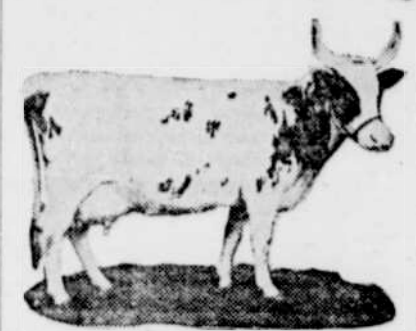


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Farm Dairying



Model Type of Ayrshire
XIV.—Milk and Cream Trade Byproducts.

By **LAURA ROSE**,
Demonstrator and Lecturer in Dairying
at the Ontario Agricultural College,
Guelph, Canada.

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THERE is no more remunerative method of disposing of milk and cream from the farm than supplying the retail trade.

At the present time there are few businesses which if viewed in the proper light present such a serious aspect. Milk is almost the sole food of the infant man the first year or two of his life. He depends entirely on it during his frailest and most helpless period. A great number of babies have to depend solely on cows' milk for their nourishment. The purity of the milk has a marked influence on the health of the child. Milk laden with bacteria is always more or less unwholesome and may to infants be actually and actively poisonous, giving rise to vomiting, diarrhea and gastro-intestinal disturbances. I would not unduly alarm, but to read statistics of the mortality of infants and to see the great number of deaths said to be directly attributed to bad milk make one shudder at what is going on. It appears like murder without intent.

These conditions exist mostly in large cities where the milk is shipped from all quarters for great distances.

When a farmer sends off a can of milk he has no idea into what homes it finds its way. Some is likely to go to feed a tiny baby, some the very sick and some the enfeebled aged—all with weak digestion and low vitality, all depending on the milk to strengthen and build them up.

The man who supplies a city or town milk trade should think of these things; should think of the lives he really holds in his keeping. The cow has little to answer for personally in regard to bad milk.

There are but two things necessary to keep the milk pure and sweet. Keep the milk clean, then the bacterial content will be low. Quickly cool the milk and keep it cold, and the bacteria which are in it will cease to develop. Pasteurization is recommended, but where the other two requirements are rigidly enforced it is not necessary. Besides, pasteurized milk does not agree with every one.

In some provinces and states there is legislation regarding the percentage of fat and total solids in milk. Vastly more important is it that a certain standard of purity be enforced. There is no more vital food problem than that of the milk supply. Some go so far as to say that dairy farms should be under municipal management just the same as the water system. Every detail of the milk trade would then be under special inspection, which should result in supplying purer milk and lowering the death rate among infants.

Milk For Retail.
The ideal method for preparing milk for retail is, first, to have the milk of best quality. Take it to the milk room separate from the stable and immediately cool it to 45 degrees. Then bottle in sterilized bottles and seal the tops with paraffined paper caps. It should be shipped as soon as possible, either packed in ice or in refrigerator cars. Milk should reach the consumer not later than twenty-four hours after it is drawn.

When we see oysters, ice cream, etc., carried in paper pails the paper milk bottle may come into use in the near future. It certainly would do away with the dread of badly washed glass bottles.

As bacteria lurk in the crevices of imperfectly cleaned vessels, all pails and cans in which milk is placed should be thoroughly cleaned and scalded. It is most important that there be no hidden nooks and corners in the tinware. Blind seams and crevices are breeding places for the worst forms of germ life. A liberal use of solder renders the inside of pails, cans, dippers and strainers perfectly smooth and cleanable.

Not until we get the consumers roused to the importance of clean milk will conditions greatly improve. To most of them milk is milk, and that is the beginning and end of it. They should be concerned about its source.

Are the cows healthy? Is the milking done in a cleanly manner? Is there any contagious disease among the attendants? These are questions about which the housewife should concern herself. When milk is guaranteed pure it usually commands a higher price. Extra precaution entails extra expense. The milk often becomes bad after it is received from the milkman because it is not properly cared for in the home. Too frequently the milk is put into a jug or pail which has only been rinsed since being emptied of milk. All milk vessels must be scalded. Another bad practice is allowing the milk to stand on the kitchen table or in some other

warm place. The milk should be covered and kept in a cool, clean place. It is a good plan to place a square of clean wet cotton over the milk picher. In warm weather, when souring is feared, it is a wise precaution to heat it to 185 degrees and quickly cool it. Danger from disease germs also is averted by doing this.

The souring of milk during a thunderstorm is due not to the thunder, but to the warm, sultry weather preceding the storm, making conditions favorable to the rapid growth of bacteria.

Do not place a bowl or jug on the door step for the milkman to fill. The dust falling into it may be sufficient to spoil the milk.

The Cream Trade.
Cream for retail should receive the same care as milk. Cream is generally sold by the quart or gallon and should be of a stipulated per cent of fat. Commercial or single cream usually contains from 20 to 25 per cent fat. Double cream 40 per cent. It takes three and one-third pints of 20 per cent cream to make a pound of butter. By comparing the price obtained for cream with that for butter, one can ascertain which is the better way of disposing of the cream. Practically speaking, 100 pounds of 4 per cent milk will make 20 pounds (two gallons) of 20 per cent cream.

It is a crime to add to the milk or cream any preservative. There are few, if any, that are not injurious, and many are really poisonous. Agents will sell a powder or solution which, if used to rinse the cans, will prevent the milk from souring. Surely such an argument should arouse suspicion. These so called remedies have been known to contain enough formaldehyde (a poison) to be dangerously harmful.

The farmer may add a little preservative saying, "This pinch cannot do any harm." The wholesale man, not knowing what has already been done, adds his small portion, and the retail dealer, who runs the greatest risk of the milk souring, puts in an extra dose. No one is able to sum up the sad results.

When ordinary milk does not sour under usual conditions within a reasonable time, there is something wrong.

More attention is each year being given to the retail trade. Legislative sanitary inspection of the milk, cows and stables and the establishing of pure milk depots to supply milk for infants especially are lessening the evils.

Milk produced under the best of conditions, cooled immediately and bottled has been kept sweet for eighteen days in the heat of summer. The milk was not pasteurized.

Cleanliness and prompt cooling were the only preservatives. We can recommend no others.

Milk Definitions.
Standard milk is milk which conforms to certain requirements which usually specify the minimum per cent of fat, and solids not fat, and sometimes the maximum number of bacteria per cubic centimeter allowable in milk offered for sale. The amounts required or permitted differ in different countries.

Sanitary milk, guaranteed milk, are terms applied to milk produced under conditions necessary to secure a pure, wholesome product.

Certified milk is milk produced under ideal conditions—healthy cows, especially adapted sanitary stables, healthy clean milkers. The milk is bottled, sealed and shipped in refrigerator cars and certified to by a commission.

Modified milk, or humanized milk, is milk containing definite proportions of fat, sugar, casein, etc., put up usually



TYPES OF MILKING STOOLS.

according to the prescription of a physician, who indicates how much of these different constituents is required. Clarified milk is milk which has been run through a separator to remove some of the impurities. The skim milk and cream are afterward mixed.

Pasteurized milk or cream is milk or cream which has been heated below the boiling point, but sufficiently to kill most of the active organisms present and immediately cooled to 50 degrees or below. Pasteurizing temperatures range from 140 to 185 degrees.

Sterilized milk is milk that has been heated to the temperature of boiling water (212 degrees) or higher for a length of time sufficient to kill all organisms present.

Condensed or evaporated milk is milk from which a considerable portion of water has been evaporated. The sweetened brands contain a high percentage of cane sugar.

Peptonized milk is milk to which some pepsin has been added in order to make the milk more easily digested.

Electrified milk is treated by a current of electricity for the purpose of destroying bacteria.

Malted milk is milk that has been pasteurized to destroy the bacteria, then partly condensed, and a small quantity of malt added.

Milk powder is obtained by evaporating the moisture from whole milk, partly skimmed milk or skim milk. The powder is used by confectioners, certain manufacturers, surveying parties and in such countries as the basin of the Yukon.

Koumiss is the product made by the alcoholic fermentation of milk caused by adding yeast and sugar to it.

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