

An English Ration for a Dairy Cow

The following is recommended as a good ration for a dairy cow by an English authority:

	Albumi- noids. lbs.	Carbo- hydrates. lbs.	Fat. lbs.
12 lbs. of good meadow hay	0.65	4.82	0.12
3 lbs. of corn meal.....	0.25	1.81	0.14
3 lbs. of ground oats.....	0.27	1.30	0.14
3 lbs. of white shorts.....	0.27	1.64	0.08
4 lbs. of linseed meal.....	1.16	1.32	0.28
	2.54	10.99	0.76

These nutrient percentages represent the fat to be about one third the weight of the albuminoids, and the albuminoids about one-fourth the weight of the carbohydrates, which last consist of sugar, starch, gum, etc.; and in the above formula the three groups of nutrients are, chemically speaking, believed to be in well-balanced proportion, which reduces the waste in digestion to a minimum.

The above ration contains an excess of heat-producing elements, owing to the preponderance of carbohydrates; but this is a necessity in cold weather. Speaking of heat reminds us that it is not a good thing to allow cows to drink large quantities of ice-cold water. Even ice-cold turnips fed to cows will involve a waste of carbohydrates. This waste can be avoided by warming the water artificially or otherwise, while the turnips can be fed at a higher temperature by pulping and mixing with chaff or straw, when after a few hours they are heated by fermentation. It is a more difficult matter perhaps on the average Canadian farm to raise the temperature of the water the cow drinks. Where water is provided for the cows in the stable by means of a wind mill and tank the temperature of the water is considerably raised by being allowed to stand a few hours in the tank before the cows get it.

Hints Regarding the Purchase of Fruit Trees

The Ohio Agricultural Experiment Station gives the following valuable advice to farmers contemplating the purchase of fruit trees:

As a rule, it is best to purchase trees direct from established nurseries, near home; but in exceptional cases it is safe to buy through agents, and also to send orders to distant nurseries. To give an order to an agent of a reliable nursery is as safe as to deal direct, but one needs to be sure that the party who claims to represent the nursery is an agent, and not a mere dealer, who buys where he pleases and sells at whatever price he can get. Dealers are seldom responsible and do not hesitate to make any promise to refill the order free of charge in case of loss in transplanting, nor to make any claim as to genuineness and superiority, in order to effect sales.

Honest men find it hard to compete with the rogues in this branch of the business, while the temptations to deceit are so great and the restrictions are so few that reliable tree dealers are rare, hence this class is to be avoided. If a salesman claims to be an agent he should be able to show papers to that effect, and the financial standing of the firm can be learned at the bank.

Financial standing is not a proof of honesty, but it is more or less dependent upon business integrity. At any rate one need not be in a hurry to order trees and can easily ascertain the business standing of any firm, especially the one near home. Agents very often exceed the authority given them by the nurseryman and make claims and promises which are unknown to their employers.

Insist that all such claims and promises be put in writing, with the name of the firm attached. If this is refused it is not safe to buy. An order is a contract and the buyer should see that it is not so worded that the nurseryman may substitute if he wishes. The nurseryman often takes this liberty, hence the words, "no substitution al-

lowed," should be inserted, and another clause might be entered in the contract which should specify that a list of such articles as cannot be furnished should be sent to the buyer within two weeks from the time the order is given. Keep an order of all trees and plants ordered, with price and size, or ages.

In selecting varieties it is not safe to invest in any high-priced novelty. Take old varieties of known merits, only, and do not be cajoled into paying fancy prices for trees propagated by special methods nor because they are said to have certain merits not possessed by trees offered by other nurserymen. If an agent makes statements which seem to be extravagant submit them to some one who is experienced in such matters, and if the agent is found to be lying about one thing it is safe to infer that he may be in others.

Do not be deceived into believing that the small home nursery has no assortment or varieties. Most likely it has just what you want and at half the price asked by the agent.

If the near-by nurseryman does not have all the cracked-up new sorts, it is a proof that they are untested. The home nurseryman can procure anything which he does not have as well as the agent can, for if it has merits it will be in general trade. On the whole, it is better before buying to have a talk with some nurseryman of reputation, as well as with fruit growers of experience. A little caution and common sense in buying trees will save lots of future trouble.

A Woman's Institute

A Woman's Institute was organized at Stony Creek, Ont., in February, 1897, and seems to be in a very flourishing condition. A definite and systematic line of work is carried on, and to facilitate matters and cover the ground thoroughly this work is divided into six divisions or branches as follows: Domestic economy; architecture, with special reference to sanitation, light, heat, etc.; physiology, hygiene, medicine, calisthenics, etc.; floriculture and horticulture; music and art; literature and sociology; and education and legislation.

With this list of subjects to choose from, the varied tastes and inclinations of the members can have free scope in any direction they wish. By dividing the work, members are more inclined to make a special study of some one of them, and are able to give the institute the benefit of their research and study.

A woman's institute could with profit be organized in every county in the province. It may be said that the regular farmers' institute covers the whole ground and a second organization is not needed. But, though man's and woman's interests in the farm are similar, the work which each one has to perform in carrying on the farming operations is quite dissimilar. We consider domestic economy in the farm home to be one of the most important topics that could be discussed at a farmers' meeting and a woman's institute organized to discuss it and kindred subjects can do an immense amount of good in making the home life on the farm more pleasant and healthful.

Losses of Butter Fat in Private Dairies

Many dairymen are not aware of the loss there is in butter fat on all farms where cream is raised by setting in ice water, cold water or cold air varying with the season. This loss is likely to be very large in summer and less in the winter. This loss, carried on year in and year out, amounts to a large sum when a whole herd is taken into account. The Kansas Experiment Station has been endeavoring, by a three days' test of a private dairy, to determine how much this loss is. They find that the skim-milk contained from .3 to .7 of one per cent. of butter fat, or an average of .44 of one per cent., while the butter-milk tested 1.1 per cent. of butter fat. The herd of five