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the Bulk Milk Hauler...

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Extension Service
University of Nebraska-Lincoln College of Agriculture Cooperating with the
U. S. Department of Agriculture and the College of Home Economics
E. F. Frolik, Dean J. L. Adams, Director

the Bulk Milk Hauler

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The milk hauler has assumed a new and important role in the milk business.

His duties and responsibilities have been radically changed with the introduction of the bulk method of handling milk. A job that formerly required mostly muscular ability has now become one of the most important in the entire milk handling process.

PUBLIC RELATIONS

In addition to his other duties and responsibilities, the bulk milk hauler must keep up his public relations. He must keep on good terms with the producer, the processor and the regulatory agencies.

On the farm there are many points of possible difference between the hauler and the producer, most of them usually due to failure to communicate. A few of the things that might cause misunderstanding are:

1. Cutting up yard with truck during wet weather.
2. Leaving screen door on milk house open.
3. Failure to return water hose to rack, close covers on bulk tank, etc.
4. Use of warm water to rinse tank when producer prefers that cold water be used.
5. Low butterfat tests that the farmer may think are due to failure to agitate the milk sufficiently.
6. Loss of tank of milk due to mixing with tank of poor-quality milk from another producer.
7. Failure to turn off compressor on direct expansion tanks.

In addition to the producer, the hauler must also satisfy the requirements of the milk processor. Probably the most common points of difference between hauler and milk plant operator are:

1. Quality of milk picked up from producers.

2. Difference between total of measurements of milk made at the producers' farms and weight or measurement of milk as delivered to plant.

3. Time of arrival at plant.

4. Failure to properly care for samples.

5. Failure to properly wash and sanitize bulk hauling tank.

Friction on these points can be reduced by (1) knowing what quality of milk is acceptable and (2) carefully following correct procedures.

The third group with which the milk hauler will work is composed of those individuals who are concerned with the quality of the milk and with the enforcement of sanitary regulations—fieldmen and regulatory officials. The milk hauler is on the producer's farm oftener than any other person. He is able to observe daily operations and conditions as they actually exist. Without "carrying tales" he is in a position to let the fieldman or milk sanitarian know which producers need help.

PERSONAL APPEARANCE

Special emphasis should be placed on personal appearance. The milk hauler should dress neatly and attempt to remain neat and clean throughout the day. Probably a light blue or gray uniform is more practical than white and would look better for a longer time.

Anyone who handles milk in any way should always be neat, clean and have *clean personal habits.* This is true for two reasons:

1. Milk is a perishable and easily contaminated food and must be handled in a clean manner at all times.

2. Anyone—sanitarian, fieldman or milk hauler—who may have occasion to discuss sanitation and cleanliness in the handling of milk with the farmer must set an example of cleanliness and neatness.

Make handwashing a habit before measuring the farmer's milk.

Emphasis should be placed on these three points—(1) clean hands, (2) pleasing personal appearance and (3) clean personal habits.

DAILY ROUTINE

The hauler's daily routine may vary considerably between areas of the country and even between routes in the same area. Following

is a list of the most important items to be considered in the daily routine:

1. Wash and dry hands.

2. Check milk for off-odor. (Use sampling port for this purpose.)

3. Check appearance of milk in tank. (Do not leave covers open while there is milk in the tank.)

4. Remove metering stick and dry with clean towel or strainer pad.

5. Reinsert metering stick, remove, read and record stick reading.

6. Turn on agitator.

7. Check calibration chart and record weight of milk.

8. Take and record milk temperature, preferably using own thermometer.

9. Remove hose and motor cord from rear compartment of truck.

10. Insert hose through port in milk house wall and plug cord into outlet. (Steps 9 and 10 may be performed before entering milk room.)

11. Check milk for flavor and odor. (If any indication of off-odor is noted at either Step 2 or 11, take sample and warm with tap water and again check odor. Some persons can detect off-flavors or odors more easily by tasting the sample.)

12. After milk has agitated for a *minimum of 5 minutes,* use sampling dipper to take sample for butterfat and other tests.

13. Start pump and pump milk from farm tank into tank truck.

14. Rinse sampling dipper and replace in sanitizing solution holder. Return holder and sample to truck.

15. Disconnect hose and motor cord.

16. Turn off compressor on direct expansion tanks.

17. Rinse tank, including covers and agitator (preferably with warm water, 90-110°F). In muddy weather it may be advisable to rinse down the floor.

18. Return water hose to rack or hook.

19. Close cover on farm tank.

20. Return milk hose and motor cord to truck.

21. Check to be sure milk house door is closed and general condition of premises same as on arrival.

MEASURING MILK

The hauler is responsible for accurately measuring the milk. In determining the amount of milk in the tank, the same method of reading the metering stick should be used by the hauler as was used by the calibrating crew when calibrating the tank.

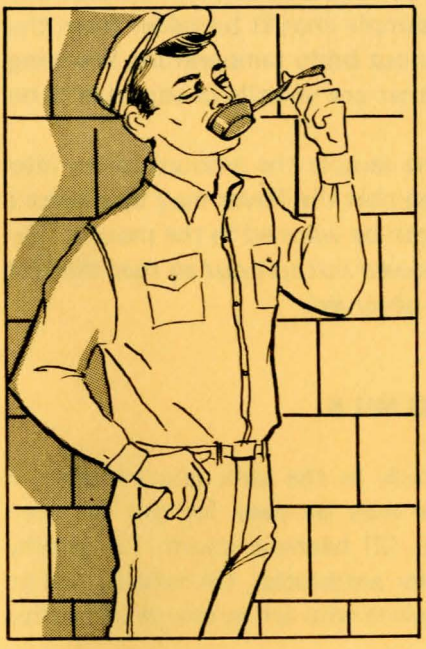
The first line *completely* covered by the milk should be read rather than a line which the milk only touches or partly covers. This is the procedure used by calibration crews. If any change from this method has been used in any area, haulers will be informed and the measuring procedure adjusted.

As soon as the metering stick has been read, the reading should be written down—before turning on the agitator or performing any further steps or operations. *This is very important* since it is easy to forget the exact reading.

DETERMINING QUALITY

Probably the greatest responsibility the bulk hauler has is to decide whether the producers' milk will be acceptable to the processing plant.

The only means the milk hauler has of determining whether a tank of milk is acceptable is through the information furnished by his senses of sight, taste and smell. A hauler can see whether there are



any defects in the milk such as off-color (bloody) or presence of foreign matter such as flies, straw, hair, etc., any of which make the milk unacceptable.

Additional checks of quality or acceptability depend upon the senses of taste and smell. What we ordinarily think of as taste actually includes both taste and smell.

When a sample of milk is taken into the mouth it is warmed and the volatile odors, or those that evaporate, are liberated. With the mouth closed these odors find their way through the nose where they are detected by the sense of smell. Individuals vary in their power to detect flavors and odors. Improved ability comes only with practice and experience.

To determine whether off-odors are present in a tank of milk, remove one of the port covers on the tank or open the cover and quickly check the odor before it has had a chance to mix with fresh, clean air. This will give the hauler the best chance to detect any possible trouble.

Off-flavor can be more easily detected in warm milk than in cold.

If a check of the odor of the milk, as described above, indicates any question as to its acceptability, a sample should be taken from the tank and warmed to 90-100°F or about body temperature. Warming the milk will cause any off-flavors that are volatile or vaporize to be more easily detected.

If the hauler wishes to taste the sample the amount taken into the mouth should be large enough so that the flavor may be checked yet small enough so that the milk can be warmed in the mouth. *The sample of milk should not be swallowed but spit out so that the feel of the mouth or "aftertaste" can be observed.*

SAMPLING MILK

After it has been found that milk in the tank is acceptable, a sample must be taken. This sample may be used for one or more purposes such as (1) butterfat test, (2) bacteria count, (3) quality check at processing plant, (4) test for antibiotics, (5) mastitis test or (6) other tests that persons at the plant who are in charge of quality control might wish to make.

Since it is not practical to determine for each individual tank the shortest time necessary to insure complete mixing with different amounts of milk, it is recommended that the agitator run a *minimum of five minutes before sampling.*

Samples should be taken and handled as directed by the regulatory agency that has charge. If a sample is to have any value, certain precautions must be observed, namely, (1) the sample must be representative of the entire contents of the tank, (2) sampling equipment must be clean and (3) samples must be refrigerated *at all times.*

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