring for them is less than that required by any other stock. They yield two crops per annum. If one is a partial, or even total failure, you have the other to fall back on. The risk of loss by death is a minimum. And yet, in spite of all these arguments, which go to prove that the Canadian farmer OUGHT to keep more sheep, we find that he is slowly, and it may be reluctantly, but none the less surely, going out of the business, from which we conclude that there is some obstacle to sheep raising of which we have taken no account in our reckoning. In your issue of the 14th ult. you said that the only obstacle is the comparative difficulty of reaching the English market. But I would venture to suggest a greater, and that is the dog nuisance. I think I am well within the mark when I say that since the first of August there have been fully one hundred sheep killed by dogs within a radius of three miles of Brucefield, and although only one was caught, it is the prevailing opinion that the greater part of the damage was done by dogs owned in the neighboring towns and villages. Now, so long as every little town and hamlet is over-run by idle, worthless dogs, just so long will the Canadian sheep-raising industry be at a discount. The dog tax has been the subject of a great deal of discussion, and many apparently sound arguments have been advanced on either side, but when carefully considered in all its aspects, the whole subject resolves itself into a simple question: Whether is it better to interfere with one man's liberty to keep dogs or to allow that man to interfere with his neighbor's liberty to keep sheep? Which is of the greater economic value to the country, the sheep or the dog?

A. P. KITCHEN.

Brucefield, Ont.