NEW HAMPSHIRE DEPARTMENT OF Environmental Services

BMPs

Best Management Practices for N.H. Solid Waste Facilities

Food Waste Composting

Composting is an excellent way to manage food waste. Like leaf and yard waste composting, compost from food waste is a valuable soil amendment. When added to gardens and lawns, finished compost will increase soil moisture retention, provide additional nutrients, and reduce the need for chemical fertilizers.

Composting food waste reduces the quantity of waste disposed of in landfills and incinerators, and saves money. In rural communities especially, residents can easily compost food waste on their own property, with or without their yard waste. This activity does not require a permit. Food waste can also be composted at centralized facilities, such as solid waste transfer stations, with a permit.

As with leaf and yard waste composting, it is important to understand the basic science of composting in order to achieve high quality finished compost without producing adverse effects, such as odors, and without attracting rodents, flies and other pests. See table on reverse side. Also, read the Leaf & Yard Waste Composting BMP Guidance Sheet to learn more about the science of composting.

It is also important to understand certain terminology, including:

Composting Terms & Definitions

- Feedstock – the mixture of organic wastes brought to your facility for composting.
- Greens – organic wastes high in nitrogen (green grass and leaves, food waste, and garden cuttings.
- Browns – organic wastes high in carbon (autumn leaves, wood chips or sawdust).
- Carbon-to-Nitrogen Ratio (C:N ratio) – the balance of energy and nutrients needed by microorganisms.
- Windrow – a pile with a shorter height and width, but greater length (example: 8’ by 12’ by 60’).
- Plant Pathogens – microscopic organisms such as bacteria and viruses that are harmful to other plants.

Did You Know?

- Bacteria is the most important component in the composting process.
- Chopping up all the compost ingredients into pieces less than 2 inches in size will speed up the composting process.
- Charcoal and wood ash can be used to control odors during the compost process; however, too much ash can harm plants grown in the compost.

Best Management Practices for Food Waste Composting

The following BMPs may differ, depending on whether you use windrow, static pile, or in-vessel methods.

- Mix roughly equal amounts by weight of browns and greens to provide the proper 30:1 C:N ratio.
- Do not leave food waste uncovered for more than 2 hours and blend all food waste into a windrow within 24 hours after its arrival, or store the food waste in a closed container to avoid odors and pests (birds, rodents, etc.).
- Routinely turn each windrow or pile to maintain aerobic (oxygen rich) conditions.
- Do not turn windrows during cold winter days or during rain storms.

- Consider applying water after windy days as windrows may have become too dry.
- It can take two or more days for compost piles kept at temperatures greater than 140°F to kill weed seeds and plant pathogens; at temperatures above 155°F, it may take only a few hours. However, do not allow windrow temperatures to remain above 155°F for more than a few hours, as beneficial organisms will also begin to die.
- Periodically check moisture levels. Grab a handful of compost from inside the pile and squeeze. If it drips, it is too wet, in which case add more dry material and turn the pile. If it is damp but does not drip when you do the squeeze test, it is about right.
- Pile heights can vary based on the amount of space and type of equipment available, but should not be more than 10 feet.
- Do not compost domestic animal fecal matter. It may contain viruses that will not be killed during the compost process.
- Do not compost feedstock containing weeds that have gone to seed because they may survive the compost process.
- Allow the compost to mature/stabilize until it no longer reheats after turning. It should have a dark brown to black color, a crumbly cake-like texture and an earthy odor.
- If considering composting sludge or septage, you must comply with the NHDES sludge and septage rules.

Composting: Potential Problems and Solutions

Problems	Solutions
Not heating up*	ADD water, grass or garden clippings, or manures, and TURN pile.
Too wet	ADD sawdust and cardboard, paper, oak leaves and corn stalks, OR hay, and TURN the pile.
Foul odor	ADD sawdust and cardboard, paper, oak leaves and corn stalks, OR hay, and TURN the pile.
Freezing	ADD sawdust and cardboard, paper, oak leaves and corn stalks, OR hay. Do NOT turn pile; wait for a warm day to turn.
Too dry	ADD water, grass or garden clippings, or manures, and TURN pile.

*For a compost pile that is not heating up, it may mean it's either too dry, you have too much carbon (leaves), or not enough nitrogen (green grass). Do a squeeze test; if the pile isn't too dry then try adding a feedstock, such as grass or manure, which has less carbon and more nitrogen to the pile.

Compost piles are too close to one another and too tall. Poor drainage is allowing water to accumulate between windrows.

Compost piles are actively managed. There is good spacing between them.

For additional information, contact:
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