

no progress, and brought little profit. Now we find the industry flourishing, and growing more rapidly than at any other period in its history.

The wisdom of Government in spending small sums in the form of subsidies, to encourage and foster dairy associations, cannot be over-estimated.

The formation of an association for the North Island, or the further extension of the Middle Island Dairy Association, is absolutely necessary. The association, by inaugurating an annual produce show, which could be held at the same time as the meeting of factory proprietors and cheese- and butter-makers, would induce a keener desire to excel.

EXPERIMENTAL DAIRY SCHOOL.

The want of an experimental dairy school is now becoming evident to all reasonably versed in practical dairying. The industry already is by no means the least of our manufacturing interests, as is clearly shown by the number of factories at work, and the value of the exports. I have all along been much impressed with the thought that if instruction is to be of the utmost utility to our dairymen we must make another onward move in the establishment of an experimental dairy school. The time has now arrived when the condition of the industry demands it; for the growing magnitude of our dairy trade, and the peculiarities of our situation, will continue to create problems and difficulties in the manufacture of butter and cheese which can only be solved by experiments and investigations reliably conducted. I feel certain that much can be done by experiment and investigation to improve our products. The establishment of a dairy school is one of the best methods by which the Government could stimulate and assist cheese and butter manufacture, both from a practical and scientific standpoint.

There is a great field open to us in the way of conducting dairy experiments, and the most authoritative and serviceable way to carry out these is by means of a dairy school. The enterprise and intelligence of the dairymen in the countries where such schools exist have increased steadily, until their products are now placed in the front rank, and it is everywhere evident that there will be a further and further advance as time goes on.

The necessity for carrying out my present proposal may be illustrated by what has been done in Canada and Denmark. Many of us can remember the kind of American cheese which came to England when first imported—rank and soapy at its best; while much of it was black, rotten, and uneatable—but by the employment of itinerant dairy-instructors, and the additional aid of experimental dairy stations, Canadian cheese now takes the lead for quality combined with uniformity (tons of it being sold in England, months in advance, to arrive). The same thing has occurred in butter manufacture in Denmark. Less than half a century ago their butter had no name, but now it commands the highest prices and best markets.

It seems to be the special functions of farmers to provide food and clothing for the rest of the race; therefore anything we can fairly do to supply them with reliable information, to enable them to produce the necessaries of life best and cheapest will add to their benefit and profit. I contend, so far as dairying is concerned, that it is incumbent on the State to supply reliable and valuable information to farmers, and to put that information forward in such a way, by repeated ocular demonstration, that even the most apathetic will be taught to put in force the truths brought to light.

I add the following, as a few matters requiring investigation that could be well undertaken at such an establishment:—

Treatment and care of milk at the farm.

The effect of setting the milk at different degrees of ripeness.

The effect of the use of different quantities of rennet extract upon a given quantity of milk, and its effects upon the cheese when made.

The effect of "high *versus* low" scalding of the curd, when in the whey.

The effect of "stirring" and "non-matting" of the curd *versus* matting and grinding of the curd.

The effect of the use of racks on which to drain and mat the curd, *versus* matting on bottom of making-vat.

The effect of early *versus* late grinding of the curd.

The effect of various depths of matting of the curd.

The effect of using different rates of salt.

The effect of hooping the curd at various lengths of time after salting.

The effect of milk possessing different percentages of butter-fat, on the quantity and quality of cheese produced.

To ascertain the best milk-tester for discovering the percentage of fat in milk, with a view to introduce the system of paying for all milk, whether for cheese or butter manufacture, according to its productive character.

To ascertain the best mechanical cream-separator.

The effect of different methods of obtaining cream from milk.

The effect of carefully pasteurizing the full-milk before separation, on the quantity, flavour, and keeping-qualities of butter.

The effect of carefully pasteurizing the cream after separation, on the quantity, flavour, and keeping-qualities of the butter.

The effect of churning the cream sweet, *versus* sour, and the quantity, quality, flavour, and keeping character of the butter.

Experiments could also be conducted in the fattening of pigs. The teaching of these and many other experiments would have a far-reaching effect for good on the industry, in stimulating and guiding our dairy-farmers.

The proposition here set forth is a very practical one, and I think well worthy of attention. To carry out this plan I would recommend for your careful consideration the desirability of leasing one