

the more simple, economical and severely practical system of farm schools of Denmark.

The elaborately equipped and complete dairy school might prove a potent agency of improvement among us; but I would advise it, not as the means of making dairymen or dairymaids, in the numbers wanted—not for the purpose of teaching the individual farmer (although he should not be denied the benefit of its privileges if he deserves them; ) but as a sort of training school—a normal school, as it were, for the training of persons (of suitable fitness and inclination) for teachers or inspectors. These teachers would be the means of bringing knowledge to the mass of workers. Such teachers would perhaps do the most effective work as travelling instructors—carrying instruction into the factories, and even into private dairies.

On the other hand, we may profit by the Danish system and utilize the farm dairy, and the factory, too, to the fullest extent, for the education of the dairy workers of the country. I would never advise the application of the Danish system as it is, but a modification of it to suit our peculiar conditions. The course of study or practice should be of the simplest character, the length of time and the studies to be in some measure optional, and the fees light. It would appear to be desirable to teach enough theory to explain practice, but the main requirement should be a correct practice. The graduates of the normal schools may serve an important purpose in this connection, in imparting knowledge to the workers in the local or minor schools; and, as travelling inspectors, introducing the best known dairy practices. Doubtless in our application of the European system, we may in some ways improve on our models.

Such dairy schools as above proposed could be made an inducement and encouragement to young men and women to devote themselves to the work of teaching. The conditions of availment of the privileges of these schools should be not financial means, but an inclination or fitness for the work of teaching, and an attention or obligation to teach. These privileges could also be made an inducement to factory managers, and even private dairy proprietors, to perfect their methods and open their factories or dairies to pupils.

Here is still another possible means of disseminating dairy knowledge. Sooner or later the common education of the people will be partly technical. Clearer ideas are beginning to obtain of what is education. The education of the future will have more relation to the probable occupation of the learner, and if it does not fit him for that occupation will not unfit him for it. It will not always be thought education for the embryo agriculturist to be made to memorize the names of stations on a line of railroad, and not taught a single fact of nature's great book of wonders. Though to the farmers of to-day the book of nature's economy is hopelessly sealed, to the farmer's boy of an early day it will have to be opened, to his lifelong benefit and infinite delight. No better beginning of reform can be made than the introduction of technical instruction in agricultural subjects in schools. By giving country pupils an insight into the delightful mysteries of nature, and a knowledge of facts that would be advantageous to agricultural labor, country schools might be made more interesting and a country life more attractive.

Let the thin end of the wedge be inserted in at least homoeopathic doses of dairy instruction in rural schools! If not practical lessons, at least there may be taught in regard to milk and its products facts which would be helpful to practice at home. This teaching would be made easier if there were provided suitable text books for the purpose, and materials necessary for object lessons. I might go farther and suggest practical ways of teaching dairy practice in common schools, but to do so might take away the breath of some of my more cautious readers.

In conclusion, it is a matter of choice to copy the elaborate well-equipped dairy European schools, or to follow the Danish plan of private dairy schools, or to profit by the experience of all our European competitors, and establish something suited to our peculiar conditions. I believe there are advantages, more than commensurate with the cost, in either action. At the same time, I believe that the first two proposed lines of action are not the best adapted to our great need, and would prove somewhat disappointing. On the other hand, some simple system of dairy instruction (such as the wisdom of our dairy authorities may advise) doubtless may be inaugurated, which could be developed in practice and prove of immense value as one factor in the improvement of dairying in Canada.

February, 1889.

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### The Dairymen's Meeting

M. Bowker's address on the Manufacture of Fertilizers was peculiarly valuable to an audience of farmers, because it was intelligent, candid and practical. He is a wide-awake business man and understands the art of putting things in a clear light, as he says, "from the manufacturer's standpoint." It is not exactly the farmer's standpoint, and for that very reason it is most desirable for farmers to know just what it is. Naturally, there was a little of the "nothing-like-leather" tone in Mr. Bowker's talk, but that did not hurt it any to those hearers who were prepared to make the necessary allowance. It by no means hurts a man's speech that he fully believes all he says. The "personal equation" is not hard to eliminate.

Mr. Bowker began, in good old New England fashion, with Adam in the Garden, and told us that God "probably" foresaw that man would, when compelled to earn his living, become greedy and seek for profits. Whatever the degree of probability as to the foreknowledge, the fact is unquestionable: nor is there any doubt among intelligent people that greed overreaches itself, and that in our anxiety, as farmers to extract "profit" from the land in the form of crops, we have, here in New England, been making pretty heavy drafts, and seem, in too many cases, to have overdrawn our account at the Bank of Nature.

But Mr. Bowker believes, too, that the Almighty was not surprised at this stupidity. He not only expected, but made large provision for the time of need, when, the account being overdrawn by thoughtless man, great reserve stores should be ready in the form of guano, phosphatic minerals, and potash and nitrogen deposits, so that in various parts of the world manure mines of apparently limitless extent should be discovered, just when the poor, greedy and ignorant tillers of the soil had got almost to their wit's end, and stood trembling in the face of general starvation. As Mr. Bowker puts it: "He has caused inland seas to dry up and deposit, in that part of the world which we now call Germany, their contents of potash and common salt. He buried great forests in Russia and in the United States, from which to-day we are drawing oil and coal, and chemical salts which enter into plant food. He drove myriads of animals out of the sea on to the land in Spain and in America, and, in this century, when we need them, we find them deposited as phosphate of lime, coprolites and soft guanos. He made great pockets in Canada, into which he poured millions of tons of apatite, the mother source of phosphoric acid, and the predominant element of bone, and without which no skeleton of any living animal could be organized. He planted sulphur in Sicily, from which man, by the aid of chemistry manufactures sulphuric acid with which to dissolve this phosphate or apatite, and so make it quickly available for plants. He placed in different parts of the United States—in Vermont, in the town of Vershire,