

the knife—this is done to prevent the cream from sticking to the edge of the pan—then with the aid of the knife glide the cream into the cream-crook. Considerable skim-milk may seem to go with the cream, but the cream is so thick that the milk does no harm.

Milk in shallow pans should stand twenty-four hours in summer, and thirty-six hours in winter. Always skim before the milk thickens. Keep in a cool, well-aired room, free from odors of any kind. Remember, nothing absorbs odors so readily as milk and its products; and it is flavor in milk or butter which chiefly determines its value. Avoid having a draft over the milk as it forms a hard, leathery crust on the cream.

CREAM SEPARATORS.

For a herd of ten or more cows a cream separator will pay. More butter fat is recovered from the milk and the cream is in a sweeter and purer condition than when obtained by any other method. The skim-milk is warm and fresh for the young stock, and the problem of cooling and caring for such a large bulk of milk is solved. If water be scarce, or ice hard to procure, invest in a separator.

CARE AND RIPENING OF CREAM.

Cream should never set in open crocks or pails in cellars, pantries, or any place where there are odors or where the air is not pure. The cream crock or can should always be covered, and in summer it should stand in the coolest place in the milk cellar, while in the winter it may be brought into a room where the temperature is from 60° to 70°. Each time the cream can is emptied it should be thoroughly washed, scalded, and put out of doors for an hour or two before being used again.

When starting to collect cream for a fresh churning, add to your first skimming a starter which you know has a clean, good flavor. A pint or two of cream saved from your previous churning, or the same amount of good butter-milk or sour skim-milk answers. The reason for adding the starter is, that the bacteria, which you know produce a fine-flavored butter, get control of the new cream before other germs which might prove unfavorable take possession of it.

Stir well each time new cream is added. Do not add sweet cream shortly before churning. You will have a great loss of butter fat if you do.

Separator cream should be cooled to 60° in winter and to 55° in summer before it is added to the cream crock.

The day before churning examine your cream. If the lactic acid be developing slowly, heat the cream to 65° in winter and 60° in summer by placing the can in a dish of warm water at 100°, and stirring constantly until the desired temperature is reached. In warm weather care should be taken not to over-heat the cream or it will become too sour before churning time, and too much acid is injurious to the flavor of the butter. It may not be necessary to warm the cream at all in summer time. Have the cream lowered to churning temperature several hours before churning. It gives a better texture to the butter.

With regard to pasteurization, see "Butter-making in the Creamery" in this bulletin.

CHURNING.

Before using, the churn should be scalded with boiling water and then rinsed with cold water. After using it should first be rinsed down with hot water, then thoroughly scalded with plenty of boiling water, and occasionally given a scouring with salt. Never allow water to remain in the churn when not in use, and do not leave the lid on. Keep in a cool place to prevent warping.