



Current Report

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Dairy Waste Management Regulations

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The potential contamination of ground and surface water from animal waste is of great concern to the public as well as agri-business. This concern is one of the reasons for the recent release of new dairy waste management regulations developed by the Milk Sanitation Division of the Oklahoma State Board of Health. These regulations were approved June 4, 1990.

The primary purposes of these new rules are to better utilize dairy waste and to prevent the pollution of our environment. Prior to June 1990, sanitarians or milk inspectors representing the Milk Sanitation Division were mostly concerned about the conditions within and immediately surrounding the milk parlor. Now, sanitarians must review the entire dairy waste management system. With the exception of what happens in a pasture, sanitarians will be reviewing the collection, handling, treatment and disposal of waste from all dairy feeding areas, holding lots and milk parlors. Dairy waste is defined as "animal excrement, animal carcasses, feed waste, waste water, contaminated runoff, or any other waste associated with the production of milk."

The following is a general discussion of the new regulations. Specific waste management systems will not be considered because the development of best management practices (BMPs) for dairy wastes are currently being developed. Furthermore, the evaluation and acceptance of non-traditional BMPs will be an ongoing process. Several OSU Fact Sheets are available on suggested practices: Land Application, No. 1710; Lagoon Design, No. 1711; and Liquid Manure Storages, No. 1712.

Design Approval

Dairy waste management systems for all milk production units must be approved by the Milk Sanitation Division. New milk production units require approval prior to construction. Significant changes in facility design, construction or management practices to existing production units must be approved prior to implementation. The waste man-

agement system design must be prepared by a registered professional engineer, the USDA-Soil Conservation Service, or others qualified in the design of these systems as determined by the Milk Sanitation Division. It is extremely important to consult one of these services before work is started, otherwise modifications may be required that could be very costly.

Waste Containment Requirements

Specific guidelines for waste containment structures, such as lagoons and earthen storages, are part of the new regulations. A containment structure should be designed and maintained to hold its anticipated load plus a 25-year, 24-hour rainfall without the possibility of runoff. Stockpiled manures or other waste should only be placed within an area designed to collect runoff waters into a containment system. The containment structure must be constructed with a clayey soil, mechanical liner or impermeable material to control seepage.

Location of Nearby Facilities

Table 1 indicates minimum distances any dairy waste management component must be from existing facilities.

Table 1. Minimum distances from dairy waste management components.

Facility	Distance (ft)
Water well: upslope	50
Water well: downslope	100
Water lines	15
Residence on adjacent property	100

Land Application

The following are requirements for land application of dairy wastes.

- A. Nitrogen loading from waste application should not exceed 100 pounds of actual nitrogen/acre/year. The 100 pound limit may be exceeded if the crop being produced requires greater amounts of nitrogen.
- B. Dairy waste should not be supplied so frequently that plants or even soils are permanently damaged.
- C. To prevent waste water runoff, waste should not be applied when the soil is saturated, frozen, or covered with snow or when precipitation is imminent.
- D. Dairy waste should not be applied where runoff will enter water ways. No application should be made where the slope is greater than 15% unless it can be shown the application will not cause pollution.

Allowable application buffer zone distances from facilities and landforms are given in Table 2. It is possible to use distances closer than those in Table 2 if it can be shown that the application will not result in pollution.

Table 2. Land Application Buffer Zones.

Landmark	Distance (ft)*
Rock outcrops or sink holes	25
Property lines	50
Streams, ponds, lakes, springs, wells, and other water supplies	100
Occupied dwellings	300

* All distances must be doubled if spray irrigation is used to spread the waste water.

Implementation Schedule

The compliance date for these regulations depends on dairy size for systems already in use. These dates are shown

in Table 3. However, any new milk production unit must meet the new regulations now. Any milk production units determined by the Milk Sanitation Division to have waste management problems must be in compliance with the regulations by June 30, 1991.

Table 3. Compliance Dates.

Herd size	Date
100 or more cows	December 31, 1991
50 to 100 cows	December 31, 1992
Less than 50 cows	December 31, 1993

Summary

These regulations do not mean that you will be required to make significant changes nor will you be required to construct a lagoon. Each milk production unit is unique. Therefore, different waste management systems can and will be used. Currently, representatives from the Milk Sanitation Division, the USDA-Soil Conservation Service and Oklahoma State University are making on-farm visits and are discussing what constitutes proper waste management.

Enforcement of these rules and the development of best management practices are to improve environmental conditions for the well-being of all Oklahomans. The milk industry is very important to Oklahoma. Because of environmental concerns and public awareness, the milk industry must move quickly in making certain it is not labeled as a source of pollution. These regulations will enable the milk industry to satisfy the question being asked of all agriculture: "What are you doing to protect the environment?" Are you doing everything you can to prevent the possibility of pollution from your dairy?