

Ontario Agricultural College and Experimental Farm.

THE CONTINUOUS PASTEURIZATION OF MILK AT
DIFFERENT TEMPERATURES FOR BUTTERMaking.

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The constant striving of agricultural countries to produce the best articles at the lowest possible cost for the English markets has resulted in very keen competition, and new competitors are constantly entering the field. We have lately heard that Siberia is sending considerable quantities of butter to England, and that special refrigerator trains and steamers have been built in order to handle this product. At present, this butter, although good in texture and make, lacks uniformity and flavor; but these defects will probably be speedily remedied, as the Russians have lately sent experts to Denmark, to study the methods followed in that country, and have even imported skilled dairymen for the purpose of instructing the Siberian peasants. Hence it behooves the Canadian maker to take advantage of every new method which is shown to be of value in producing a first-class article.

As it has been the strenuous endeavor to cheapen production in those countries which make a specialty of dairying, there must be good grounds for their adoption of pasteurization, an operation which increases the cost to a considerable extent in the outlay, both for apparatus and for the production of the heat required in the operation.

That buttermakers should incur this additional expense is very good evidence that pasteurization is an important operation, and that without it there is difficulty in obtaining the best results.

The comparison that has often been made between the farmer and the dairyman, explains the chief reason for pasteurization. The farmer cultivates his land and prepares his soil for the special crops he intends to grow; he eradicates as far as possible all weeds, and he selects with care a good variety of seed, from which he expects to reap as he has sown. The dairyman also prepares his soil, the raw milk, by heating it to such a temperature as will kill all or the greater number of bacteria which may be present, these being his weeds; then he seeds his milk with a selected variety of micro-organism found to produce a good flavor in butter; and he also expects to reap even as he has sown. These two points—first, the preparation of the milk by pasteurizing, and, secondly, the seeding with selected races of bacteria—have enabled all makers to secure the great desideratum, *uniformity of product*, which is of such importance to both producers and consumers