

Livestock and Dairy

Facts About Care of Farmers' Feeders and Aids to Greater Milk Production.

Competition in the dairy market is keen these days. To get the top price from the creamery the farmer must produce the best article. The dairyman who wants to get such a price will find it worth while to consider the following article. Mr. Simpson is instructor at Oregon Agricultural College. He will conclude his subject in next week's issue.

By O. G. SIMPSON.

THE most serious problem confronting the dairy industry of Oregon today is the poor grade of cream delivered to the creameries. Cream is often two weeks old when delivered, and not infrequently is in a stale and even putrid condition. Good butter cannot be made from such cream.

A large amount of New Zealand butter is being imported to our markets, some of which is of very good quality. If the dairyman wishes to continue to receive the good price for butter fat that he has enjoyed in the past, he must deliver better cream to the creamery. The creamery will then be enabled to make a quality of butter much better than it is possible to import, since it requires from 60 to 90 days to put New Zealand butter on this market.

It is not necessary for the dairyman to purchase a lot of expensive equipment or hire additional labor in order to produce a high quality in cream or milk.

Care of Cow.

The care of milk really begins with the care that the cow receives. Cows that are in the best of health, surrounded by the best conditions, and receiving good feed, produce the best flavored milk. Strong flavored feeds, such as kale and turnips, if consumed by the cow shortly before milking, will produce the same flavor in the milk. If fed a number of hours before milking, preferably immediately after milking, the flavors will probably be passed off by the cow. The condition of the cow will largely influence the amount of dirt and bacteria in the milk. When the cow's flanks and udder are covered with manure and dirt, some of it will fall into the milk pail.

Dusty and poorly ventilated stables cause a large percentage of the dust and bacteria in the milk, because the stable air becomes filled with dust and bacteria which fall into the milk pail. The same objection is to be made to feeding dusty feed, while milking, or even shortly before milking.

Open Air Ideal.

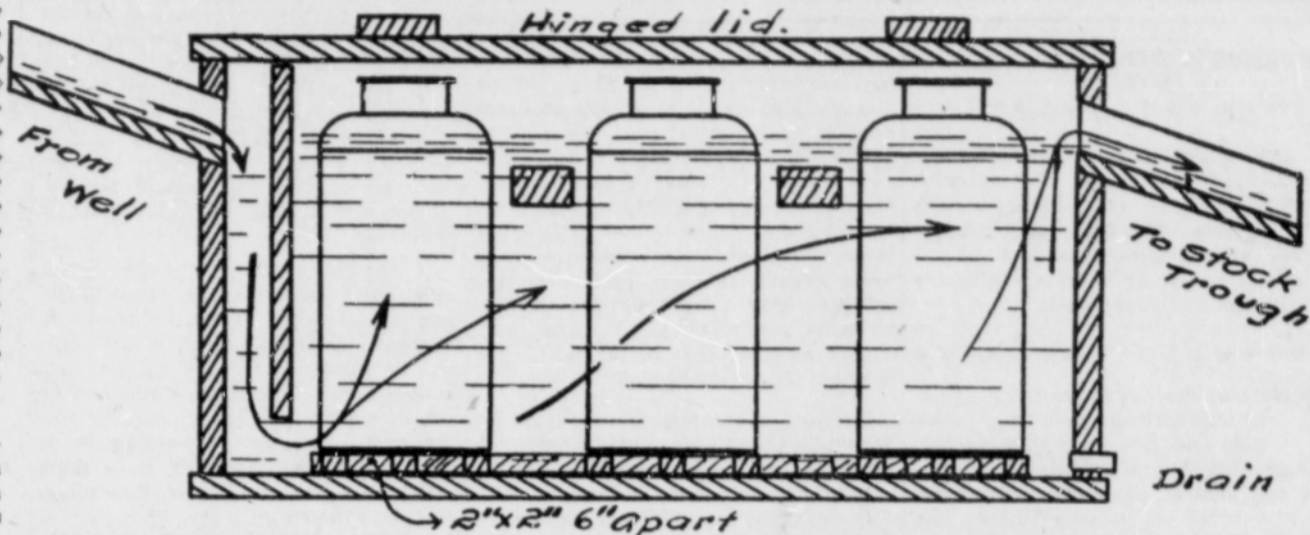
The ideal condition for the milking of a cow would be in an open field with a moist, clear air; the cow, of course, to be clean and healthy. This condition can be approached by having a clean stable, free from dust and by moistening the hair on the udder and flanks with a clean, moist cloth. This serves to make the hairs stick to one another and to retain the dust. The practice of wetting the hands with milk cannot be too strongly condemned. If anything is necessary to soften the teats, a little vaseline may be used.

The milk should be drawn into small top pails. Pails with small openings in the tops reduce the amount of exposure to the atmosphere, as may be seen by the accompanying sketch. Experiments have shown that the use of the small top pail reduces the bacterial content approximately 50 per cent. Such pails are not expensive. It is also well to examine them when purchasing, to see that there are no crevices or unsoldered places to retain milk particles. Some milkers may find the small top pail a little awkward at first, but will soon find that all of the objections disappear.

Remove Milk Soon.

The milk should be removed from the stable as soon as possible after being drawn. If it remains long in the stable, it is likely to take up stable odors.

Straining is done to remove dirt and occasional hairs, but it does not reduce the bacterial content of the milk. If the milking period is long, the strainer



Tank for cooling milk or cream with well water. Illustration courtesy Oregon Agricultural College.

should be rinsed off with a little water to prevent its clogging up and to remove any dirt that might dissolve or break up and pass into the milk.

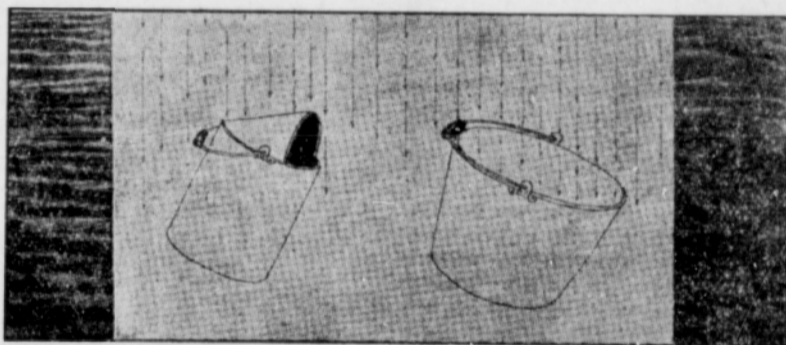
Where the milk is to be sold in bulk or bottled, it should be cooled as soon as possible after being drawn. There are several ways of cooling milk. The most common is to set the cans in a trough or barrel of cold water. Better results are obtained by having a continuous flow of water. While cooling, the milk should be kept well stirred in order to cause a more rapid cooling. Milk is a poor conductor of heat, and unless stirred occasionally, the milk near the center of the can will stay warm for some time after that near the sides are cooled. There are a number of devices on the market for cooling milk and cream. Most of them use running water which flows through the inside while the milk flows down over the outside surface. These contrivances produce rapid cooling, but use several times as much water as the volume of milk.

er will keep the temperature of the cream from rising rapidly.

Spring Calves

SPECIAL care must be taken with spring dairy calves or they will not develop properly. The fall calf does not have to fight the flies nor is it turned into pasture to shift for itself like the spring calf.

The cow should freshen in a box stall and the calf should remain with her for the first two or three days so as to be more certain of obtaining the colostrum milk. Until it is three weeks old, the calf should be given the mother's milk three times a day at the rate of three to five pounds per feed. The amount may then be increased slightly, and the calf fed only twice a day. Great care should be taken to keep all feeding utensils scrupulously clean.



Relative amount of exposure to contamination with covered and open milk pail.

In selecting a cooler of this type, do not forget to look for ease of cleaning.

Separate Before Cooling.

If the cream alone is to be sold, the separating should be done before cooling down the milk, and the cream cooled immediately by one of the methods mentioned. A rich cream has better keeping qualities than a thin cream. Butterfat does not furnish food for bacteria. The bacteria that grow in cream derive their food from the skim milk present in the cream. A rich cream, therefore, testing from 35 per cent to 40 per cent, has better keeping qualities, because there is less food for bacteria. Stirring cream twice daily, if kept any length of time before churning or shipping, will prevent a hard layer forming at the top and the skim milk settling at the bottom. Before two lots of milk or cream are to be mixed, both should be cooled to the same temperature. If one lot is warmer than the other, rapid souring will likely be the result.

The cream containers should be kept covered after the cream has been cooled. When exposed to the air, cream forms a leathery layer over the top, and unless in very clean air and surroundings, it may also become contaminated with dust. Deliver the cream often, not less than three times a week in summer and twice a week in winter. Even though kept under the very best conditions, it will develop staleness if kept too long. If the can is to be hauled any distance in the sun, cover it with a blanket or burlap, saturated with water. The moisture evaporating from the cov-

er is often advisable to feed whole milk until the end of the fifth week, but skimmed milk may be substituted at the end of the fourth, depending upon the condition and value of the calf.

Calves should not be fed roughage too early. They will begin to eat it when two or three weeks old, but unless it is given in small amounts, digestive disorders may result. Until the calf is two months old, fine mixed hay, which has less tendency to cause scours, is better than clear clover or alfalfa. Small amounts of silage leaves may be fed after the calf is one month old.

Grain in small amounts may be fed after the calf is two weeks old; a good mixture is five parts of whole oats, three parts bran, one part corn meal, and one part oil meal. It should be given dry in order to compel thorough mastication. When fed in this manner, immediately after the milk, it also helps to prevent ear sucking.

It is not advisable to turn young calves onto pasture, as grass is very laxative. The barn is more even in temperature, also cooler, and if kept clean and dry, much more suitable for the development of the calf.

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