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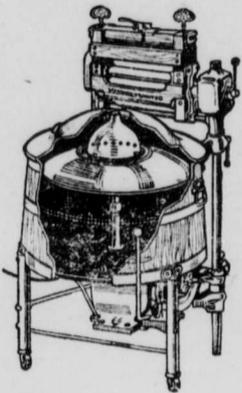
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FROM HARD TIMES TO CANADA



Do the pioneers lament? Migrants aboard the tender of the
WHEN the Canadian Pacific steamships "Marloch" and "Metagama" last docked at St. John, Canada gained to the extent of over six hundred able-bodied and industrious farmers, farm workers and women from the Hebrides. Forced by the loss of their fishing trade through the war and German competition, and by general hard times to leave their thatched homes, these people have come to a land of promise and have been welcomed as the most valuable immigrants in years. Under the leadership of Rev. Alexander J. Gillies and Rev. John MacMillan, they have gone to the Red Deer district of Alberta and to various parts of Ontario, where they will engage in agriculture.

Most of them are from the island of South Uist, Benbecular and Barra. Here their families worked small farms of from ten to twenty acres and kept a stock of from two to eight cattle and ten sheep on common pasturage. In the spring they gathered seaweed for fuel, planted oats, barley, rye and potatoes, and when this was done took to the sea,

some to engage in fishing, which brought but small monetary return, and others to join the merchant marine. In the fall those who were near returned home, harvested the small crop and thatched their houses. But there was not work for all. It was of no use to fish when there was no market and one man could do the work of the farm which produced but little. The wolf was at every door, almost, and the emigration officer received more applications for information and later assistance than he could comfortably handle.

These people having arrived and received welcome have already buckled down to work. Their losses at home have contributed to Canada's gain. A large party have gone to Red Deer where they will build their own church and school, and in addition to English they will retain their own native Gaelic tongue. The remainder of the immigrants have been split up as hired men in various parts of Ontario. Over four hundred were passengers on the "Marloch," the rest on the "Metagama."

MILK PASTEURIZATION

Making Milk Safe for Use in the Family.

Pasteurization is Not Sterilization—Diseases Transmitted by Milk—Points Charged Against Pasteurization—“Safety First” a Good Practice.

(Contributed by Ontario Department of Agriculture, Toronto.)

The process applied to milk, that we know as pasteurization, was originally used by Pasteur to prevent the souring of wines and beer, and it is now universally applied in the control of milk supplies of large cities. At first it was intended for the preservation of milk, that is, to prevent souring, but now it is used solely with the idea of destroying disease-producing micro-organisms.

Pasteurization is Not Sterilization.

Pasteurization is not sterilization. A much greater heat is required to sterilize than is applied in the former process. Pasteurization consists of heating the milk to a temperature of not less than 140 degrees F., for a period of not less than 20 and not more than 30 minutes, and then rapidly cooling it to 45 degs. F., or under, and keeping it at that temperature until delivered to the consumer. In addition to this, every care must be taken to have a clean product. The process does not remove dirt; therefore those responsible for the supervision of milk supplies insist on a high quality of milk for pasteurization.

No matter how carefully milk is handled and how well cows are inspected there still remains the danger of the carrier, that is, a person harboring the germs of a disease and yet not affected by them; or of the person who is developing an infectious disease, yet is not sick enough to stop working. The people may unwittingly infect the milk by coughing, sneezing, by their soiled hands when milking or washing vessels, or indirectly in many other ways. It is true that if the milk is kept cold these disease-producing bacteria will not multiply, but they may remain alive and fully virulent for a long time and the original number be sufficient to cause infection.

Disease Transmitted by Milk.

Until methods of milk production are much more perfect than they are at present the only way of maintaining a safe milk supply would appear to be by pasteurization, in which the rapid cooling and keeping cool is given as much attention as the maintenance of the correct temperature for the proper length of time.—Ronald Gwatkin, D.V.S.C., Ontario Veterinary College, Guelph.

mycosis and others. Pasteurization destroys the organisms that are the cause of all the foregoing diseases. In regard to bovine tuberculosis it is known that though adults may be relatively immune to infection from a bovine source, children are quite susceptible, and a considerable percentage of cases of tuberculosis in young children can be shown to be of bovine origin. There are certain biological differences in the bacilli from humans and cattle which make it possible to differentiate these infections. A cow may be dangerous even though the udder is not infected, as the germs are passed out with the excreta before any clinical evidence of tuberculosis is present, and owing to the position of the udder it is almost impossible to keep them out of the pail as they fall in with the tiny particles of manure that are on the cow's body and that silt down in the form of dust. Apart from the recognized disease producing bacteria, it is known that large numbers of ordinarily harmless ones in milk may cause a serious and frequently fatal diarrhea in children during the summer months.

Points Charged Against Pasteurization.

Some of the arguments put forward against pasteurization are: That the cream is reduced; that the milk is rendered indigestible; that the milk will not sour, thus doing away with nature's danger signal; and that the vitamins are destroyed. The last is the only argument that now carries any weight. The cream is not reduced in quantity, but by heating the fat globules are broken up smaller and do not rise to the top so easily, thus causing the cream line to appear less. As a matter of fact at 142 degs. F., there is very little reduction even in the appearance. With proper pasteurization the chemical and physical constitution of the milk is not appreciably changed, at least not to an extent that renders it less valuable as a food. The lactic acid bacteria that cause souring of milk are not all destroyed by the heating, and consequently properly pasteurized milk may sour like raw milk, thus indicating its age and condition. Recent work on vitamins shows that the anti-rachitic and anti-neuritic factors are not removed by pasteurization, but that the anti-scorbutic vitamins probably is. It should be replaced by giving daily a teaspoonful of orange or lemon juice diluted with water and sweetened.

“Safety First” Good Practice.

“FEELING” FOR LAYERS

This Method is About as Certain as the Trap Nest.

Experiments With Capons—Feeding Costs—Excellent Flesh Produced—Without Confinement—Handling Baby Chicks.

(Contributed by Ontario Department of Agriculture, Toronto.)

The writer carried on a series of experiments with poultry when connected with the Agricultural Experiment Station for Vancouver Island, Sidney, B.C., and presents the following notes as among those worthy of consideration:

DETERMINATION OF EGG-LAYING

A test was made of the feeling method, to determine its accuracy. Thirty hens that were under trapnest record were subjected to the feeling process for eight days: January 17 to 24.

The results of “feeling” were checked up and tallied perfectly with the “trapnesting,” indicating that it is quite possible for any careful person to determine which hens are laying by feeling the bird for the presence of the egg in the oviduct, in the early morning before she leaves the perch. The method also has an advantage in that it eliminates the necessary confinement of the birds in a “trapnest” for a period which is frequently longer than is actually required to produce an egg.

The great disadvantage of the feeling method is that it is impracticable for pedigree breeding, inasmuch that the eggs from individual birds cannot be recorded.

CAPONS.

Thirty cockerels were operated on when twelve weeks old. These birds were a thrifty and well-grown lot, averaging 2½ pounds in weight. After caponizing, they were kept under the same conditions as the cockerels. The feed cost for a pound increase in weight was slightly less for the cockerels up to six months of age. At this time the cockerels and capons weighed the same. These birds were killed for Christmas trade when 264 days old, and weighed, plucked, 8 pounds 2 ounces. The percentage of offal was low, being but 18 per cent.

The most profitable use is made of beet tops when they are sliced and fed with alfalfa hay or other forage and possibly supplemented with grain or concentrate feeds.

The chief value of cowpea hay lies in its high percentage of digestible protein. This has been verified by numerous feeding tests.