

Water Quality Enhancement Activity – WQL14 – Land Application of Treated Manure



Land Application of Treated Manure

This enhancement is for the use of manure that has been treated to reduce **both** odors and pathogens prior to land application. Acceptable practices include controlled temperature anaerobic digestion (mesophilic or thermophilic), composting and chemical treatment. Waste treatment lagoons and injection of manure alone do not qualify as acceptable practices.

Land Use Applicability

This enhancement is applicable to cropland and pasture land.

Benefits

Utilizing manure for land application not only benefits crop production and soil quality, it also reduces air and water quality concerns if properly treated. Odors have been shown to be significantly reduced when manure is treated before land application. Benefits include reduced odors in the airshed. This lessens the impacts on neighboring properties along with potentially increasing the time and areas available for land application. Working conditions for employees can also be improved by the reduction in odors. An additional benefit for treating manure prior to land application is the reduction in pathogens. Human and animal health concerns are diminished due to lower pathogen counts from properly treated animal manure. Reduced or eliminated pathogens from land applied manure also decrease the likelihood water quality contamination from pathogens.

Criteria

Animal manure must be treated with a practice which will reduce both odors and pathogens prior to the manure being land applied. Acceptable treatment practices include:

- Controlled temperature anaerobic digestion (mesophilic or thermophilic)
- Composting
- Chemical treatments

Documentation Requirements

- Documentation of the manure treatment practice(s) used prior to land application to obtain both odor and pathogen reduction.
- Documentation of the land application of manure that includes:
 - Fields where manure is applied
 - Manure application rate per field
 - Nutrients applied to each field
 - Crops grown in each field



United States Department of Agriculture
Natural Resources Conservation Service

NE-WQL14

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State Criteria

- Acceptable treatment practices to reduce both odors and pathogens in animal manure include:
 - Controlled temperature anaerobic digestion (mesophilic or thermophilic),
 - Composting, or
 - Chemical treatments.
- Soils shall be sampled and analyzed in accordance with Practice Specification for Nutrient Management (S-590) or NebGuide “Guidelines for Soil Sampling” (G1740).
- All soil samples must be taken prior to applying fertilizer or manure.
- Manure shall be sampled and analyzed annually in accordance with Practice Standard 633 – Waste Utilization and Nebfact “Manure Testing: What to Request” (NF02-507).
- Nutrient application rates are within University of Nebraska recommendations based on soil tests and established yield goals considering all nutrient sources (refer to Practice Standard 590 and Practice Specification (S-590) for Nutrient Management).

Documentation Requirements

1. Provide description of manure treatment process in Table 1.
2. Provide a map indicating where the activities were applied.
3. Provide copies of soil test results.
4. Provide copies of manure analysis.
5. Complete the nutrient and fertilizer application table on the following page.

Table 1 – Manure Treatment Practice		
Type & Number of Livestock	Manure Treatment Practice Used Prior to Land Application	Date Practice Employed
500 head farrow	Temp. Controlled Anaerobic digester (mesophilic)	11/2/09

I certify that the following information meets specifications and has been provided to NRCS:

1. Written documentation of the activity performed per documentation requirements.
2. Copies of dated receipts for equipment or services purchased.

I understand that it is my responsibility to obtain all necessary permits and to comply with all laws, regulations and ordinances pertaining to the application of these activities.

Certified by: _____ **Date:** _____



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Field Information			Commercial Fertilizer and Manure Information									
Tract & Field	Acres	Crop & Yield	Date Fertilizer / Manure Applied (m/d/yr)	Form of Commercial Fert., or Manure	Rate (lb/a)	Application Method	If Treated Manure, Days to Incorp.	N Avail. (lb/a)	P Avail. (lb/a)	Total N Avail. (lb/a)	Total P Avail. (lb/a)	
T1234 & F1	78.9	Crop	3/30/10	82-0-0	100 lb/a	Inject	na	82	0	173.5	104	
		Yield	6/30/10	Swine Effluent	1 ac- gal/a	Center pivot	No incorp.	61.5	104			
		Corn	5/1/10	28-0-0	10 gal/a	Planter	na	30	0			
		Crop										
		Yield										
		Crop										
		Yield										
		Crop										
		Yield										
		Yield										