

COMPOST FOR USE IN ORGANIC PRODUCTION

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Spring has finally sprung and it's the time of year when many farmers and gardeners are applying compost as a fertility amendment or soil conditioner to their fields and garden beds. If you are an organic producer, there are a few things to know about compost for use in organic production.

Compost, as defined by the National Organic Program (NOP), is the product of a managed process through which microorganisms break down plant and animal materials into more available forms suitable for application to the soil. A few goals for the production and use of compost might include capturing nutrients which remain in the plant and/or animal waste product, increasing biological activity and diversity in the soil, and repurposing agricultural byproducts.

Section [§205.203\(c\)](#) of the [NOP regulations](#) states the following:

The producer must manage plant and animal materials to maintain or improve soil organic matter content in a manner that does not contribute to contamination of crops, soil, or water by plant nutrients, pathogenic organisms, heavy metals, or residues of prohibited substances. Plant and animal materials include:

- (1) Raw animal manure;
- (2) Composted plant and animal materials; and,
- (3) Uncomposted plant materials.

Aged manure is not considered compost unless it undergoes the composting process described later in this article. Without composting, or following the guidelines established in [NOP Guidance 5006](#), "Processed Animal Manures in Organic Crop Production," aged manure will be treated as raw manure and must meet the manure waiting period (90 days for crops

above ground, 120 days for crops below ground) or be applied to crops not intended for human consumption per [§205.203\(c\)\(1\)](#). Uncomposted plant materials are not held to the composting requirements and may be applied at any time. Manure and plant matter are not required to be from organic sources when used as fertility inputs or compost feedstocks. However, all feedstocks will be scrutinized to ensure no prohibited inputs have been added before applying to the field or compost pile. Always check with your specialist before using any input in your operation which has not already been approved.

The feedstocks, which are the ingredients that go into the pile or bin for composting, must fall into one of the following categories:

- Agricultural.
- Non-synthetic substances not prohibited at [§205.602](#).
- Synthetic substances approved for use in crop production at [§205.601\(c\)](#) and (j).

Among the synthetic substances on the National List allowed in crop production are newspapers or other recycled paper, without glossy or colored inks. There are paper products on the market which we might want to recycle in our compost, including cardboard and disposable foodware. However, many of these products contain coatings or other synthetic additives which would not be allowed in organic production. Additionally, though the research is limited, there have been a few studies indicating that compost containing disposable foodware feedstocks contains elevated levels of PFAS chemical compounds. Due to the complexity and immense number of these compounds in our environment, minimal published research, and lack of both federal and state regulations or tolerance levels for compost, MCS does not have the foundation or the data needed to require PFAS testing for compost at this time. However, we

are taking a proactive approach and require the screening out of these types of recyclable paper products as compost feedstocks to reduce the potential of introducing a prohibited substance into the compost, thus ensuring a reduced risk of contamination to crops, soil or water.

Compostable and biodegradable products also need review as they do often contain synthetic or prohibited ingredients and would not be approved as compost feedstocks.

The standards for the composting process, established by the NOP, can be found at [§205.203\(c\)\(2\)](#), and are as follows:

Composted plant and animal materials produced through a process that:

- (i) Established an initial C:N ratio of between 25:1 and 40:1; and
- (ii) Maintained a temperature of between 131 °F and 170 °F for 3 days using an in-vessel or static aerated pile system; or
- (iii) Maintained a temperature of between 131 °F and 170 °F for 15 days using a windrow composting system, during which period, the materials must be turned a minimum of five times.

These standards set the basis for compost review, however, they do not address other acceptable methods of composting, such as a pile, rather than a windrow, or vermicomposting. In 2006, the National Organic Standards Board (NOSB) presented the NOP with recommendations that acknowledged other methods of composting. The NOP concurred with the NOSB that "site-specific variation in feedstock materials, management practices, and production requirements dictate that all organic farmers exercise flexibility in managing plant and animal materials on their operations," as written in NOP Guidance [5021](#), "Compost and Vermicompost in Organic Crop Production." MCS accepts these recommendations which

