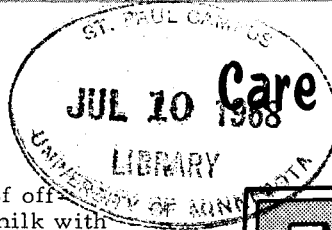


DAIRY INDUSTRIES NO. 4

(4) 967

V.S. PACKARD, JR.

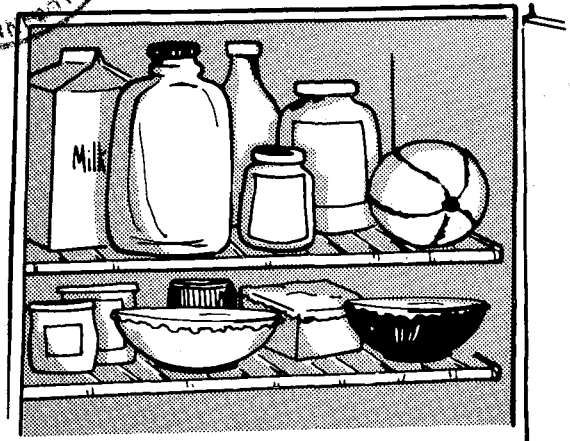


Care of Milk in the Home

To keep milk fresh, safe, and free of off-flavors, handle both raw and processed milk with care to insure maximum purity and shelf-life. A few precautions, the do's and don'ts of milk handling, help keep milk fresh and healthful.

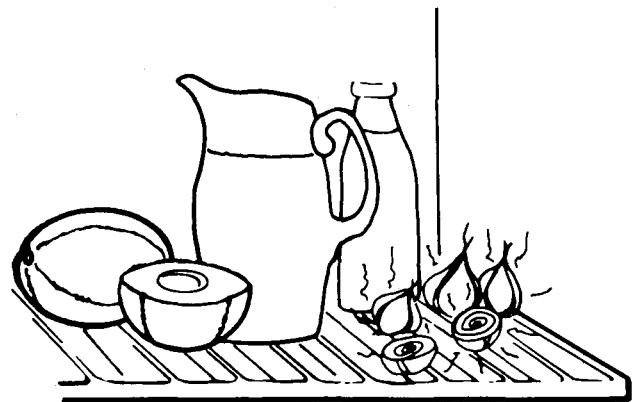
DO

- keep milk cold at all times. Milk temperature should be constantly kept below 45° F. Return containers to the refrigerator immediately after use.
- keep milk capped or covered. Both disease and spoilage bacteria may accidentally enter exposed milk.
- pasteurize all milk for home consumption.
- store milk in the dark.



DON'T

- allow milk to freeze. Milk which has frozen is not harmful, but its flavor and physical characteristics change slightly.
- pour unused milk back into the original container.
- expose milk to sunlight. A few minutes' exposure can cause an off-flavor to develop and some riboflavin loss, especially in milk in plain glass bottles. You should provide door-step storage boxes for home-delivered milk.
- expose milk to objectionable odors. Vegetable, meat, fruit, paint, and medicinal odors are readily absorbed by milk.
- touch the lip of containers with your hands before or after pouring milk.
- store milk in metal containers except those of stainless steel. Some metals (copper and iron) may be absorbed and cause off-flavors.
- overheat milk. Both off-flavors and loss of vitamin potency occur.



PASTEURIZING MILK

All milk produced and consumed at home should be pasteurized.

What is Pasteurization?

Pasteurizing, as applied to milk, originates from the work of Louis Pasteur between 1860 and 1867. He discovered that a mild heat treatment prevented wines from souring. When this process was applied to other foods, it was called "pasteurization."

Why Pasteurize Milk?

Milk is pasteurized to: (1) destroy any disease-producing bacteria present, and (2) increase its shelf-life by destroying spoilage bacteria. Though care is taken to control the kinds of bacteria in raw milk, the presence of disease-producing bacteria is always a possibility. Sources of these bacteria vary widely (farmyard, barn, cow, milking and storage equipment, and milk handler). Any of these may contribute undesirable bacteria to milk, despite normal precautions. Good sanitation programs lessen--but do not discount--this possibility.

When to Pasteurize

Milk produced under sanitary conditions and immediately cooled to 35 to 40° F. and maintained at that temperature will keep a few days. Raw milk stored in home refrigerators, many of which are set for higher temperatures, may not keep that long. Pasteurization soon after milking is recommended.

How to Pasteurize

Pasteurization is the process of heating every particle of milk to a specified temperature for a given length of time. Low temperatures require longer holding times than high temperatures. The heat treatment given milk is just sufficient to kill the most resistant disease cells that might be present.

Minimum time-temperature requirements are used because milk flavor may change at higher temperatures or over longer holding periods. It may taste cooked or even scorched. This cooked flavor disappears upon storage.

In dairy plants, very sensitive equipment is used to insure proper pasteurization. Equally important, every precaution is taken to prevent recontamination. Because the equipment is scientifically controlled, pasteurization is assured. Families should strongly consider the use of commercially processed milk.

Two methods of pasteurization are common:

1. The "long-hold" process--milk is heated to 145° F. and held for 30 minutes.
2. The high-temperature-short-time process (HTST)--milk is heated to 165° F. and held momentarily.

In routine home pasteurizing, electric pasteurizers are most desirable. These are available in retail outlets and are completely automatic. Milk is placed in the pasteurizer, a control is set, and the pasteurizer heats, maintains temperature, and shuts off after the proper interval.

A double-boiler may be used for heating milk. Never heat milk directly over burners. For pasteurizing in a double-boiler:

1. Fill the bottom section with water.
2. Add milk to the top section and cover.
3. Heat to 165° F., using an accurate thermometer to check temperature. Learn to estimate the time needed to bring milk to 165° F.
4. Cool milk promptly by immersing boiler (still covered) in a pan of cold running water or, preferably, ice water. Quick cooling minimizes a cooked flavor and growth of spoilage bacteria surviving pasteurization.
5. If another container is used for storage, be sure it is sanitary. Use a common dairy equipment sanitizer to sterilize it. Pasteurization does not good if milk is recontaminated. Use a container that can be capped or covered at all times.
6. Keep milk under constant refrigeration.

Milk is one of the most healthful foods known. Treat it properly, drink it regularly, and enjoy good health.