



We Welcome Practical Progressive Ideas.

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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FARM AND DAIRY & RURAL HOME

The First Principles of Dairying

Basic Factors that Make for Success on the Dairy Farm.—An Address by Prof. H. H. Dean, O.A.C., Guelph

THERE is danger in Ontario at this time of getting away from the first principles of dairying. In the striving after new things, we may forget the fundamentals of the industry which has placed this province in a foremost place among the producers of agricultural goods. It is well that we should, from time to time, take a survey of those things which are essential for the continued growth and welfare of dairying, and in which all we, who are met at this time and in this place, are so much concerned.

Taking a wide survey of the persons interested, we find a great many different classes and a great variety of industries more or less concerned in dairying. The streams of milk from a cow's udder as they touch the bottom of a milk pail start in motion lines of manufacture, trade and commerce in nearly all parts of the world. It is like the stone thrown into the lake, causing ripples and movements extending to the farthest shore. Manufacturers of tin, iron and woodenware are concerned in maintaining a healthy dairy trade. Merchants of all descriptions are interested, as the money received for dairy goods keeps the wheels of commerce revolving. The transportation companies are very much concerned in order that they may maintain healthy traffic. An American railway man in one of the Western grain States was asked why he took such an interest in dairying. He replied: "If the farmers along our line persist in the raising of grain and selling it, it will only be a short time before they will have nothing to sell, and as a result there will be no freight to haul."

The bankers are becoming interested in dairying and in some places are advancing sums of money to responsible farmers for the purchase of cows, these cows to be paid for out of the earnings of the cows. This looks like sound business for both bankers and farmers. We should like to observe in passing that bankers have not given that attention to the financial interests of farmers which the latter merit. More liberal terms to farmers which would enable them to buy better stock, improve their farms, etc., would give a more healthful tone to the whole province.

Details of First Principles

1. Soil. Good, fertile soil is the basis of sound agriculture and is the first and most important

principle in dairying. Lean soil means lean, hungry stock, and a man who carries a lean pocketbook. A rich, fertile soil means well fed live stock, and a man who carries a fat pocket-book or a good bank account. It is one of the wise provisions of nature and the chief means adopted by her to maintain a healthful balance, that plants and animals each feed on the refuse or by products of the other. No fertilizer yet discovered can take the place of animal manure (a waste liquid-solid) for plants; and animals must have plants to feed upon. The poisonous

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the heart of man," indicating the close relationship which exists between the soil and its owner. 2. Feed. In spite of all that has been said and written on this question of feeding cows economically, we appear to be making very little progress. The cost of feed is increasing each year, without a corresponding increase in the price received for milk and milk products. This winter of 1914-15 finds dairy farmers required to purchase large quantities of feed, more especially in some sections where drought and army worm played havoc with the hay and out crops.

About the only feed that can be purchased at a reasonable price, according to its proteid content, is cottonseed meal, an imported feed, which needs to be fed carefully and be mixed with other meals for best results. While it is a wise policy to purchase a fair portion of meals for dairy cows, it is a better plan to grow, so far as possible, feed on one's own farm, else the cost of the purchased feed may run away with the profits from sale of milk and cream.

Looking over the whole question of feeds and their relation to cheese, it would seem as though it would be a good plan to adopt as a slogan a modification of an English rhyme, which may read as follows:

Canada's Capital C's—

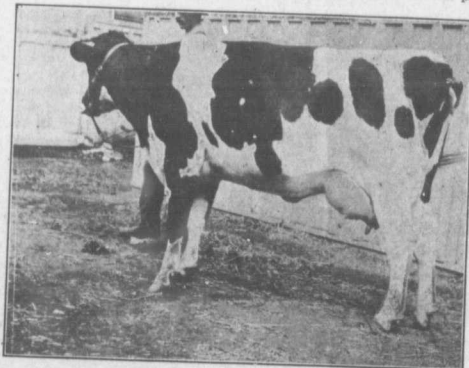
Corn, Clover, Cows and Cheddar

Cheese.

Just About Cows

3. Cows. There never was a time in the history of dairying so much good dairy stock is available for farmers as at present, yet it is difficult to sell good male animals at reasonable prices. These animals

much to further improve the milk-producing capacity of cows, but farmers are unwilling, or unable, to invest in this class of stock. Here is an opportunity for our moneyed men and farmers' organizations to invest some capital to good advantage, and start breeding associations among patrons of these factories and creameries. All cheese and butter manufacturers are, or should be, interested in this question of increasing the milk production for the manufacture of dairy goods. Operating expenses are much the same whether making five or twenty-five cheese a day; whether churning five hundred or one thousand five hundred pounds butter daily. Improved dairy sires is one of the cheapest and



The Grand Champion Holstein Female at Toronto.

Rosa Bonheur Flower, exhibited by A. E. Hulet, Oxford Co., Ont., was first shown in the dry class where she took first place. Before the championships were judged, in which she captured high honors, she was the mother of a bounding Holstein baby. She is a cow of splendid conformation and quality, but lacks a little in substance.—Photo by an editor of Farm and Dairy.

gas, carbon-dioxide, breathed out by animals is an essential for plant growth, while the life-giving oxygen gas, liberated by plants is absolutely vital to animals of all kinds. What a wonderful arrangement!

The kinds of soil found on Ontario dairy farms may be classed as clay, loam and sand, with various grades and mixtures of these. While successful dairying may be carried on, with any one of these classes of soil, experience indicates that soils of a clayey nature are best adapted for dairying. Whatever be the nature or class of soil used for dairying, it must be fed, preferably with animal manures, if we should hope for success. Byron said, "As the soil is, so is