

The Dairy Herd in Winter.

Editor "The Farmer's Advocate":

requires it, let him get out on a matter how dark or could it is, he's started the day right on nothing mair weakening tae yer in bed half asleep aifter ye ken an' at wark. Ilka time ye dee in this or anything else, mak's yer chances o' formin' anither effort, I can tell ye, for oor happi-ness depends on it. Juist look aboot ye'll see plenty proof o' that. worth the effort ye may also de-wi'oot the effort ye'll get naeth-ings me o' what an Irishman said his who was thinkin' o' under- job, but was afraid he micht cess o' it. "Och man," says Pat, yer hands." It was his way o' d that gin he pit energy enouch he'd bring it tae a guid feenish when we start in tae acquire a may as weel remember the Irish-er though it was maybe no' an wrote the Book o' Proverbs, still i' a guid thing noo an' again, an' e above takin' notice o' them.

SANDY FRASER.

Potato and Field Root Experience.

s not a good year for potatoes cially on heavy land, like that of Advocate" farm, "Weldwood," g that readers might be interested good results were obtained from Slag on this crop, potatoes be- the rate of 17 bags where the 300 lbs. per acre, to 7 bags applied. This is nearly 2½ times no slag was sown. Of course, it bered that the yield was low on out of rot.

some mangels and turnips ferti- Slag. From six rows of mangels 2,200-lb. loads of mangels were in six like rows unfertilized four 0 lbs. was the yield. On six the yield was one-half load fertilized than on the unfertilized. ere a big crop, but the turnips 1. The Slag was applied to the 300 lbs. per acre.

THE DAIRY.

mbia Milk and Cream Contests.

ual Milk and Cream Contest in the annual convention of the B. Association, held at New West- ary 27 and 28, brought out a of high-class products. Three ed; viz., Approved Milk, Market Cream, open to producers only. arded from Vancouver Island, r mainland points. The milk uary 20 and shipped to New e it was stored with the New ery Association. The products anuary 24 on bacteria, flavor, fat, solids not fat, and pack- 20, \$15, \$10, and \$5 were lass. A bacteria count of 48 as made, and a remarkable fea- est was the low bacteria counts est count in the Milk Classes c.c., and the highest in the 6,500 per c.c. The average exhibits in both Approved and 7 in number, being 800 per c.c. resulted in a count of 500 per

entry of Joseph Thompson, ed highest in the Contest, the 9.05. In the Approved Milk es, of Steveston, B. C., and Cloverdale, B. C., tied for first of 98. In the Market Cream went to William Hampton, of C., with a score of 97.3.

s a list of the prize-winners. es obtained:

CLASS.—1, J. M. Steves, nnon Bros., Cloverdale, 98; 2, ort Hammond, 97.75; J. A. ond, 97.75; 3, A. Laity, Port 4, E. & T. Raper, Victoria,

(producers only).—1, Joseph 99.05; 2, Grimmer Bros., Port Island, 97.5; 3, Isaac Elise, Joseph Hamilton, Chilliwack,

AM (producers only).—1, Port Hammond, 97.30; 2, J. W. Langley, Canford, 90.6; andwick, 87.

I have frequently been asked, "Does winter dairying pay?" To this, I can answer, yes. It pays both directly and indirectly. In the first place, I get the advantage of the increased price of dairy products during the winter season. Then, the individual records of my herd show that I am getting more milk during each lactation period than formerly, due, I believe, to the better care entailed by winter dairying. I have noticed time and again that a cow freshening in the fall will maintain a good flow of milk through the winter, then go on to grass and give practically as much milk in the middle of her lactation period as she did when fresh. I think that winter dairying aids in solving the farm labor problem. With only a herd of dry cows to feed through the winter, I certainly would have no work for an extra man. Then when spring came there would be all the bother of securing new help. No good, capable man likes the idea of hunting a new job every fall, and the day is past when he is willing to work throughout the winter for board and lodging. Nor can he afford to be idle three or four months out of the year, and we dairymen cannot afford to let him be so.

To produce winter milk profitably there are a number of essentials that must be carefully observed. It takes healthy cows to produce a large quantity of pure milk. To have the sanitary conditions right, there must be light, ventilation and absolute dryness. Then, too, the cow should be comfortably warm. There are men who are cruelly neglectful of the health and welfare of their animals, and there are others who are cruelly solicitous regarding them. Neither will make any profit. The question is, "how can the best results be obtained at the least expense?" The profit comes, it it comes at all, from feed consumed in excess of the maintenance ration, and which may be called the productive ration. It behooves us, therefore, to see, if by modifying conditions, we can reduce the amount of feed required for maintenance to the very lowest point. The average temperature of the cow is 102 degrees Fahrenheit, and this must be maintained no matter what the surrounding temperature may be. Under the most favorable conditions 70 per cent. of the maintenance ration is used as fuel to keep the cow warm. The more cold she is forced to endure, the more feed will be required to keep up the necessary warmth. It follows then, that to make milk cheaply the stable must be warm. Warm air is not necessarily impure air. If a good system of ventilation is installed, the hygienic conditions will be all right. It has been found that a cow can warm a space containing 600 cubic feet and maintain the temperature, but if there is no ventilation she will smother in a night. I like a system that brings the fresh air into the stable through an underground pipe, thus warming it, considerably before its introduction into and distribution throughout the stable. The fresh air coming in causes a constant outgoing of the lighter, foul air. A continual change is thereby being effected, and the air in the stable is kept pure.

No other branch of farming has enlisted the scientific ability of the country to such an extent as that of caring for the stock, and the handling of their products. Consumers of dairy products are becoming alarmed, and justly so, over the conditions under which milk is being produced. Ten years from now dairymen will look back and wonder at their stupidity in attempting to produce milk under some of the conditions that exist at the present time.

If, then, we are to have clean milk, it is essential that the stables be clean. One of the things we do previous to bringing the cows into their winter quarters is to whitewash the walls and ceiling. This wash is made of ordinary lime and skim-milk, to which is added about five or six teaspoonfuls of crude carbolic acid for each gallon of whitewash. It is then put on with an ordinary spray-pump, such as is used in spraying fruit trees. This gives us a light, clean stable, and is very important if we are to have anything like sanitary conditions. In our stables we have done away with the manger entirely, having reached the conclusion that they are an unnecessary nuisance. The dirt accumulates in them very rapidly, and it was practically impossible to keep them clean. We now have the cows eating off the same level on which they stand. The feed passage in front of the cows is about ten inches higher than the one on which they stand. This forms, to some extent, the back-ground, and we can go along with a broom and clean the feed passage in a very short time, something we could not do with the ordinary manger.

Currying and brushing the cows will be found a profitable operation. Experiments have demonstrated that this will increase the flow of milk from two to four quarts per cow, or, in a large herd, sufficient to pay the wages of a hired man. When the cows are stabled for winter I make it a practice to clip the udder and hind parts. By

this means they are easily kept clean, and there is little trouble from foreign material getting into the milk.

There are various methods of tying dairy cows, and all have some good points. Everything considered, we like the swinging stanchion better than any other method. It is cheap, simple in construction, and gives the cow a considerable amount of freedom. To say the least, they are a long way in advance of that old relic of barbarism, the stationary stanchion, which all true dairymen have relegated to the scrap-heap.

In regard to feeding, there are a number of general principles which no feeder should lose sight of. The cow is no latter-day worker of miracles. The milk must come either directly or indirectly from the feed consumed. Every large producer must be a large consumer. At the same time there is no profit in filling the cow up on any food that may be at hand or is possible to buy. If we are to keep the cost of production down, there must be a familiarity, both with the feeding value and the market price of various feeds. I feel certain that every intelligent and experienced feeder of dairy cattle will agree that a cow's ration should be palatable and fairly well balanced to produce best results. It is often pointed out that there is nothing better than pasture as a milk producer. In the proportion of its constituents, clover hay does not differ materially, but to feed clover hay alone, a cow would soon tire of it and only eat enough for maintenance. Combined with roots or corn silage the succulence makes the bulky part of the ration more palatable, and it is eaten with a relish that produces much better results. In my own

Look at the difference in location of barnyards. While one may be almost surrounded by buildings, another may be exposed to all the winds that blow. I turned my cows out last winter for exercise; they had water in the stable) and every time they failed in milk supply. The last three months of last winter they were not turned out at all. I had no sick cows, and no stiff legs. This winter they have not been out yet, and if there are eight cows doing better than ours, taking length of time milking and age of cows into consideration, then that man can figure he has some pretty good cows.

Wentworth Co., Ont.

A. HASLAM.

Care and Management of the Dairy Herd.

Editor "The Farmer's Advocate":

Care and management of the dairy herd is a wide subject, and we have to limit ourselves to a review of a few of the leading points. It will be found most profitable for the dairy farmer to confine himself to some one of the well-recognized dairy breeds. I do not mean by this, that they should be pure-bred and registered cows. Having made a selection of the breed, always use a pure-bred sire of that breed, and see that he possesses a strong constitution and is descended, on both sides of his parentage, from heavy milkers or producers of butter-fat.

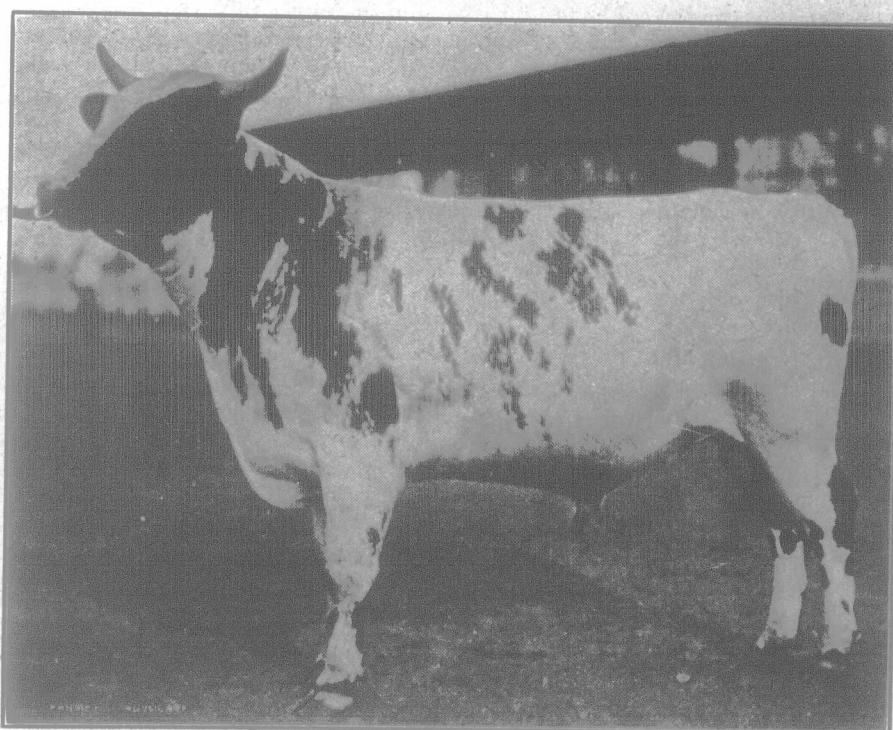
It will be found the most satisfactory plan for dairy farmers to raise their own cows. In the creamery districts this is easily done, as there is always plenty of fresh skim-milk. Feed the

young calf whole milk for the first ten days, then gradually add a little skim-milk, so that at the end of three weeks the whole milk will be substituted altogether by skim-milk. As the whole milk is reduced, add a little ground flaxseed to take the place of the natural fat of the milk. This along with grass in the summer or alfalfa hay, corn silage and roots in the winter, will be all the feed required to raise a good calf. If alfalfa hay cannot be had, feed ground oats to take its place.

Young heifers should not drop their first calf until they have reached the age of thirty months. This will give them a chance to develop a strong, vigorous body.

The management of the dairy herd in the early summer months is a comparatively easy matter. At that time the cows are in the field with plenty of fresh air, sunshine, succulent and palatable grass and pure water. These are the ideal rations for the dairy herd.

Having met many of the farmers of Ontario during the past years, I notice a great change in their dairy methods. Formerly, most of the cows were milked for only a few months during the summer. This system is gradually giving place to dairying the year round. Many of the cows are now milked a period of about ten months. This has been brought about largely by the demand for milk and cream for the town and city trade. With this change the production of milk during the winter becomes an important matter. Clean, sanitary milk can only be produced from healthy cows kept in clean, well-lighted stables, with good ventilation, and with good feed and pure water. The stable should be well lighted with large windows. I prefer the sash being one solid piece with the length placed vertically. This should be made stationary at the bottom, but arranged to drop inwards at the top. This permits the windows to be partly opened on warm days without any draft striking the cows. During cold weather the windows should be kept closed, and the air conducted from near the ground outside up a flue and discharged into the stable near the ceiling. The foul air should be removed from the stable from near the floor, as that is where the deadly gas settles after being thrown off by the animals' lungs. This can be accomplished by having a tight board flue made to carry the foul air up from the stable floor and above the ridge of the barn. A hinged door should be put on the side of the flue near the ceiling, so that it may be opened when the stable gets too warm. By keeping the opening closed in cold weather it prevents the escape of the warm air in the body of the stable, and carries off the cool, foul air from the floor. A common



Fairview Milkman.

First-prize yearling Ayrshire bull at the Canadian National Exhibition, Toronto, 1915. Exhibited by Laurie Bros., Malvern, Ont.

stable corn and clover form the basis of the ration, supplemented with concentrates we can raise on the farm, and purchased nitrogen feeds as may be required to make the ration reasonably well balanced. The following is a ration that has given good results with my own herd: corn silage, 40 pounds; clover hay, 10 pounds; pea meal, 2 pounds; oil meal, 2 pounds; ground oats, 2 pounds; wheat bran, 2 pounds; salt ½ pound.

It is important that water be before the cows at all times. In full flow of milk they require from 90 to 125 pounds a day. It is simply impossible for them to drink this amount at one time. With easy access to it at all times they will help themselves probably twenty times in twenty-four hours. In a herd of eighteen cows as much extra milk will be produced as if there were an additional cow in the stable. This extra profit alone would put the water into the barn for several generations of cows.

Elgin Co., Ont.

AGRICOLA.

His Best-spent Money.

Editor "The Farmer's Advocate":

Enclosed please find \$1.50 for renewal of our yellow-backed friend, the best spent money of the year's outgo. Friend Peter McArthur is always looked for, with his stories about the "Red Cow" and other farm topics. Keep up the discussion on winter exercise for dairy cows. I can't see how anyone can compare one year's doings of a herd with the next year. Where is there a herd this winter, with the same individual cows freshening at the same time as a year ago? How can anyone figure the difference between turning cows out for water and keeping them tied all the time, when the herd is made up of different individuals?