

tive cheese factory in Canada. It is because farmers and dairymen have co-operated and built factories all over this country that the cheese industry has been developed to its present large proportions. It is because, at the inception of co-operative cheese making in Ontario, the dairymen united and formed dairy associations, which looked after the educational part of the business, that the quality of our cheese has been gradually improved and raised to its present degree of excellence. It is because, in the earlier history of dairying, our dairymen co-operated and were united, that laws were enacted prohibiting the importation or the manufacturing of "filled cheese" or "bogus butter" in Canada, and that the statutes were so amended as to administer adequate punishment to all parties found tampering with milk supplied to the cheese and butter factories. Therefore the term "co-operation" has been almost synonymous with the term "success" as applied to the cheese industry of Canada.

In one particular, however, there has been and is at the present time a serious lack of co-operation on the part of our dairymen. The spirit of rivalry between factories has been carried too far in many of the older dairy districts, and has blinded somewhat the judgment of dairymen as to what is true economy in the management of cheese factories. Many of these factories, in order to gain patronage and secure more milk, cut into each other's territory, making the running expenses of each factory higher. Instead of co-operating in the arrangement of definite boundary lines between the territory of each factory, in many sections, such divisions are completely ignored and it is quite a common occurrence to see two or three different milk-wagons belonging to as many different factories going over the same concession line to get milk. We have in our mind one particular instance where a milk-wagon from one factory travels $2\frac{1}{2}$ miles past a neighboring factory to gather milk. Such encroachment upon each other's territory only serves to increase the running expenses of each factory concerned. If the territory belonging to each were so arranged that there would be no travelling over the same ground two or three times, the expense of hauling milk would be considerably reduced and the cost of manufacturing to the patrons very much lessened.

If there were more co-operation among factories in regard to the butter fat system of paying for milk, this improved method would

soon be more generally adopted by our factories. If the factories in the various districts would co-operate and arrange that no sour whey should be returned to the patrons in the milk-cans, the evil effects resulting from this practice would soon be overcome. If there were more co-operation among the different factories in reference to the selling of cheese, the product could be disposed of and handled to much better advantage than is now done in many factories.

These are some of the points that it would be in the interest of dairymen to consider. We have not space to develop each one fully, but trust that by drawing the attention of all those connected with our cheese factory system to them an improvement may be effected and more co-operation engendered among factories in these particulars.

The Boiling Point of Milk.

The *British Medical Journal* publishes a contribution from Dr. Edmunds in which he makes the following observations on the above subject: Referring to the temperature at which typhoid bacilli are killed, a correspondent assumes that milk boils at 180° to 190° F. This is a mistake which needs correction. Milk boils at a temperature higher than that of water, and it is well known that boiling milk inflicts a much more serious scald than boiling water. The point at which milk boils will vary half a degree or more according to the amount of saline and other non-aqueous constituents, but I find that a fair sample of milk, taken from my own kitchen, boils at 235° F. when tested with a standard chemical thermometer. I have always advised that milk boiled for one minute is made safe by the killing of any infective germs which it might have contained. The butter contained in the milk does not seem to raise its boiling point, but it is well enough known that butter and other fats and fixed oils boil at a very much higher temperature, and that boiling fixed oils destroy the skin as effectually as melted lead. In the manufacture of tin plate—that is, sheet iron plated with tin—the tin is kept melted under melted tallow, and the clean sheet iron is tinned by being passed through this bath of molten tin. Fixed oils may be heated to about 500° F. without undergoing material change, but at about 700° F. they begin to boil, owing to the evolution of gases, which are set free as a process of destructive distillation. It is generally held that the typhoid