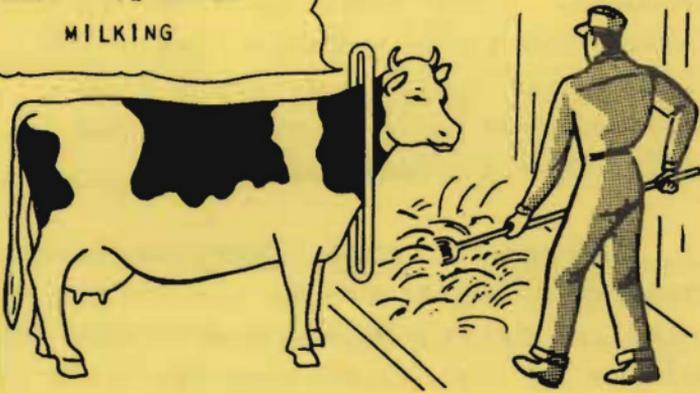


PREVENT

OFF FLAVORS

in milk and cream

NO SILAGE NOW!
WAIT 'TIL AFTER
MILKING



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NORTH DAKOTA STATE UNIVERSITY

- FEED CORRECTLY
- VENTILATE PROPERLY
- PRACTICE CLEANLINESS
- HAVE HEALTHY COWS

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EXTENSION SERVICE
E. J. Haslerud, Director
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Dairymen:

Flavor is an important factor in selling all dairy products. Ask the homemaker why her family drinks milk, eats cheese and likes ice cream, and she usually answers: "Because they like the flavor."

It is that fresh, clean and slightly sweet flavor, along with the high nutritional value of dairy foods that keeps people asking for milk, ice cream, cheese and butter. Food value alone will not sell dairy products. They must be rich in flavor and taste appeal. Any off flavor will bring complaints from the consumer and if not corrected will reduce consumption.

Therefore, good flavor is of tremendous importance to the sales appeal of dairy products and to the welfare of the dairy industry.

Since milk flavor and quality start on the farm, your production methods and handling practices should be aimed at producing milk of only the highest quality. This leaflet deals with the most common causes of off flavors which occur in production of milk, and recommendations for preventing them.

Howard J. McLeod
Extension Agent
Dairy Marketing

Cause and Prevention of Off-Flavors in Milk

Feed Flavors

Feed flavors are among the most frequent causes of off flavors in milk which make it undesirable from a market standpoint. Any foreign flavor in bottled milk or manufactured dairy products will immediately cut down consumption and reduce sales.

Feed flavors can be prevented by correct feeding practices. In particular, avoid feeding strong-flavored feed before and during milking.

To avoid feed flavors that occur when the cows are in the barn, feed silage or potatoes or any strong-flavored feeds after and never just before or during milking.

Feed flavors result when a cow breathes air heavily saturated with a strong feed odor or eats such feeds just before or during milking.

Grass and Weed Flavors

Grass and weed flavors are especially troublesome in spring and cause objectionable flavors in milk, as well as in dairy products made from milk. Flavors caused by plants the cow eats in the pasture, such as sweet clover, alfalfa, rye or wild onions, frenchweed, mustard, etc., may be reduced by bringing the cows in from the pasture two to three hours before milking. If these off flavors are still present it may be necessary to take cows off pasture earlier.

Sudden changes in feeding from dry feed in the barn to pasture always bring about a grass flavor in milk. Turn your cows out to pasture only a short time each day to start with, preferably in the morning, then gradually increase the time until you can leave the cows on pasture all day. Or, take your cows off pasture and feed dry hay for several hours before milking. This also tends to reduce danger from bloat as well as to increase milk production.

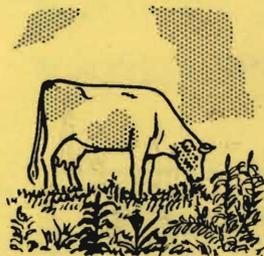
Proper Ventilation

Poorly ventilated barns frequently cause off-flavor in market milk. Frost, dampness and foul-smelling barns are the result of improper ventilation.

Barny odors: When the cow breathes this foul barny odor, it goes into her lungs and is picked up by the blood stream where the odors are carried into the udder. In this way the milk becomes tainted before it is drawn.

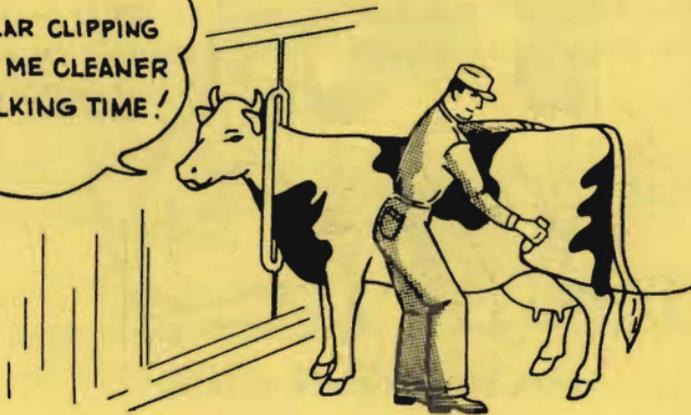
Gravity ventilation systems in operation in most North Dakota dairy barns have been inadequate to keep the barn dry and free from odors. Forced-air ventilation with electric fan thermostatically controlled, has been most successful in ridding the dairy barn of dampness and barny odors.

For information on the proper ventilation of a dairy barn, write for Circular AE-39, "Ventilating a Barn with Electric Fans", from the NDAC Extension Service, Information Department, or see your county extension agent.



Avoid grass and
weed flavors

REGULAR CLIPPING
KEEPS ME CLEANER
AT MILKING TIME!



Cleanliness

Clean cows, clean barn and clean utensils are essential to produce milk of good flavor and low bacteria count.

Bacteria frequently cause off-flavors and souring of milk and cream. They get into milk during and after milking from such sources as barn dirt, straw and manure, and from the cow's udder and teats.

Regular clipping of cow's udder and flanks, and washing udder and teats before each milking, will keep down this source of bacterial contamination.

Careless washing of milking machine and equipment is most frequently the source of high bacteria counts in milk. Milkstone builds up in the pails and milker and is evidence of careless washing methods. Milkstone offers a hiding place for bacteria and should be removed from all equipment. To further reduce bacteria counts, rubber inflations and milk hose should be boiled in lye solution (2 oz. Lye to 1 gal. water) for 15 minutes once each week.



Wash udder before milking

For information on cleaning dairy equipment, write for a poster on "Washing Milking Machine and Washing Cream Separator" from the NDAC Extension Service, Information Department, or get one from your county agent.

To prevent off-flavors in milk and cream caused by bacteria growth, eliminate the source of contamination and cool promptly to 50°F. or below in cold running water or commercial milk cooler.



Keep utensils clean

Healthy Cows

Only healthy cows produce milk of good flavor and quality. Mastitis, brucellosis, and bovine tuberculosis are three important diseases of cows which affect milk from a human health standpoint.

Dairy herds should be tested each year for brucellosis and perhaps every 3 years for tuberculosis since humans may be infected with these diseases by contact with the animals or from drinking milk from infected animals.

Milk from cows suffering from mastitis or other udder infections usually is abnormal in flavor and odor. It should not be used for human consumption.

Cows in advanced lactation may produce bitter or salty milk which is not acceptable to consumers and should not be sold as market milk. This is likely to be most noticeable if nearly all cows go dry at same time.

Absorbed Flavors and Odors

Milk fat takes up odors and flavors readily. Some of the most common foreign flavors are fly sprays, paints, kerosene, or disinfectants. Protect milk from being exposed to anything likely to taint its good flavor. Keep lids on cans even while cooling.

Prepared by:
Howard J. McLeod
Extension Dairy Marketing Agent

MILK AND CREAM are manufactured into dairy products for HUMAN FOOD

Therefore: Milk and cream must be handled with the same care with which you prepare any food in your kitchen.