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POINTERS ABOUT MILK

Information Relating to Cheese Factory and Town Supply.

The Percentage Composition of Milk—Handling Milk for the City Trade—Hot Weather Poultry Counsel.

(Contributed by Ontario Department of Agriculture, Toronto.)

THE term percentage means so much in 100—that is, in one hundred pounds, gallons, etc. The composition of milk is usually stated as so much of each part in one hundred parts or pounds. This varies considerably according to breed of cattle; lactation period, or length of time milking; whether first or last of the milking, and upon many other conditions. Usually, however, in Ontario, the milk will have about the following composition:

Water	87.5
Fat	3.5
Casein and albumen	3.2
Sugar	5.0
Ash	0.8
Total	100

The buttermaker takes one part only from the milk, the fat. The cheesemaker takes out chiefly two parts or constituents, casein and fat. The condenser and powder milk manufacturers make use of all the solids in milk for human food, hence are able to pay higher prices for milk than can manufacturers of butter and cheese. Because milk contains on the average only about three-and-one-half pounds of fat, which when made into butter has mixed with it from 16 to 20 per cent. of water and salt, thus making only about four pounds of butter out of 100 pounds of milk, we see why butter must of necessity be a high price per pound. The cheesemaker is able to make 8½ to 10 pounds cheese per 100 pounds milk, consequently is able to sell his product at about one-half the price per pound which butter sells for, and yet pay as high, or higher prices per 100 pounds milk than can the butter manufacturer. The condensed and powder milk manufacturers are able to sell their products at a still lower price per pound, because they are able to recover from twelve to twelve-and-one-half pounds of solid food material from 100 pounds milk.

From the foregoing we see that the commercial value of milk has a very close relation to its composition, and the use that is made of the various parts of the milk solids.—H. H. Dean, O. A. College, Guelph.

Milk For the City Trade.
"Safety First" is a good slogan in the milk business. To make milk safe it must be drawn from healthy cows—preferably those which have passed the tuberculin test; the stable, pasture and all surroundings must be clean; the utensils which come in contact with the milk must be clean; the persons handling the milk should be a living advertisement of exemplified cleanliness; the delivery wagons, cans, measures, etc., should be clean. In order that assurance of safety may be doubly sure, it is advisable to pasteurize the milk—that is, heat it to 140 degrees to 150 degrees F., hold at this temperature for twenty to thirty minutes, then cool to 50 degrees F. or below and hold at this temperature until delivered to the consumer. Pasteurized milk is the safest kind of milk for humans to drink.

The person buying milk has certain duties in order to ensure a safe product, especially for children. Among these may be mentioned, placing the milk at once on delivery in a refrigerator or cool cellar protected from dust and odors, and by keeping it in a tightly closed vessel—preferably in the milk bottle covered with an inverted glass tumbler, or special cover; the top of the milk-cap should be wiped to remove dust before taking it from the milk bottle; no more milk should be taken from the supply bottle than is required for a meal; any "left-over" milk should not be put into the supply vessel after the meal, as this will likely spoil the whole of the milk on hand; milk taken to a sick room should not be used for any other purpose, except it be boiled, and then only for cooking; milk bottle should be washed as soon as empty, and be promptly returned to the milkman. In no case should milk bottles be used for any other purpose in the house than for holding milk.

Milk is a perfect food for children, and also for "grown-ups," along with other substantial material. It is cheap food at ten to twelve cents a quart compared with the price of other foods. In any good, clean milk and be willing to pay a reasonable price for such milk. Milk producers and milk consumers should co-operate.—Prof. H. H. Dean, O. A. College, Guelph.

Children Cry
FOR FLETCHER'S
CASTORIA

PRESERVATION OF FOOD

Essentials in Saving Vegetables and Fruits.

Sterilizing Preparatory to Canning Described—Drying Methods and the Cold Pack Also Described.

(Contributed by Ontario Department of Agriculture, Toronto.)

IT is a universally known fact that foods not properly preserved will spoil. They will ferment, decay, putrefy or become moldy. These changes are brought about by the development of bacteria, yeasts and molds on or in the food. If these micro-organisms can be prevented from growing on or in the food it will not spoil. Therefore, the question of food preservation resolves itself into the problem of preventing these bacteria, yeasts and molds from growing or multiplying on or in the foods. This is done in various ways according to the nature of the food to be preserved.

In the preservation of such vegetables as green peas, beans, asparagus and green corn, cooking and sealing are necessary. These are green and juicy, and if stored in the fresh condition they will either wilt or ferment and rot. This fermentation and rotting is due to the development of the bacteria which are present on the vegetables. There will be sufficient moisture present in the mass to enable the bacteria to multiply and feed on the material and thus induce the rot.

So in order to preserve such vegetables in the fresh condition the bacteria present have to be all killed and all other bacteria prevented from getting on the material until it is to be used. In order to accomplish this the process of canning is resorted to. To get satisfactory results from canning vegetables it is necessary to have:

- 1st. Good sound healthy vegetables.
- 2nd. Good clean sealers with tight-fitting tops and good rubbers.
- 3rd. Wash the vegetables and fill into the sealers.
- 4th. Cover with water salted to taste.
- 5th. Put on the tops and leave slightly loose.
- 6th. Place sealers in a steamer or boiler half filled with cold water and heat to the boiling point for half an hour.
- 7th. Remove sealers from boiler or steamer and tighten down the tops.
- 8th. After 24 hours loosen the tops and return to the boiler or steamer and give another half hour's boiling.
- 9th. Repeat this process after another 24 hours. Then tighten down the tops and place away.

This treatment should destroy all micro-organisms present, and if the top is hermetically sealed no others can get in until it is opened.

Another method of sterilizing is to give one boiling to the filled sealers for three to four hours. This, however, cannot be depended on to give as satisfactory results as the above.

Another method is to heat in steam under 15 lbs. pressure for thirty minutes. This is the commercial way for which special strong steamers (autoclaves) that can withstand internal pressure are necessary.

Another method of preserving vegetables is by drying in special ovens. This drying process extracts sufficient moisture from the vegetables to prevent the bacteria present from having the water to multiply unless the materials should get moist before being used. If sufficient moisture is not extracted, or should the dried materials get moist during storage, then decay or rot will rapidly develop, as the bacteria are not killed in the drying process and only require moisture to enable them to develop.

Such fruits as strawberries, raspberries, plums, peaches, currants, blueberries, etc., which are soft, cannot be kept any length of time without fermenting or molding unless they are canned.

The canning process is simply for the purpose of killing all mold spores and yeast cells that are on the fruit and preventing others getting on until the material is to be used.

Canning fruits is not so difficult as canning vegetables because it is easier to kill yeasts and molds which affect fruits than it is to kill bacteria that affect vegetables.

These fruits may be cooked in a fruit-kettle, sugar added to taste, and filled hot direct from the kettle into sterilized sealers removed direct from scalding water. The covers, rings and rubbers should be put on at once direct from scalding water and screwed down tightly.

Another way to preserve such fruits is by the cold pack method. In this the fruit is not cooked before putting into the sealer. Sound fruit not overripe should be used. This is picked over and filled directly into clean sealers. Stone fruit should be pitted.

A syrup of sugar and water sweetened to taste is then filled into sealers so as to completely cover the fruit. The tops, rubbers and rings are put on but not screwed down tightly. The sealers are then placed in a boiler containing cold water sufficient to reach three-fourths up the sealers and this is brought to a boil

and kept boiling for half an hour. The sealers are then removed and the tops screwed down tightly at once. When cooled, store away.—Prof. D. H. Jones, O. A. College, Guelph.

Feed Plenty to Hens.
Feed plenty of the feeds you have on hand. Hens prefer rolled oats and barley to whole grain. A ration of one-third each of oats, barley and cracked corn gives first-class results. Supply plenty of tender green feed, shade and clean drink. Water should be given in abundance and must always be clean and fresh. Barnyard water is extremely bad. Sour skim-milk is excellent.

Hot Weather Poultry Counsel.
The rooster, unless kept for next year's breeding, is too expensive a luxury to keep—and he'll help relieve the meat shortage.

The market for the cull stuff promises to be good this month—and by marketing in June the distribution is more equalized.

By eating the poor layers the farmer gains in two ways—he eliminates the profit-takers from his flock and he lowers the meat bill for his table. The small farm flock of good layers is always more profitable and satisfactory than the large flock of poor layers.

The good layer of the yellow-legged breeds at this season loses the color from the feet and bill and these latter becoming almost white. The sleek plumaged, fat yellow-legged hens are usually very poor layers. It will pay to cull them out now.

If Miller's Worm Powders needed the support of testimonials they could be got by the thousands from mothers who know the great virtue of this excellent medicine. But the powders will speak for themselves and in such a way that there can be no question of them. They act speedily and thoroughly, and the child to whom they are administered will show improvement from the first dose.

Swiss Crops.
The crops in Switzerland in 1919 were considerably below those in 1918, with the exception of the fruit crop. This was due to unfavorable atmospheric conditions, a cold and wet spring, drought in early summer and again in late summer, followed by sudden falls in temperature and early frosts, and to the fact that the acreage planted in 1919 was smaller than in 1918.

A Record in Prizes.
The secretary of the Brandon Winter Fair recently paid to James Turner, of Carrol, the sum of \$1,040 as his share of the prize money won at the big Manitoba show. This amount is claimed to be the largest ever paid to one exhibitor at any show in Canada.

The Friendly World Trip.
It's a queer world. Sunday we spent in a friend's boat, making the trip to Wallaceburg, Ont. Along that stretch of blue water we passed every sort of people in every sort of boats, and in every instance we waved a hand in greeting to them and they waved to us. It was no trick at all to get a warm and genial sign of friendship from passersby. The people on land saluted us. It seemed as though we were continually being welcomed as we arrived in sight and wished good luck as we departed. Yet on land we could have passed by the same people time after time and not one of them would have turned to look or wave a hand. Why can't people be as friendly to land travelers as they are to those who travel by water? It's a queer world.—Cleveland Leader.

Priests Fought as Pollus.
Yesterday on the Rue St. Honore I met two priests, one wearing an empty sleeve, one wearing a mechanical leg and both wearing the Croix de Guerre. "Were you in the war as chaplains?" I asked.

"No," replied the one-legged priest, "we were pollus. Most of the younger priests fought in the ranks."

"But I suppose very few were wounded?"

"On the contrary," replied the one-armed one, "the percentage was high. You see, we had no families, so it was only right that when there was something dangerous to do we should go first."—Lee Shipley in Kansas City Star.

Cotton Production Welcome.
Mesopotamia has always grown some cotton, which modern methods may improve. Of this material may have been the veil with which Rebekah covered herself at her first meeting with Isaac, as she journeyed under the guidance of Abraham's servant, from Mesopotamia to Canaan to become Isaac's wife. Cotton competition between Mesopotamia and Egypt would be particularly attractive. And cotton is one good thing of which war's tatterdemalion, the world of today cannot have too much.—Boston Herald.

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