## Chilling 11 ាព THE DAIRY.

### Winter Dairying.

Editor "The Farmer's Advocate" ;

The problem of winter-dairying is one which should receive more attention from the dairy farmer than it does at present. In the average dairy section the farmer depends upon the milk products of his own cows during the summer to furnish him with a sufficient yearly revenue. Then, if pastures fall, or insufficient land has been allowed for pasturing, the production falls short and a small income is the result. The effect of this is, too frequently, the reduction of the number of cows kept rather than the adoption of some other system of dairy farming that will utilize the crops and labor at hand to better advantage.

By adopting a system of winter-dairying, the result is an increase in the number of cows kept and this is one of the necessary changes in many sections, where the soil would be in a better state of fertility if more live stock were fed.

The question of keeping efficient labor on the farm is one that is causing much agitation at the present time. A competent man must be paid according to his work, and, if allowed to be idle for a part of the year, there is a loss to both employer and the employed. An equal distribution of labor throughout the year allows the farmer to keep the hired help with a profit. During the summer months, the farm work of soil-cultivation, seeding and harvesting takes the greater part of the time, and this makes the farmer dependent on the winter season for sufficient time to give attention to his herd.

There are other questions to be considered in making a choice between summer and winter dairying. The modern dairyman has much caretul and regular work to carry into effect before success is assured. The stables and cows must be kept clean, the milking utensils must be washed and scalded regularly and the milk must feceive proper attention in handling. In the modern herd, there must be time spent in keeping records and balancing accounts from which to estimate the value of the individual animals. This work can be done best in the winter, when the most time is available, and no work is more congenial than attending to a dairy herd when it is properly done.

For winter dairying we should have the cows freshen during the months of November and De-By this time they are in winter quarcember. ters and have become accustomed to the winter The bulky feeds should consist of clover diet. hay or mixed hay, turnips or mangels, allowing one small feed of straw per day, as much as they will eat up clean. The meal ration will vary according to the market prices and the kinds available. A mixture will always give more economical returns than any single grain. Examples of rations might be given as:

Clover or mixed hav

#### FARMER'S ADVOCATE. THE

balanced. During the early months of the winter when an abundance of feed is to be had the cost of production is lower than it is during the spring months when feed is high in price and the cows are lowering in milk production. Then on the grass the cost is low, but raises as the pastures become short and the heat and flies become annoying.

The prices received for the winter products of milk, and the extended milk flow compensate largely for any raise in cost of production that will occur. Then the case with which milk is handled in winter is an insurance against loss and is worthy of consideration. The question of raising the fall-born calf must not be overlooked. By having the calves dropped in the fall they are at liberty and receive more attention from the feeder as well as the cows. Be fore the heat and flies of the following summer they are matured well enough to stand the heat and will keep growing while the spring calves are not receiving proper attention on account of the summer work, or are suffering from heat and tiles, unless kept in the stable. If we consider this still further we will find that the development of the calf makes the development of the cow and while good calves can be and are raised during the summer, the feeder always feels that he is neglecting his other work and will of necessity neglect the calves that are his coming cows. In winter this pressure of time is easily avoided.

Taking the question of winter dairying in full, we find that we have, economy of labor and time, which is economical and educating, an extended milk flow, which gives greater profit; the best time to raise the calves which makes a better herd, also the highest prices and the best season in which to handle milk and its products. W. J. REID.

Prince Edward Island.

# An Economical Ration.

Editor "The Farmer's Advocate" :

I am feeding about 60 head of dairy cows and have abundance of the following feed stuffs on hand : Corn silage, well cured, but not containing much grain, as it was not as mature as it should be when cut. Clover silage, stacked green, uncut, and well saved. Mangels and turnips, fed pulped. Timothy hay, fine, green, and well cured. This hay, with a little straw and other roughage, is run through the cutting box, mixed with pulped roots, corn silage and chop with a little salt, and allowed to stand from 12



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that you have the quantity and succulency in your cheaper fodders, and all you need to add is some protein-rich concentrates in order to make a little closer ration. The clover silage will bring up the protein in the roughage, but, notwithstanding this, it will still be rather wide. A greater flow of milk might be obtained by a liberal feeding of grain, but no doubt you are after economical production and prefer to feed in such a way that it may be obtained.

The approximate amounts in the roughage have been estimated that the concentrates might be computed. They are : corn silage, 80 lbs. ; red clover silage, 20 lbs. ; roots, 20 lbs., and timothy hay, 10 lbs. There will be 24 lbs. dry matter in the roughage, but the proportion of carbohydrates and fat to protein will be as 1 to 9}. Too wide a ration, as any one will see, and requires some protein-rich concentrates to make a more economical feeding mixture. In order to better balance the ration add 2 lbs, dried brewers' grains, 2 lbs. wheat bran and 1 lb. oil cake meal. The ration will then he made up of 28 Ibs. dry matter, and the carbohydrates and fats will exceed the protein by 6.4 times or the nutritive ratio will be as 1 is to 6.4.

The brewers' grains are considered equal to the bran for cows, but in order to have a mixture it might be profitable to use the wheat bran even if it does cost more per ton than the brewers' grains. The straw which the cows re-The straw which the cows receive will not add materially to the nutrients in the fodder, but will, to a certain extent, increase the dry matter. From 25 to 30 lbs. per day is almost the limit for dry matter consumed by an average producing cow, and any great amount of straw will decrease the amount of concentrated food the cow will require. On this account it would not be wise to feed too much.

With the amount of desirable cheap fodders you have at your disposal it is not necessary to invest in any elaborate amount of grains. Those previously mentioned will balance the ration and give you good and economical returns.

# HORTICULTURE.

## **Results of Experiments.**

A season has ended which will be remembered for the prevalence of apple scab in many districts. Western and south-western Ontario suffered severely, while some sections of the Maritime Provinces lost considerably both through drop and unmarketable fruit, due to scab. A thorough application before the fungus became established on the stem of the apple prevented

an exceptionally heavy drop, while persistent spraying insured a higher quality of fruit. However, there were instances where the operations were performed with diligence, and, on a par with previ thoroughness, yet the results were not as satisfactory as they have been in the past.

Turning or mangala
Bran. 40 lbs.
3 lbs.
Middlings 3 lbs
Oats
Cotton seed meal
1 lb.
Hay 14 lbs
Roots
Bran 40 Ibs.
Opto 3 lbs.
<b>Uals</b> 2 lbs
Barley
Linseed meal
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Either of these rations would be sufficient for an average cow giving 30 to 35 lbs. of milk per day. If she is giving less or more than that amount, the grain could be increased or decreased accordingly. The heaviest flow of milk will be while the cows are in the stable, and they will begin to lower in production during the months of March and April, but as soon as put on the the grass, they will produce a second flow and will continue to do well until they are dry before freshening. When allowed to dry off on the fall pastures the common fault is that the pastures are short and there is nothing on which the cow can gain flesh before the next lactation period. This can be overcome by feeding green crops and will keep the cow in much better form than if she is expected to produce milk and keep in good flesh at the same time.

When summer dairying is practised, the cows freshening in the spring will produce a large flow of milk as long as the grass lasts. Late in the season the dry grass, flies and heat will reduce the flow, unless heavy feeding is resorted to. At this time the cow would be better if dry, and thus lessen the tax upon her body.

An objection that is held against winter dairying is that the cost of feed is so high that it is not economical. While this is true, to a certain extent, there are so many features that stand in favor of such a system that it is largely over-

#### White Lass.

Winner of the three-year-old Ayrshire class at the Provincial Winter Fair; also first in breeding class at Canadian National, and winner of the dairy test at the National Live-stock Show. Exhibited by J. L. Stansell.

to 24 hours and then fed. After this feed they are allowed what whole hay they will clean up. The clover silage is fed in racks outside during the day. I buy nearly all my grain feed at the following prices : dried brewers' grains, \$19.25 per ton; oat chop, \$29.00; barley chop, \$25.00; rice meal, \$22.50; oil cake meal, n. p., \$42.00; bran, \$26.00; shorts, \$27.00.

Would you kindly let me know the proportions of these grains that I should feed to form the most economical balanced ration for dairy cows? B. C. E. A. W.

If you have on hand an abundance of such roughage as corn silage, clover silage, turnips, mangels, timothy hay and straw. It appears

Many have tried the Bordeaux mixture, lished. and still more have used the lime sulphur solution, and each in turn has reported favorably. Yet no good infallible report, recently made, is to hand showing, under exactly similar condi-tions, that one is superior to the other.

The experimental farms and stations cannot be expected to do everything in one season, yet an unprejudiced trial of these two common spraying compounds would have been valuable in the extreme, at the close of such a season. One or two years' trial will not establish the superiority of any practice, variety, implement, fertilizer or operation in connection with fruit growing. To be sure we must have the averaged results of

Statements have reached us in the form of rumors that the old Bordeaux mixture was more efficacious than the lime sulphur solution in the destruction and prevention of the scab. For the winter and bud moth spray the lime sulphur, no doubt has the largest number of advocates, but there are those who are loath to give up the Bordeaux for later sprays. Strange it is, no comparative results from these two different mixtures have recently been pub-