

a problem. What the future may evolve is not easy to say, but it does seem that perhaps the very best means in present view of reaching the class designed is the plan of sending to the homes of private dairymen a plain and concise explanation of the latest and most approved methods of butter-making, as suggested and carried out by the author of "SCIENTIFIC DAIRY PRACTICE."

While regarding, as I do, butter making as a very practical operation, bordering even on empiricism rather than on science, I cannot go so far as Mr. Lynch in making it a science. I take great pleasure in expressing entire approval of the general character of Mr. Lynch's book, the correctness of its teachings, and its adaptation to the mission it was designed to fill. I would here direct the attention of the reader to the description of the latest methods of separating cream, and to the distinction pointed out between ripening cream and souring it. I would especially call attention to the new method of washing butter in the churn in GRANULAR FORM, instead of gathering it in large masses, filled with butter-milk; also to the still newer process of salting butter partially or wholly with brine, instead of with dry salt alone—these methods enabling the operator to avoid entirely the injury done to butter in working it in the old-fashioned way. These are points of great importance in the production of fine butter, and their explanation has been made so plain as to make it easy to follow out the methods.

The pleasure of eating butter equal to the finest in the world, and the advantages in developing a large and profitable import trade in butter, is within the grasp of the Dominion! It may be brought about by intelligent and persistent efforts in educating the butter-makers of the country.

In the effort to enlarge the butter interest, it would seem desirable, rather than turning into butter the milk now made into cheese, to keep more cows and so reduce the area of grain for export; with a view not only to greater profit, but to increasing the fertility of the soil, in place of exhausting it. Selling butter, if the manure and by-products of the dairy are properly cared for, exhausts the soil of nothing, but leaves it to grow richer by the steady decomposition of its plant-food previously insoluble.

Not so with grain. An acre of wheat, for example, producing 27 bushels, exhausts the soil of the weight of one of those bushels in ash and nitrogen that at present prices would cost over seven dollars to restore to the soil, to leave the soil in as good a condition as it might be left by butter production.

When the apparent income to the farmer from the sale of butter and grain are equal, it ought not to be difficult for a farmer or a statesman to decide the production of which it would be wiser to encourage.

L. B. A.

Rochester, N. Y., May 2nd.

Quebec, 12 May 1887.

Dear Mr. Lynch,—I am really sorry I could not before tell you how pleased I was in reading your book on Scientific dairy practice. It is truly invaluable. There is in fact so much in it, in very close type, that I have not as yet found time to digest it all, but I have seen enough to be sure that it is the best I have had the luck to read so far.

It is a work that as should be found in the hands of every dairy farmer worthy of the name.

Wishing you every success, believe me

Yours very truly,

ED. A. BARNARD.

I hope to review Mr. Lynch's valuable contribution to the dairy industry in next month's Journal.

A. R. J. F.

The Potato Rot.

A correspondent of the *Gardener's Monthly*, vouched for by the editor as an expert, claims that the diseases of the potato come from the immense strain to which it has been subjected in the shape of gross feeding, high cultivation, unnatural treatment, and all the greed of the exacting cultivator with his determination to have the "last pound of flesh." The writer thinks that if we were to treat in a similar way any other like kind of vegetable that is propagated by the bulb or tuber—such as the tulip, the hyacinth, or the narcissus—pretty similar results would follow. "In fact all vegetables and animals, when pressure is put upon them like it is upon the poor potato, must, 'like riding a free horse to death,' finally succumb to its treatment; for all ought to be impressed with the important lesson that if we break nature's laws we certainly shall, sooner or later, have to pay the penalty." This may all be true; but if it be culpable in a farmer to raise as large crops of potatoes as he can, how is it with other crops? As for ourselves, we do not believe that the above quoted theory will bear investigation. Potatoes rot under poor as well as high culture, and we have been assured by a good authority that disease affects even the wild potato, at times, just as the black-knot affects the wild cherry.

Invisible Cream.

A writer in the *Rural New Yorker* makes the following pertinent query, which we commend to the attention of our friends of the *Homestead*:

Will those apostles of the Holstein Frisian breed who keep talking and writing about the unchurnable butter-fat or "richness" there is in their milk which, because of the minuteness of the butter globule, as they allege, will not rise when the milk is set for creaming, but, which they allege, is utilized when the milk is devoted to cheese-making, explain how it comes to pass that the Massachusetts official chemical analysis of Holstein milk yields only 3.29 per cent of fat, while the Massachusetts Jersey milk yields 4.34 per cent? The story about there being elements in milk that vanish in the hands of a chemist and a butter-maker, and "materialize" in the hands of a cheese maker, is good "flap-doodle to feed fools with." Square honesty is the best policy. If neither a common churn, nor a chemist, nor an oil test churn can make butter fat "show up" in "common scrub" proportions in Holstein milk or cream, how metallic is the "check" that assumes that in some charmed way it puts in an appearance in a cheese!—as though rennet had more than mortal power to evoke something out of air, to abstract something from nothing!—(Wait a little. A. R. J. F.)

Clover Sickness.

BY SIR J. B. LAWES, LL. D., F. R. S.

EDS. COUNTRY GENTLEMAN—The valuable article on clover sickness by F. P. ROOT which was published in your paper of Feb. 3d (p. 84) establishes the fact that in the soils of the United States, as in the soils of Europe, clover sickness prevails wherever clover has been grown too long, or been too frequently repeated. The author describes the results just as they occur elsewhere. First, the benefit which the wheat derives from the growth of the clover; then the benefit which the clover derives from plaster, and finally, the inability to grow clover, which is followed by bad crops of wheat.

Considering the immense difference in the amount of fertility which is found in different soils, it is not surprising that those who farm in the most favored localities are sceptical in regard to the failure of the clover plant. Having farmed all their lives without having experienced any failure, they see no reason why disease should ever occur. The cause