



PCO Guidance on Manure, Compost and Compost Tea Products

Manure

Any animal manure that has not been composted according to the compost regulations (see below) is considered to be raw manure and must follow the raw manure restriction §205.203(c)(1). This includes aged manure, and also composted manure that does not meet composting method regulations.

Regulations for Raw Animal Manure

According to the National Rule §205.203(c)(1), raw animal manure may be

- (i) Applied to land used for a crop not intended for human consumption;
- (ii) Incorporated into the soil not less than 120 days prior to the harvest of a product whose edible portion has direct contact with the soil surface or soil particles; or
- (iii) Incorporated into the soil not less than 90 days prior to the harvest of a product whose edible portion does not have direct contact with the soil surface or soil particles.

Dehydrated/Processed Manure

The following restrictions apply:

- If dehydrated/processed manure meets NOP Policy requirements, it may be used without soil incorporation or days to harvest restriction.
- If dehydrated/processed manure is added to foliar or other liquid solutions, it must follow the raw manure restriction §205.203(c)(1).

The above restrictions usually pertain to manufactured and purchased manure products, which must follow the manufacturing requirements as specified by NOP Policy. Dehydrated or processed manure products must be treated so that all portions of the product reach a minimum temperature of either 150° F for at least one hour, or 165° F (without causing combustion) and are dried to a maximum moisture level of 12%, OR an equivalent heating and drying process may be used, if tests show that the product contains no more than 1000 MPN fecal coliform per gram of processed manure sampled and no more than 3 MPN Salmonella per 4 gram sample of processed manure.

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Compost

Purchased compost must be reviewed by PCO, regardless of whether it comes from a certified organic operation or not. This would include mushroom compost purchased from certified organic mushroom houses.

Regulations for Compost

The producer must obtain documentation of all inputs (feedstocks and additives) used in compost production. All ingredients must be either non-synthetic or synthetics approved for use as soil amendments at §205.601. The compost must have documentation to show it was produced in a manner compliant with §205.203(c)(2): produced in windrows and reached a temperature of between 131° F and 170° F for 15 days, and was turned at least 5 times, or else produced in a static aerated pile or in-vessel that maintains between 130° F and 170° F temperature for 3 days.

■ Compost that contains any animal products (including livestock mortalities) and does not meet the compost requirements must follow the raw manure restriction §205.203(c)(1).

■ Compost that contains only plant materials and no animal products is permitted for use without restriction, even if it does not meet the compost requirements.

If documentation is not available for composting procedure of purchased compost, and the grower wants to use it without a harvest restriction, they must re-compost the material and document the ingredients, additives, temperatures, mixing procedure and dates.

Mortality Composting

Composting livestock mortalities on-site is allowed if composting procedures are followed according to compost regulations. Guidelines and resources on mortality composting can be obtained from your local extension office.

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Vermicompost

Vermicompost is the managed process of worms digesting organic matter into a beneficial soil amendment. Vermicompost is allowed if

(i) made from only allowed feedstock materials (including manure)

(ii) aerobicity is maintained by regular additions of thin layers of organic matter at 1–3 day intervals,

(iii) moisture is maintained at 70–90% and

(iv) duration of vermicomposting is at least 12 months for outdoor windrows, 4 months for indoor container systems, 4 months for angled wedge systems, or 60 days for continuous flow reactors.

Producers must have records of all ingredients, and method of production (from NOSB guidance).

Vermicompost that contains only plant materials and no animal products is permitted for use without restriction, even if it does not meet compost requirements.

Compost Tea and Extracts

Tea or Extract?

■ **Compost tea** (definition) — A water extract of compost produced to transfer microbial biomass, fine particulate organic matter, and soluble chemical components into water. Brewed for more than an hour.

■ **Compost extracts** (definition) — The result of any allowed mixture of compost, water, additives that are not held for more than one hour before use.

Compost tea or compost extracts that contain animal products are not allowed for the production of edible seed sprouts.

Compost tea may be made from PCO approved compost, or vermicompost and may include other permitted materials (non-synthetic substances and synthetics permitted at §205.601 for soil and plant amendments). PCO must have documentation of compost production temperatures, methods, and all ingredients used in tea production.

Because of food safety concerns it is recommended that all tea made from compost (made with or without manure), that also contains added nutrients (fertilizers, carbohydrates, etc.) be tested for pathogens if used on crops for human consumption. Good Agricultural Practice (GAP) standards offer additional guidance. Contact PCO for more information.