

These should be sunk in the earth in order to secure a lower or more even temperature of water, as well as for convenience in handling the milk.

The vats should be about six feet wide, and from twelve to twenty-four feet long, arranged for a depth of eighteen inches of water. There should be a constant flow of water in and out of the vats so as to secure a uniform temperature of the milk after it has been divested of its animal heat. The milk is set in pails eight inches in diameter by twenty inches in length, each holding fifteen quarts of milk.

As fast as the milk is delivered the pails are filled to the depth of seventeen inches and plunged in the water, care being taken that the water comes up even with, or a little above the milk in the pails.

The temperature of the water should be 48° to 56° .

A vat holding 2,000 quarts of milk should have a sufficient flow of water to divest the milk of its animal heat in less than an hour.

Good pure milk will keep sweet thirty-six hours when thus put in the vats, even in the hottest weather.

When milk is kept thirty-six hours in the water, nearly all the cream will rise.

The Orange Co. dairymen claim that it all rises in twenty-four hours. They say, too, that they get as much cream by setting in pails on the above plan, as they can to set the milk shallow in pans, and the cream is of better quality, because a smaller surface being exposed to the air, there is not that liability for the cream to get dry, which has a tendency to fleck the butter and injure its quality.

The old notion that cream cannot rise through a depth of milk greater than seven inches is believed to be an error.

Desiring to test this matter, I took glass cream jars, in which were graduated scales, and set milk of the same quality at different depths, 2 to 18 inches. The depth of cream was always in proportion to the quantity of milk.

One of the troubles of butter-making on the old system is in regulating the temperature of the milk room, and in knowing when to skim the cream. It requires close watching.

In our variable climate it is almost impossible to keep the milk at a uniform temperature, when set in jars in the ordinary way. By the new system, we always have a uniform temperature without trouble, and therefore have perfect control of the milk. Again, in the new system, the shells of casein enclosing the butter globules are not so liable to decompose and injure the flavor of the butter, for it is this caseinous matter that spoils the butter, and even under the best management it cannot all be taken out; but by exposing only a small surface of the milk to the air, we effect an important gain.

The Orange Co. butter makers have tried a great many patent churns, and they find none which they like so well as the old barrel dash churn. At the butter factories they use the barrel and half size, and about fifty quarts of sweet cream are put into each churn; the cream is diluted with water by adding cold water in summer and warm in winter, at the rate of sixteen to thirty quarts to each churning.

The temperature of the cream in summer, when the churns are started,