

DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

ANIMAL INDUSTRY DIVISION

BODIES OF DEAD ANIMALS

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These rules become effective immediately after filing with the secretary of state unless adopted under section 33, 44, or 45a (9) of the administrative procedures act of 1969, 1969 PA 306, MCL 24.233, 24.244, or 24.245a. Rules adopted under these sections become effective 7 days after filing with the secretary of state.

(By authority conferred on the department of agriculture and rural development by sections 15 and 27 of 1982 PA 239, MCL 287.665 and 287.677)

R 287.655 of the Michigan Administrative Code is amended, as follows:

R 287.655 Composting.

Rule 5. (1) Unless otherwise approved by the director, composting methods must accommodate only normal daily natural mortality under common ownership and be designed with capacity for both active composting and curing.

(2) Active composting consists of all of the following:

- (a) Organic materials.
- (b) Aeration and moisture management.
- (c) Heat production.
- (d) Repeated temperature patterns.

(3) Bulking agent is a material added to compost to provide nutrients, decrease bulk density, promote aeration, and remove heat. Bulking agent also means amendment, medium, carbon source, and feedstock. Any of the following may be used as compost bulking agents:

- (a) Dried grass.
- (b) Hay.
- (c) Chopped straw.
- (d) Chopped corn stover.
- (e) Chopped bean stover.
- (f) Unpainted wood chips that do not have additives or preservatives.
- (g) Unpainted shredded bark that does not have additives or preservatives.
- (h) Unpainted sawdust that does not have additives or preservatives.
- (i) Leaves.
- (j) Grass clippings.
- (k) Grain hulls.
- (l) Poultry litter or litter cake.
- (m) Animal manure solids.

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- (n) Waste animal feeds.
 - (o) Finished or cured compost.
 - (p) A mixture of any of the recommended bulking agents listed in subdivisions (a) to (q) of this subrule.
 - (q) Other, as approved by the director.
- (4) Curing is the period of time after active composting for further decomposition at a slow rate. Less intense heat production and lower temperatures must be sustained during curing.
- (5) In response to a written request, the use of composting methods other than as specified in this rule and the Michigan Animal Tissue Composting Operational Standard (Michigan State University and NRCS), as adopted by reference in R 287.651a, may be allowed by the director.
- (6) One or more of the following methods of composting must be used and passive, forced, and active aeration, or any combination of the 3, may be used with each method:
- (a) Open pile.
 - (b) Bin.
 - (c) Windrow.
 - (d) In-vessel.
 - (e) Other, as approved by the director.
- (7) The composting structure must be constructed and maintained to withstand structural damage caused by active composting and equipment used for compost aeration and movement. Any structural damage to the structure must be repaired before it is used again for active composting.
- (8) The site for composting must maintain the following minimum isolation distances:
- (a) Two hundred feet from waters of the state as that term is defined in R 287.651(t)(i) to (viii).
 - (b) Two feet above the seasonal high-water table, as that term is defined by NRCS 313 Waste Storage Facility Conservation Practice Standard and adopted by reference in R 287.651a.
 - (c) Two hundred feet from any well.
 - (d) Two hundred feet from nearest non-farm residence.
- (9) The composting site must be selected or graded, or both, to direct surface runoff away from the compost site and prevent effluent from contacting surface waters.
- (10) For an animal production operation accumulating more than 20,000 pounds of mortality annually or any animal process operation, regardless of composting method, composting must be done in compliance with the following:
- (a) All active, finished, curing, and cured compost at the site must be located in or on, 1 or both of the following:
 - (i) On an improved surface, as that term is defined by NRCS 313 Waste Storage Facility Conservation Practice Standard, and adopted by reference in R 287.651a, and designed to withstand anticipated loads from the equipment used for placement, aeration, and movement of compost.
 - (ii) In an in-vessel system.
 - (b) All effluent generated and runoff events during active composting and curing, not retained in the compost, must be managed in a manner consistent with all applicable federal, state, and local laws and with at least 1 of the following:

(i) Reintroduced into compost piles.

(ii) Collected and stored in a storage facility with a liner that meets the criteria defined in NRCS 313 Waste Storage Facility Conservation Practice Standard and adopted by reference in R 287.651a, and utilized for crop production in accordance with the recommendations in the 2023 Generally Accepted Agricultural Management Practices for Nutrient Utilization, as established in the Michigan right to farm act, 1981 PA 93, MCL 286.471 to 286.474, and published at:

[https://www.michigan.gov/mdard/-](https://www.michigan.gov/mdard/-/media/Project/Websites/mdard/documents/environment/rtf/2023-GAMPS/2023-Nutrient-Utilization-GAAMPs.pdf)

[/media/Project/Websites/mdard/documents/environment/rtf/2023-GAMPS/2023-Nutrient-Utilization-GAAMPs.pdf](https://www.michigan.gov/mdard/-/media/Project/Websites/mdard/documents/environment/rtf/2023-GAMPS/2023-Nutrient-Utilization-GAAMPs.pdf).

(iii) Diverted to a treatment system meeting the criteria in NRCS 635 Wastewater Treatment Strip Conservation Practice Standard and adopted by reference in R 287.651a.

(iv) Other methods, as approved by the director.

(11) For an animal production operation accumulation less than 20,000 pounds of mortality annually, composting may be done without a structure or vessel provided the following conditions are met:

(a) A new composting site is selected for use annually. The following apply:

(i) Use of the current year's site may continue until the compost is finished, but not more than 2 years after the time of the first dead animal addition, at which time the finished compost must be disposed of in accordance with subrule (10) of this rule.

(ii) No new tissue is added to a site after 1 year after the first dead animal addition.

(iii) A new site may be immediately adjacent to a previous site.

(iv) A previous site is not reused within a 10-year period.

(b) A new site is on land used in crop rotation.

(c) A new site is not directly above sub surfacing drains or tile.

(12) Active composting must maintain all of the following:

(a) Carbon-to-nitrogen ratio minimum of 15:1.

(b) Moisture content, range of 40% to 60%.

(c) At least 1 reading of a temperature greater than 130 degrees Fahrenheit after the initiation of a batch with the temperature measured at a depth of 1 foot into the compost once weekly. A temperature reading must be conducted twice per week for a rotating drum, continuous flow, in-vessel system.

(d) The following conditions must be met for active composting:

(i) Composting temperature may remain in a range of 100 degrees Fahrenheit to 150 degrees Fahrenheit for several weeks.

(ii) Properly timed aeration, moisture alterations, or both.

(iii) Each batch of animal tissue compost must undergo a minimum of 3 heat cycles of active composting before final utilization, unless the director determines fewer heat cycles are necessary for the elimination of the virus of concern based on guidance from the United States Department of Agriculture.

(iv) A static compost pile may be aerated passively, by periodic agitation, mixing or turning, or by using forced aeration.

(13) An individual shall manage the composting process in compliance with the guidelines described in the Michigan Animal Tissue Composting Operational Standards, as adopted by reference in R 287.651a, and all of the following:

(a) The composting process must be managed in batches. Composting must involve controlled active and curing phases, temperature-based aeration, and a planned end point of not more than 2 years after the time of the first dead animal addition to a batch. Complete curing is not required. Compost is considered finished based on its planned use as a soil amendment or rooting medium, and its aesthetic acceptability. In the context of animal tissue composting, finished and cured are different terms. Compost must be finished; however, complete curing is not required.

(b) Dead animals must be added to the compost batch within 24 hours following death.

(c) Afterbirth may be stored in closed impervious containers and must be added to the batch within 3 days after initiating container use.

(d) Initially, the compost pile or windrow must be constructed with a base of dry absorbent bulking agent that is at least 1 foot deep before any dead animal is added for composting. A base depth of 2 feet must be used for dead animals of greater than 600 pounds.

(e) Dead animals must not be placed in the pile or windrow closer than 6 inches to any edge or wall.

(f) Dead animals must be covered by a minimum of 6 inches of bulking agent and not be exposed.

(g) Pieces of hide remaining at the completion of curing must be removed and added to a new active compost batch or be disposed of under section 21 of 1982 PA 239, MCL 287.671, before the compost may be sold, transferred, or applied to crop land. In emergency composting situations, the Director may authorize the removal of unfinished compost to a new site.

(h) Large bones of mature animals remaining at the completion of curing must be crumbled during the mechanical spreading process, removed, and added to a new active compost batch, or disposed of under section 21 of 1982 PA 239, MCL 287.671, before the compost may be sold, transferred, or applied to crop land.

(i) Flies, rodents, pests, vermin, and other scavengers or predators must be controlled so as not to disrupt the compost piles or constitute a risk or health hazard to human or animal populations.

(j) Odors must be controlled in accordance with the Michigan Animal Tissue Composting Operational Standards, as adopted by reference in R 287.651a.

(14) The disposition of finished compost may be by direct application to soils, sale, or other transfer of ownership. Application to soils must be done in accordance with the recommendations within the 2023 Generally Accepted Agricultural and Management Practices for Nutrient Utilization, as specified in the Michigan right to farm act, 1981 PA 93, MCL 286.471 to 286.474, and published at <https://www.michigan.gov/mdard/-/media/Project/Websites/mdard/documents/environment/rtf/2023-GAMPS/2023-Nutrient-Utilization-GAAMPs.pdf>.

(15) In the interest of public health or animal health, the director may require that any compost be tested at a laboratory approved by the director for certain pathogenic organisms or any contaminant before the compost leaves the composing site.

(16) Unless otherwise authorized by the Director, composting dead animals must not be removed from the composting site, except as finished compost, unless the dead animal is disposed of in accordance with section 21 of 1982 PA 239, MCL 287.671.

(17) The owner or operator of the composting site shall keep records for 5 years containing the following information and make the records available to the director immediately on request:

- (a) The start date of each compost batch.
- (b) The approximate weight, maturity, and species of dead animals or afterbirth added each time an addition is made and the dates the tissue is added to new compost batches.
- (c) The temperature of each batch measured weekly, taken at a minimum of 1 foot deep into the compost.
- (d) The date or dates compost is mechanically aerated.
- (e) The final disposition of finished compost, including the method, destination, date, and volume for the batch.

(18) A contingency plan to remedy problems and ensure the proper disposal of dead animals must be maintained at the compost site. The contingency plan must include all the following information:

- (a) A list of the following:
 - (i) The location of telephone numbers and emergency numbers for the police, the fire department, and medical aid.
 - (ii) The individual or individuals responsible for the composting operation.
- (b) An action plan for all of the following emergencies:
 - (i) Fire.
 - (ii) Wind.
 - (iii) Flood.
- (c) Plans for the proper disposition of dead animals if composting is temporarily or permanently terminated.