

factory that the process would not have been adopted in over 95 per cent. of the creameries."

The starters sent out from the laboratory are identical with those used in Denmark, and with proper care and management should yield equally good results. Patrons should ascertain if their makers are obtaining the highest price for their butter or cheese. If they are not let them make inquiries as to the cause of the lower prices. In nine cases out of ten the fault will be found in the flavor; that is, it is the result of bad or no starters or tainted milk.

In other industries where bacterial organisms are made use of in the production of a manufactured article, such as in bread-making, brewing, etc., those establishments which use the pure culture system are superseding those which adhere to the old unreliable methods.

The pure culture method is not a mere scientific theory, it is nothing less than a business-like method of producing a standard and uniform article. No man expects to obtain a clean crop of wheat if he sows seed which contains half a dozen kinds of seed, and he can no more reasonably expect to obtain butter or cheese with a uniform flavor if the cream has been ripened with undesirable bacteria.

Canadian cheese has obtained the position it now holds in the British market because in its manufacture accurate technical knowledge and sound business principles have been used. At present the farmers' institutes in the States and the dairy associations in Australia, New Zealand and the States are taking up the subject of dairy bacteriology far more energetically than are the dairymen of this country; it is especially desirable, now that the effects of cold storage are being so closely watched by the British buyers, that everything that can have an improving influence upon our food products should be taken advantage of to the fullest extent.

It must not be supposed that pure starters will compensate for carelessness or neglect in any part of the process of butter making. Milk or cream once tainted or changed by the action of injurious bacteria cannot be made to give good butter or cheese by any treatment. The greatest benefit can be derived from the use of pure cultures only when the cream or milk is ripened by the bacteria contained in the starter; this, as a rule, necessitates pasteurization. However, great improvement can be made by taking precautions as to cleanliness and the employment of low temperatures while handling the milk, the starter being added as soon as the cream is set to ripen.

MALCOLM ROSS,
Fellow in Bacteriology.

Ontario Agricultural College, Guelph, Ont.,
July 29th, 1899.

Ships Cheese Every Week. Quality Improved

To the Editor of FARMING:

Your favor of the 26th inst. received and also a copy of FARMING. I note what you say about the use of Formalin in preventing mould on cheese; I have not had any experience in the use of Formalin, but some of the exporters in Montreal have tried something of the kind and they say it worked well.

In regard to the sub earth ducts I don't know of any factories that have put them in. For my own part I have been shipping cheese every week, and any warm weather we have had has done the cheese more good than harm.

I have had no experience in using ice in curing-rooms, but think it would have good results if it were properly managed.

You ask for my opinion in regard to the quality of cheese made this season. As far as my knowledge and experience goes I think on the whole we have made finer cheese this season than we did in 1898. As a rule we are making our cheese softer than we did formerly.

WM. EAGER.

Morrisburg, Ont.,
July 31st, 1899.

Cheese Manufacturer.

Ice in Curing-Rooms

Good Results Obtained at the Tavistock Cheese Factory—An Improvement in the Quality of the Cheese

To the Editor of FARMING:

Replying to yours of yesterday's date I would say that my experience with Formalin as a preventive for mould on cheese has been very limited, having only used one bottle last year. I must say, however, that I was disappointed in the results, having been led to believe by some who advocated its use that once or twice spraying would effectively check the mould. We did not find this to be the case in our experience; the cheese would still keep moulding. However, we considered it a help at the time. Probably, as Mr. Barr has said, we did not use enough or use it often enough. We have not used any this season. Our cheese has not shown much mould, and we have just rubbed it off in the old fashioned way.

I have noticed this season in our locality a decided improvement in curing cheese, chiefly by using ice to control the temperature. We are using it, and I am pleased to say that we are very well satisfied indeed with the results, having been able, in the very hottest time, to keep the temperature down to about 70°. I have not had any experience with sub-earth ducts. There are none being put in that I am aware of in this district. They are a good thing, I have no doubt. As far as I have been able to judge, the quality of the cheese in our district is better than last year.

A. T. BELL.

Tavistock, July 27th, 1899.

Preventing Mould in Cheese; Ice in Curing-Rooms

To the Editor of FARMING:

I received your letter of the 26th inst. asking me if I had had any experience in using Formalin to prevent mould on cheese. I have never used it myself, but have seen it used. Some say it is no use. I think the trouble is that the makers do not use enough of it to kill all the germs. I have been in Mr. Barr's factory at different times this summer and there is no mould on his cheese and there is a different smell in his curing-room from that of any other factory that I have been in; you could hardly tell that there was cheese in the curing-room if you did not see them, it had such a nice, clean, sweet smell.

In regard to curing cheese I find quite an improvement in the curing-rooms. Nearly all are putting in ice-boxes and have been controlling the temperature of the room fairly well so far. Makers are all anxious about keeping the temperature right and I think it is a great help to the cheese trade to have finer cheese. As to sub-earth ducts there are none in operation in this section so I cannot say anything about them just now. Using ice in the curing-room seems to be all right, excepting that the cheese is more inclined to mould which is the only objection I have to make to its use.

In regard to the quality of the cheese; so far the quality has been fine, the best for years. Everything has been in its favor, good grass, good water and cool nights. In so far as the makers are concerned in the making of the cheese they are not improving as fast as they might. During this last week gassy curds have been more common in some factories.

GEO. McDONALD,
Dairy Instructor.

Bluevale, Ont., July 29th, 1899.