

Quality Milk First Among Market Milk Distributors

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Bottled milk and cream, cottage cheese, buttermilk, chocolate milk, and butter are the standard dairy products which have been sold by the market milk industry for many years.

The importance of high quality should not be lost sight of in the industry's effort to meet increased consumption of milk and milk products. Quality factors include safety, good keeping qualities, cleanliness, proper food value and flavor is most important from the standpoint of increasing consumption.

The flavor of milk, as produced by cows that are in normal condition and that are in that stage of lactation ordinarily considered as suitable for market milk production, varies greatly with the individual animal. The flavor of milk depends largely upon the amount of butterfat as well as the proportion of sugar, protein, and ash it contains.

Furthermore, the feed the cow consumed will have an important bearing on the flavor. Some milk may taste watery, even though it is fairly high in butterfat. Feed and fruity flavors may be very evident in the milk from some cows, while that from other animals similarly fed may have little or none

A Last Look Around



With toy pistol ready in his right hand and wearing his cock-a-hoop air force cap, three-year-old warrior Laurie Godfrey takes a last look around the railroad station at Sydney, Australia, before being evacuated to a country town.

(Central Press)

of the flavor defects. Some milk will develop rancidity or tallowiness much sooner than others.

Causes of Off-Flavors

Certain roughages such as corn, silage, alfalfa hay, clover hay, and green forage in general, when fed to cows within the five-hour period preceding milking, will cause a noticeable off-flavor in the milk. While such flavor defects are not serious in comparison with those resulting from certain weeds, such as onions, parlie, or bitterweed, they detract from the quality of the product. Proper management is necessary in order to reduce feed flavor defects to a minimum.

The importance of bacterial control in the production of raw milk of high quality is commonly recognized. It is known that microorganisms are responsible not only for acid development in milk, but also for many off-flavors. Numerous cases of peculiar off-flavor in raw milk have been observed during the summer months. This flavor was credited by some as being of feed origin because of its similarity to malt. A study of some proved it to be of a fermented source. It would seem that control of this defect and similar ones, therefore, would be closely associated with proper washing and sterilizing of the milk utensils on the farm with the proper cooling of the milk.

Turnips, potatoes, beet and carrot flavors also have been attributed to the growth of bacteria. The organisms responsible for the flavors get into the milk from hay, straw, grain, and dust. Other off-flavors that have been credited to bacterial growth are hydrogen sulphide, phenol and doughy. A taste may be caused by bacteria that form ammonia, which in turn

Farmer Owes It To His Family To Keep At Least One Dairy Cow

By Fred M. Haig, State College Animal Husbandman.

The history of agriculture in all civilized nations has been one of change from grain growing with livestock farming as a secondary consideration to a system of farming in which livestock play an important part. The best dairy districts of Europe were once grain-growing centers, and our own eastern states 50 years ago produced most grain. Yet today this section is intensively in the business

react with acid present producing a soapy flavor.

By the adoption of a public health regulation that includes suitable specifications as to the methods that must be followed in the production and handling of the raw milk, there should be little trouble from off-flavors in market milk due to bacterial action.

One of the most troublesome flavor defects in both raw and pasteurized milk is the flavor called by various names, such as oil, cappy, metallic, tallowy, and oxidized. Investigations have found this defect to be due to an oxidation process. Most investigators have thought the butterfat itself was oxidized. Copper and iron salts when present catalyze fat oxidation, thus speeding up the action and therefore playing a very important part in the occurrence of tallowy flavor.

Develops After Bottling

Oxidized flavor usually does not develop in the milk until 4 to 48 hours after bottling. Peculiarly, oxidized flavors occur in milk most frequently during the winter months. There seem to be two factors responsible for this, the bacterial content of the milk and the feed of the cows. Milk of high bacterial content is less likely to become tallowy than milk of low content, and the milk from cows fed dry feed is more likely to become tallowy than that from cows on pasture or green feed. At Rutgers University during the winter months when the cows were on dry feeds, the oxidized flavor defect was eliminated by adding carrots to the ration. Thus, it is not at all unlikely that by the use of properly cured hays and certain foods containing the essential elements our troubles from tallowy flavors during the winter months can be greatly minimized.

When milk is exposed to the direct rays of the sun in plain glass bottles a burnt flavor results. The flavor is due to the action of the sun upon the non-fatty portion of the milk. The sun rays are so effective in bringing about flavor changes in the milk that exposure for even fifteen minutes can be detected by taste. Consumers should be advised to store their milk in the absence of sunlight.

Rancidity More Common
Rancidity is a defect more common in raw milk or cream or butter made from same than in pasteurized products. In cases where there is a considerable lapse of time between the production of milk and its pasteurization rancidity is likely to prove troublesome to the pasteurized milk dealer. Rancidity is most troublesome during the winter months, suggesting a correlation with the feed to which the cows have access. Studies indicate it may be controlled by introduction of carrots in the cows ration.

Since rancidity develops while the milk is in storage at low temperatures it is important to pasteurize the milk as soon as possible after it is produced to retard rancidity development.

On several occasions it has been observed that raw milk coming from the farms had an undesirable medicinal flavor. Chemical sterilization was used to sterilize the farm equipment. The exact nature of the reaction is not known. It is desirable to use this method of sterilization judiciously and carefully to avoid this type of off-flavor.

of producing milk and livestock. Livestock farming and dairying, in particular, offer a splendid market for grain and roughages. The dairy cow as an efficient converter of comparatively coarse, rough feeds into a highly concentrated and nutritious food for humans has no equal. The cow will eat large quantities of hay, silage, corn stover, grain, and grain by-products, not edible by man, and convert them into milk, a food without which the human race cannot develop into a healthy people, either physically or mentally.

The cow has rightly been called the foster mother of the world, and millions of people now living owe their very lives to the fact that some cow supplied them with fresh milk when they were infants. Most of us are stronger and healthier because we have partaken freely of this great food.

Yet we find many farmers denying their children this most nearly perfect of all foods by refusing to keep a family cow. There is one county in this state that only has one cow to each 164 people. The average for the state is one cow for each 10 people, while the average for the United States

Bataan Heroines Back Home



U. S. Army Signal Corps Photo

Smilingly posing at the Presidio in San Francisco are three U. S. Army nurses after their arrival from the Pacific war zone. They saw service in besieged Bataan, taking care of from 180 to 235 patients each and working seventeen hours daily. The ordeal was so tough that the girls lost from fifteen to twenty-five pounds apiece.

is one cow for each 5 people. It is apparent we need many more family cows on our farms. In fact, a farmer owes it to his family, as a good citizen, to have at least one cow on his farm to furnish his children with milk and butter and the other delicious goods that can be made from milk.

Milk is the only food in the world that contains practically all the elements that growing children

must have, namely, proteins, minerals, energy, and vitamins, all furnished in such an easily digested form that even the new-born babe can drink it. If science should discover some new, comparatively cheap product, which contained all elements for growth and health, and the actual cure for many specific diseases, the newspapers of the world would herald it as the greatest invention of the age.

Societies would be formed that no family went without. Yet milk will do all these things. But even though we have known about this for centuries, we suffer by not using this life-giving food. For instance, how many adults drink a pint of milk a day? Not so many, because average consumption is less than one-fourth of a pint a day. Yet, if grown-ups would be drinking a pint a day, they would feel better and actually have resistance to disease.

Today milk is produced clean, healthy cows, in clean, equipped with modern dairy equipment. Practically all cities and towns have strict dairy ordinances relative to the production of each requirement of these ordinances must be satisfied by dairy farmer before he can sell milk. This important inspection work is supervised by the health department, by maintaining inspectors who visit each farm and milk distributing monthly to see that the milk produced in the most sanitary manner. In this way the production of milk is held to a very high standard for the protection of the consumer. In short, drinking milk by one, old or young, will pay dividends in health. And the old saying, "Health means wealth," had a truer meaning.

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