

Mortality Composting

(& How it relates to Act 38)

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Livestock & Poultry Mortality: PA Domestic Animal Law

The PA Domestic Animal Law lists the legal requirements for properly managing and disposing of dead farm animals on livestock and poultry operations. Responsible parties must:

- Properly dispose of the carcass within 48 hours.
- Prevent exposure of the carcass to other living animals, domestic animals and the public.
- Minimize environmental impact and not endanger animal or public health while transporting deadstock.
- Be licensed by the PA Department of Agriculture to commercially transport and dispose of deadstock and poultry.

Livestock & Poultry Mortality: Legal Methods of Disposal

Rendering

Incineration

Burial

Composting

Act 38 Definitions: How compost is regulated under Act 38

§ 83.201. Definitions.

Manure

(i) Animal excrement, including poultry litter, which is produced at an agricultural operation.

(ii) The term includes materials such as bedding, washwater and other materials which are commingled with that excrement.

Manure group—A portion of the manure generated on the operation that is distinct due to factors including species, handling practices, manure consistency, anticipated nutrient content or application season.

Nutrient—A substance or recognized plant nutrient, element or compound which is used or sold for its plant nutritive content or its claimed nutritive value. The term includes, but is not limited to, livestock and poultry manures, compost as fertilizer, commercially manufactured chemical fertilizers, biosolids or combinations thereof. The only nutrient elements of concern under this subchapter, based on their potential to impact the quality of surface waters or groundwater, are nitrogen and phosphorus. Unless the context clearly indicates otherwise, “nutrients” as used in this subchapter means nitrogen and phosphorus.

Mortality Composting: General How-To

Siting of Mortality Composting Areas

- Improved surfaces that prevent runoff and leaching are recommended, but field locations are possible when sited correctly.
- Compost piles and windrows must be setback 100 feet from all surface waters and water wells, although 200 feet is recommended.
- Piles and windrows should have all weather access and be located on shallow slopes where upslope soil surfaces have ground cover that prevents precipitation from running onto the pile.
- If upslope water needs controlled, installation of diversions may be necessary
- Piles and windrows should not be located in swales and the length of slope above the pile should be minimized as practical.
- Downslope areas should have vegetation that can filter and allow runoff to infiltrate the soil.
- Avoid placing your piles and windrows on your boundary lines.

Mortality Composting: General How-To

Utilizing a Carbon-based Media Supply

- The base of a mortality compost pile is critical to composting success. The material must be carbon-based and act like a sponge that holds liquids that leave the carcass as it decomposes.
 - Many plant-based materials can be utilized as compost media including sawdust, chopped fodder, feed refusals, shavings, and switchgrass.
 - A great source available on many farms are dry manures that are already produced on site. (The more bedding and the dryer the manure the better.)
- The base should generously be 2 feet or deeper before a carcass is placed on the pile.
- Similarly, the carcass should receive 2 feet minimum of coverage.
- Signs of improper base construction or sparse coverage include:
 - Visible liquids leaching from the pile (the 'sponge' was not big enough)
 - The presence of flies or birds and other scavengers attracted to exposed carcasses or wet spots
 - Odors are also indicative of improper base or coverage.

Mortality Composting: How-To Handouts & Resource Materials

- The Pennsylvania Agricultural Ombudsman Program
 - *Livestock & Poultry Mortality in Pennsylvania* Brochure
 - <https://www.paagombudsman.com/mortality-composting-2/>
- Penn State Extension
 - <https://extension.psu.edu/composting-animal-mortalities>
 - <https://extension.psu.edu/on-farm-mortality-composting-management-principles-and-information-resources>
- Cornell Waste Management Institute
 - <http://compost.css.cornell.edu/naturalrenderingFS.pdf>

Mortality Composting: Guidance for Nutrient Management Plans

Operation Description

- Provide a brief description of how the various manure groups on the operation are generated, stored, and handled, including a description of any compost (including mortality) and how it will be handled, and any atypical manure handling strategies

Small Quantity Manure Groups

- Composting of animal mortalities may yield a small amount of manure. Small quantities of mortality compost of less than 5 tons of poultry mortality compost or 25 tons of non-poultry mortality compost do not need to be included in Appendix 3 but must be included in the plan as a small quantity manure group.

Mortality Composting: Guidance for Nutrient Management Plans

Small Quantity Manure Groups (Continued)

- Documentation of the small quantity manure group must be included in the nutrient management plan according to the following requirements:
 - The Operation Description section of Appendix 2: Operation Information must include a description of how the manure in the small quantity manure group will be handled and utilized. The description must include where the collected manure will be applied, and, if applicable, the specific pasture that will receive the uncollected manure.
 - If the collected or uncollected manure from the small quantity manure group will be applied to a crop field or pasture, a note for the crop management unit(s) receiving the manure must be included in the NMP Summary Notes.

Mortality Composting: Guidance for Nutrient Management Plans

Manure Analysis Exemptions

- ***Small Quantity Manure Groups***
 - Manure analysis is optional for small quantity manure groups from minor animal groups or small amounts of mortality compost.
- ***Mortality Compost***
 - Analysis is required for quantities exceeding 5 tons of poultry mortality compost or 25 tons of non-poultry mortality compost unless the material used to compost the mortalities is exclusively from a manure group generated on the operation, such as poultry litter. In those cases, that manure group analysis could be used for the mortality compost. However, if other non-manure materials are used in the mortality composting process, the compost must be listed as a manure group in the plan and an annual analysis of this material is required.

Mortality Composting: Guidance for Nutrient Management Plans

Appendix 4, Residual Nitrogen Carryover from Previous Manure Applications

- **Atypical Manure Groups** – Atypical manure is defined as the end product of any manure treatment process in which the typical ratio of ammonium and organic nitrogen is altered and thereby influencing the nitrogen availability when this manure end product is land applied for crop production. The nitrogen availability for atypical manure in Act 38 nutrient management plans must be determined by utilizing the “N Fractions Method” using the Penn State Agronomy Guide Table 1.2-12.
 - *Mortality Compost is considered an atypical manure group.*



Questions?