

The Dairy.

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Introductory.

In opening a communication with the dairy men of the Dominion through the columns of the CANADA FARMER, it will be the leading effort of the writer, as it is the declared purpose of the publisher, to make the Dairy Department both interesting and profitable. Great progress has been made within a few years, in the art and science of dairying; and though much has been done, much more remains to be done, and the concentrated effort of all concerned is required to push progress and investigation further. We announce at the outset that we very much desire the co-operation of the dairy readers of THE FARMER, both men and women, to aid in the furtherance of the common cause. It will be gratifying at all times to have them make statements of experience which they may deem valuable, to offer such suggestions as may occur to them, and to present freely such queries as they may desire to have solved. A satisfactory answer to every question that may be raised is not pledged. No single individual can be expected to explain, or to know, all that is, or can, or ought to be known, concerning dairy husbandry. The field is too broad, and the unsolved problems that are constantly looming up, like a succession of Alps, before the vision of the investigator, are too numerous and too great to be mastered by a single mind. But whatever has been gained by having been born and brought up in the heart of the best dairy district in America (Herkimer); by a life-long contact and intercourse with the best dairymen, and the best dairy writers and investigators in the country; and by an experience that runs back over a quarter of a century, in which study and manual labor in all departments of the dairy have been combined—be it much or little—shall be at the service of the readers of THE FARMER who may seek it. And if amid the conflicting opinions that prevail in regard to dairy matters, statements shall be made or views expressed which shall not appear sound, a friendly criticism will always be acceptable and is invited. There is plenty of room for all to improve, and it is very desirable that the best efforts of all should be contributed. Progress cannot be predicated so much upon the labor of any single individual, as upon the combined wisdom and experience of all, and it is to be hoped that the readers of THE FARMER will appreciate how much they can do for each other and the cause.

Advantages of Dairy Farming.

The introduction of the system of associated dairying, and the increased attention and study it has attracted to the subject, are steadily making the business of dairy husbandry a leading branch of rural industry. The more thoroughly the matter is investigated the more clearly does it appear that the dairy affords many advantages over grain-raising and the other ordinary branches of farming, especially in particular localities; and as a natural consequence, this branch of farming is steadily gaining adherents in all parts of our continent.

In favorable seasons, the annual returns from a grain farm and a dairy farm do not foot up with a very wide difference; but that difference, whatever it may be, is generally in favor of the dairy. But it is not the extraordinary margin of profit afforded by dairy farming that is making so many converts to the cause. The inducements which cause so many to give a preference to this industry are various; and first among them is the greater certainty it affords of uniform results. All that portion of North America included in the north temperate zone, is subject to great climatic variations and sudden

changes of weather, which more or less affect and interfere with the farmer's crops. Drought, early or late frosts, excessive wet and cold, and storms of wind and hail, are ever-and-again, the occasion of unfilled bins and empty pockets in one part of the country or other. On the prairies of the western States, it is estimated that the corn crop, (probably the most reliable crop in that section), is seriously injured on an average once in three years. And all over Canada and the north-eastern States, crops are injuriously affected by drought or other cause, to a serious extent once in four years. Grass is more tenacious of life, and grows at a lower temperature than almost any other farm product. Nothing is so secure against varying climate and sudden changes of weather as grass; and as the operations of the dairy farmer are based on this crop, he can count on results much more nearly uniform than the grain-grower. Though his cows are liable to accident and disease, his greater security against variable seasons and weather is equivalent to a considerable premium in favor of his mode of farming.

A second consideration in favor of dairy husbandry, is the greater uniformity in the price of butter and cheese, as compared with other farm products. The markets are often glutted with the different varieties of grain, meat, wool, &c., the price running down below living rates, to be followed perhaps by inflation. In dairy products variations are not so great. Periods of activity and depression occur, but there are no such wide fluctuations as in the grain market. Great extremes cannot be reached in the dairy. The cows of a country cannot vary suddenly. It takes four or five years to produce a cow—and the market cannot be suddenly glutted. In fact, the cows in any country generally maintain a uniform ratio with the number of inhabitants, varying very little, if at all. On this continent it has remained nearly the same from the earliest settlement of the country to the present time, varying little from twenty three cows to 100 inhabitants. A similar uniformity has prevailed in England and other countries of Europe. The relation, therefore, between the supply and demand of dairy products, cannot vary suddenly or very much. The relative proportions of butter and cheese may vary by reason of changes from the manufacture of one to the manufacture of the other. But an excess of cheese diminishes the product of butter, for the number of cows and the aggregate of milk remaining the same, if more is devoted to cheese-making, less must be to butter-making, and vice versa. Prices run up or down as the supply of either varies, but dairymen oscillate so easily from the manufacture of one to the other, that no great excesses or deficiencies can well occur. These circumstances have a controlling influence, and will in the future, as they have done in the past, keep prices comparatively even. The greatest variations are occasioned by good or bad seasons, when the aggregate of dairy products is swelled or diminished.

The difference in the severity of labor in grain-raising and dairy farming has also, probably, some influence in inclining farmers to the dairy; but perhaps the strongest inducement is the little exhaustion it occasions to the fertility of the soil.

How the usual modes of farming exhaust the fertility of the soil is well known. The stores of plant-food which untold ages had accumulated in the virgin soil are sapped away in a few short years of subjugation to the plough. The depleting process seems destined to over-run the whole continent. It sweeps steadily on, keeping pace with the removal of the primordial forests, and leaves everywhere impoverished soils and diminished crops behind it. The exhaustion goes on till the yield is reduced below profitable culture, when some new mode of operating must be adopted. Stock-raising, dairying, fallowing, rest, green crops, plastering or artificial manuring must be resorted to, to increase the yield to profitable results, for such results may always be accomplished. However low the fertility may be reduced there is always still left in the soil an immense wealth of plant food, though unavailable for present use, because locked up in insoluble compounds which require time and the action of the elements to unloose. Here then is a vast extent of land thus reduced, for the restoration of which dairy farming is most appropriate and inviting. It stops at once exhaustion, but does not stop income. It brings good returns from the first.

Forage crops grow well where grain crops pay poorly. Seeding down to grass gives time for air and water, heat and frost, to gradually unlock the tenacious compounds which hold the mineral elements of plants, as with a firm grasp, and lets them loose for the rootlets to feed upon, or to accumulate in the soil for future use. It gives time for the absorbent properties of the soil to take in elements of fertility from the atmosphere, from the snows and rains, and from the dew of heaven. In this way a farm that has been run down may be made to grow rich, and a rich one richer. This problem is often worked out practically by farmers with such satisfactory results as to strongly induce others to "go and do likewise."

The manure-heap is the all-essential thing with the dairyman. His mode of farming allows him to consume the products of his farm on his own premises, and to return nearly all that is taken from the soil, back whence it came. There is a steady exhaustion going on upon a dairy farm as well as upon a grain farm, but it is small in comparison. It consists chiefly of phosphates that are carried away in the milk, and which may be easily restored with bone earth. The waste is so slow with ordinary care of the manure, that it is not usually felt for very many years. By carefully saving all the liquid manure from the stables and the pens, the store which is already in the earth would hold out still longer. This a dairyman should always do. The liquid excretions of his animals are worth fully as much to the dairyman as the solid; because it contains just what dairy farming is all the time inclined to waste. To lose the liquid manure is to lose one-half the benefit to the farm from keeping a dairy. This fact is beginning to be pretty well appreciated. While dairymen are swelling the manure heap by every available means, they are at the same time adopting conveniences to save and utilize the valuable liquids which in former days were allowed to waste. And this increased economy in manures makes the contrast between a farm and farmer growing rich and one that is growing poor, so great as to attract the attention of observant men, who become persuaded, and keep more stock and plough less.

Limit of Lands for the Dairy.

The first limitation to dairying is climate. If it is either too hot or too cold to keep cows comfortable and healthy, their milk will be faulty and its products poor. The climate of Canada is generally favorable. But protection against the heat of summer and the severe colds of the winter is necessary.

The second limitation is the supply of water. If an abundance of good, pure, fresh water, convenient of access, cannot be had, thoughts of dairying had better not be entertained. Pure water is a "sine qua non" in dairying. It must be running water, or at least fresh. Stagnant or even standing water should not be used: it is unsafe. Local limitations on this account often occur. The prairies are almost excluded from dairying on this account.

The third limitation is the supply of food. The quality must be good, whatever it is. It is impossible to make good milk from poor material; and if such food cannot be supplied cheaply and abundantly it will restrict the operations of the dairy. The increasing value of land in the older settled portions of the continent, tends to increase the cost of cattle food, and to confine the limits of dairying on one side, while the increased occupation of new and cheap lands on the other, tends to the extension of the dairy in that direction. The immense extent of cheap land in the Dominion will defy competition for an indefinite period, especially in the production of cheese.

Peculiarities of soil have been supposed to set the most rigid limits to dairying, especially to the cheese interest. It is not easy to set definite bounds to the land from which good butter and cheese can only be made. Dairymen have been compelled to change their opinions in regard to the extent of dairying lands, and with more light they may have occasion for further modification. It is but a few years since the best informed dairymen believed that the limits of successful cheese-making were very narrow, and that the people of a few favored localities anticipated that they would enjoy for ever the privilege of supplying the world with cheese. It is but a few years ago that New York supplied Canada and the Western States with cheese, because it was then supposed that good cheese could not be made in either place. Now Canada is not only supplying herself, but is sending better cheese to England than New York then sent to Canada; and the western States