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1993

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Repository Citation

Taraba, J. L.; Thom, W. D.; Pescatore, Anthony J.; and Williams, R. M., "Solid Livestock Waste Regulatory Requirements" (1993).
Agricultural Engineering Extension Updates. 22.
https://uknowledge.uky.edu/aeu_reports/22

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Solid Livestock Waste Regulatory Requirements

J.L. Taraba, W.D. Thom, A.J. Pescatore, and R.M. Williams

Proper management and utilization of livestock waste can be a significant contribution to the economic well being of a livestock enterprise, since the wastes have considerable economic value if properly utilized. When returned to the soil as fertilizer or soil conditioner, the value as a nutrient source has been well established. More recently, processed livestock wastes have been utilized as a high protein feed additives. Livestock waste should be considered a resource to be utilized rather than a disposal problem.

In recent years, concerns for the environment have led to an awareness of the need for proper care and handling of waste of all types. Merely disposing (dumping in streams, flood plains, etc.) of livestock waste is likely to have adverse impacts on the environment and, in that event, Federal and State environmental protection regulations may be violated. Individuals who make an effort to utilize livestock waste properly are unlikely to be cited for violations of solid waste disposal regulations even though they may be unaware of their actual content. The following discussion attempts to summarize those solid waste disposal regulations which may apply to livestock wastes. Also included is a checklist which may be useful as a reminder of items to be considered in the management of livestock waste.

Land application is the most common method of utilization of livestock waste; however, sufficient land must be available for disposal of the waste in amounts that do not exceed agronomic values and do not contaminate surface or ground waters. A manure plan prepared by the Soil Conservation Service may aid the producer in meeting the legal requirements for waste management. The plan will follow best management practices associated with manure application and nutrient management. The plan also identifies the location of the disposal site and lists restrictions, which may include distances from streams, wells, surface water, wind direction

considerations, distance to residences, or possibly distances to other animal production facilities. In general, many of the requirements set forth in 401 KAR 47:030 Environmental Performance Standards may apply (see permit by rule section).

In some instances the producer may want to transport livestock wastes off the farm for disposal. The waste generator can not contract away responsibility or liability for proper treatment of waste. The waste generator should determine the ultimate destination of the waste and determine if proper treatment has occurred. In cases of improper treatment of waste, the DWM usually cites everyone involved and the legal system determines who is liable. Landowners who lease their land should take precautions to insure that any livestock wastes associated with their land receives proper treatment. The attached sample letters may aid managers of livestock wastes in the event a legal problem occurs due to improper handling of wastes transported off the farm.

Federal and State solid waste regulations are generally written for the disposal of industrial and municipal waste, since these wastes may constitute a potential hazard to the general public. Federal regulations (40 CFR257, Solid Waste Disposal Facilities and Practices) state that they do not apply to agricultural waste returned to the soil. Kentucky Administrative Regulations (401 KAR 47:100, General Provisions for Obtaining a Solid Waste Permit) administered by the Division of Waste Management (DWM) contain a specific exclusion for agricultural waste provided they are utilized on the same farm on which they are generated. The manures and crop residues must be returned to the soil as fertilizers or soil conditioners.

The Kentucky Department of Transportation (KYDOT) is not concerned about the transportation of animal wastes. They do not consider it to be a hazardous waste, and the KYDOT rules for permits and record keeping do not apply. A for-hire carrier must register with KYDOT as an exempt carrier and pay the appropriate road tax. There are no KYDOT rules pertaining to the farmer who handles the waste himself; however, the waste should remain in the vehicle during transport, and local ordinances may apply. The DWM is not concerned with the transport of agricultural waste as long as the Environmental Performance Standards are not violated.

Permit-by-Rule

Rules and regulations for treatment, storage, recycling and disposal of solid wastes have been established by the DWM, Solid Waste Branch. Chapter 401 KAR 47:030 (Environmental Performance Standards) lists the minimum environmental standards which apply to all solid waste sites or handling facilities. Handling of agricultural waste in the form of manures and crop residues have generally been excluded from the formal regulatory process; however, agricultural solid waste disposal is regulated with a permit-by-rule. No permit application is required. (See Definitions Section)

The permit-by-rule is automatic; however, there are a number of items the Division of waste Management considers when determining permit by rule compliance. The following is a summary of those sections of the Environment Performance Standards (401 KAR 47:030) which may be pertinent to agricultural waste management.

Flood Plains

No solid waste site or facility shall be placed in a manner likely to result in a washout of waste so as to impose a hazard to human health, wildlife, land or water resources.

Endangered Species

No solid waste site or facility shall cause or contribute to the taking of any endangered or threatened species, or their habitat.

Surface Waters

No solid waste site or facility shall cause a discharge of pollutants into the waters of the Commonwealth. This applies to point and non-point sources.

Groundwater

No solid waste site or facility shall contaminate an underground drinking water source. Section 6 of 401 KAR 47:030 contains the maximum contaminant levels allowed when assessing groundwater contamination impacts on water resources.

Food Chain Crops

There are prohibitions against the application of waste to land which may grow food chain crops or tobacco when there is a presence of cadmium. Agricultural waste are generally excluded because of the absence of cadmium in agricultural wastes.

Disease

No solid waste site or facility shall exist unless the on-site population of disease vectors (flies, rodents, etc.), is controlled to protect human health and environment.

Air

No solid waste site or facility shall engage in open burning of solid waste. This requirement does not apply to infrequent burning of agricultural waste in the field. In addition, a waste site may not violate applicable air pollution regulations. Air quality regulations should be consulted prior to operation of an incinerator (Title 401, KAR Chapter 5). State administrative regulations contain little about the regulation of odors from agricultural facilities; however, persistent offensive odors may be a basis for public nuisance lawsuits. The odor regulation requires that odor not be detectable at equal to or greater than 7 dilutions on a Barnebey-Cheney scentometer at the property line of the farm from which the odor is generated (401 KAR 53:010).

Safety

In general, no solid waste site or facility may pose a hazard to the general public.

Public Nuisance

No solid waste site or facility shall result in a public nuisance because of blowing litter, debris, or other waste material.

Wetlands

No solid waste site or facility shall be located in wetlands.

Compliance

No solid waste site or facility shall violate any requirements of KRS chapter 224 (Environmental Protection).

Composting Livestock Waste -- Registered permit-by-rule

Composting is a well established method of processing animal waste; however, if the compost is produced for distribution off the farm, a registered permit-by-rule must be submitted to the DWM. Any additions of waste to the compost which did not originate on the farm requires the producer to obtain a permit regardless of the location of the disposal site. Registration forms may be obtained from the DWM. The DWM requires a registered permit by rule for composting of dead chickens regardless of the disposition of the compost. The requirements for obtaining a registered permit-by-rule for composting solid waste are contained in 401 KAR 48:200 section 15. An applicant is required to provide the DWM with the following:

1. A description of wastes to be composted.
2. The site layout and location.
3. A description of the composting system.
4. A description of the composting process.
5. A marketing and distribution plan. (Any claims regarding the nutrient value of the compost must be approved by the State division of Regulatory Services).
6. Specification of the final product.
7. A plan for closure which complies with the environmental performance standards.

In addition to the information provided to the DWM in the permit application, the following requirements must be met.

1. A log must be kept containing recipients who receive more than 20 cubic yards in a month.
2. Records must be maintained of the amount of solid waste that is composted and the date it was composted.
3. After the composted solid waste has completed the curing process, distribute or dispose within one year at least 75% of the compost.

The following attachments contain:

1. A checklist of items to be considered when disposing of solid livestock waste.
2. A list of definitions used.
3. A sample letter to be sent from the producer of the waste to the recipient.
4. A sample letter to be sent from the recipient of the waste to the producer.
5. A sample log sheet to be used by either the producer the recipient of the waste for maintain a record of the disposition of the waste.

Checklist

The following checklist contains some items which the producer may want to consider when managing solid livestock waste.

1. Manure plan if waste is distributed on the farm.
2. If waste is transferred off the farm, a letter from the recipient of the waste to the producer specifying the destination and intended use of the waste.
3. A letter from the producer to the recipient certifying the contents of the waste.
4. A log sheet maintained by the producer of quantities of waste transferred off the farm.
5. Do any of the activities (storage, transportation, final disposition) violate the Environmental Performance Standards?
 - a. Flood Plans
 - b. Endangered Species
 - c. Surface Waters
 - d. Groundwater
 - e. Food Chain Crops
 - f. Disease
 - g. Air
 - h. Safety
 - i. Public Nuisance
 - j. Wetlands

Definitions:

KRS - Kentucky Revised Statute

KAR - Kentucky Administrative Regulation

Division of Waste Management(DWM) - A division of the Natural Resources and Environmental Protection Cabinet, Department for Environmental Protection, located at 18 Reilly Road, Frankfort, Ky. 40601, (502) 564-6716.

Solid Waste Branch - A branch of the Division of Waste Management.

Permit-by-Rule - A category of solid waste sites or facility permits for certain solid waste management practices which are deemed to have a permit without the owner or operator having made application to the cabinet.

Registered Permit by Rule - Similar to the Permit by Rule except the owner or operator must submit a registration form to the Division of Waste Management.

Flood Plain - The area in a watershed that is subject to flooding. For regulatory purposes this includes all the area likely to be flooded at least once every 100 years.

Endangered Species - plant or animal species threatened with extinction.

Wetlands - land that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support vegetation typically adapted for life in saturated soils.

Sample letter from recipient to producer.

I certify that the agricultural waste received from _____ will be disposed of properly in a manner consistent with the environmental requirements of KRS 224 and in particular the environmental performance standards listed in 401 KAR 47:030.

I plan to use the waste as a fertilizer or soil conditioner on land located at _____

I will notify the producer in the event of any changes in final destination or use.

or

I plan to use the waste as a feed supplement. I understand that these wastes may contain various drugs which may restrict their use as animal feeds. I will notify the producer in the event of any changes in final destination or use.

or

I plan to use this material in the manufacture of compost and will comply with applicable sections of 401 KAR 48:200. I will notify the producer of any changes in destination or use.

Signed: _____

(Recipient of livestock waste)

Sample Letter from Producer to Recipient

I certify that the agricultural waste delivered to _____ contains only livestock waste and litter, with one exception. The waste may contain various drugs which may restrict their use as animal feed.

I understand that you plan to use the waste as _____, and in a manner consistent with the environmental performance standard listed in 40IKAR47:030.

Signed: _____

(Producer of livestock waste)

Livestock Waste Disposition Log

DATE

QUANTITY

DESTINATION

USE
