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COMPOST FACT SHEET #5

Compost Bulking Materials

COMPOST FACT SHEET SERIES 2004/2007

These fact sheets can be accessed at:
<http://cwmi.css.cornell.edu/factsheets.htm>

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Composting Liquids

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Wood chips such as those pictured here are ideal for use as a bulking agent in compost piles.

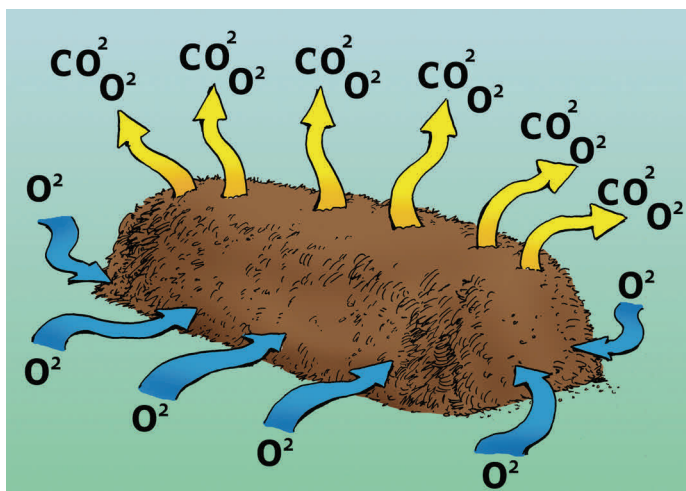
Bulking Materials and Carbon Sources

The ratio of carbon to nitrogen in feedstocks is an important consideration in optimizing the composting process. Composting wet, high nitrogen materials like manure and food scraps, requires the addition of a carbon source in order to provide the microbes with an energy source. Carbon sources can also serve as a bulking material, absorbing moisture and allowing air movement through the pile.

When securing bulking materials, remember that, “All carbon is not created equal.” Wood chips are not the same as shavings, shavings are not saw dust. All carbon sources can be used, but which to use depends on the situation and goals of the producer.

Wood Chips

Wood chips can be in the form of chips from a chipper, which produce a fairly consistent size of 2”, or tub grindings that come out in a variety of sizes with some long pieces. Their purpose is to promote natural air flow in the pile. When using bulky material, less turning is required, saving time and money. Depending on the end use of the product, the chips may need to be screened out, but can be reused in the next pile.



Bulkier carbon sources promote better airflow through a compost pile, which in turn will speed the natural degradation process.

NOTE!

When using a static pile composting method, it is important to use a bulkier carbon source to keep the pile aerated.

Shavings

Shavings have more surface area than wood chips which makes the carbon more available, but because of their structure they tend to clump when wet, which can impede good airflow.

Saw Dust

Because saw dust has very fine particle size, it is an excellent source of carbon. However, the fine particle size and lack of structure does not facilitate air circulation in the pile. It is also quite absorbent, and when moisture fills the spaces, air has a hard time circulating. If using fine materials like saw dust, the pile will need to be turned more frequently. Air can also be forced through the pile, but this can be challenging with dense material.

Hay/Straw

These dried grasses are a good carbon source but they tend to mat (become a thick mass) if not well broken up and mixed in. They require more turning, but if mixed in proper ratios, can work well.

Paper Products

Cardboard and newspaper are occasionally used as bedding on dairy farms and thus become part of the compost pile. They

CAUTION!

Be sure carbon sources do not come from treated or painted wood products.

provide carbon and good absorption, but not much airspace. Some farms using corrugated cardboard that has gone through a bedding chopper have been successful composting it with the manure without other bulking materials.

Corn Cob/Stalk

These materials can be used to provide a carbon source and provide for more air flow. Stalks can be size reduced in a bedding chopper. Spoiled feed tends to add both carbon and nitrogen as well as converting the spoilage into a usable product.

Leaves and Yard Trimmings

Leaves and yard wastes (small sticks, discarded produce, and garden residuals) can be used as a bulking material and carbon source. They can add structure to the pile and are readily available from municipalities. Farmers have directly incorporated leaves into fields to increase organic material, but composting them first will make the nutrients and organic matter more available to crops.

One caution with leaves: When they are collected, they are vacuumed or picked up with a loader. With these collection methods you can get more than leaves; watch for rocks, garbage, glass and other contaminants that may be hidden in the leaves. Carefully manage wet grass clippings as a nitrogen source. Unless well managed, they can cause the pile to become anaerobic and odiferous.

HELPFUL HINT!

Ask road/tree crews working in your area if chipped brush and branches are available. Have a convenient place for workers to drop material off.

Contact list for sources of bulking materials for composting. Fill in the blanks and post in an easily accessible location as a reference.

Local Highway Department	Contact: _____ Phone: _____ E-Mail: _____
State Highway Department	Contact: _____ Phone: _____ E-Mail: _____
Utility Company	Contact: _____ Phone: _____ E-Mail: _____
Landscapers	Contact: _____ Phone: _____ E-Mail: _____ Contact: _____ Phone: _____ E-Mail: _____
Logging Companies	Contact: _____ Phone: _____ E-Mail: _____ Contact: _____ Phone: _____ E-Mail: _____
Arborists (Tree Care Specialists)	Contact: _____ Phone: _____ E-Mail: _____
Local Parks Department	Contact: _____ Phone: _____ E-Mail: _____

Acknowledgement

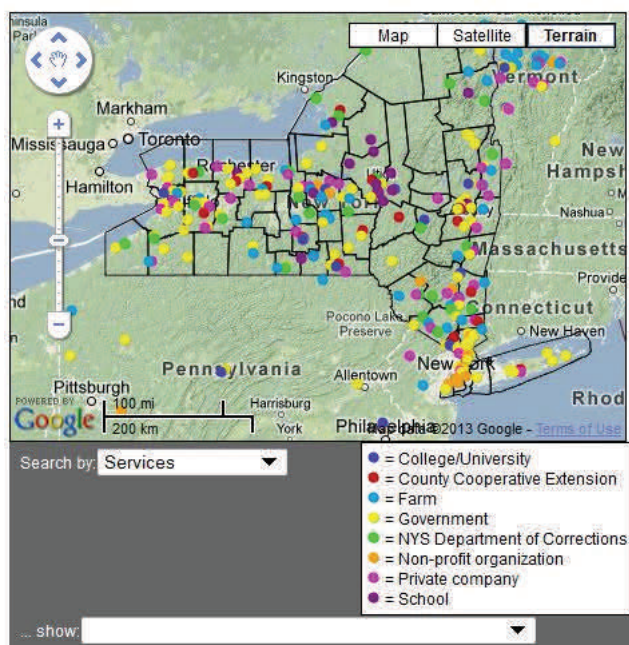
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New York State Compost Facilities Search

A map of compost facilities, transfer stations, and compost education and demonstration sites in NY and surrounding states can be accessed at: <http://compost.css.cornell.edu/maps.html> (see example below).

Please check the map and help us update the information by letting us know of additional facilities or other changes.



Cornell University Farm Services Compost Facility

Website: <http://cwmi.css.cornell.edu/farmservices.pdf>

County: Tompkins
 Owner: Public, College/University
 Contact: Bill Huizinga
 Address: Stevens Rd, Ithaca, NY 14850
 Phone: 607-257-2235
 Fax: 607-257-2237
 E-mail: glt4@cornell.edu

Feedstocks

Food Waste (Pre and/or Post Plate): Yes
 Floral waste and trimmings/plants: Yes
 Manures: Yes, research animal bedding - ; Cow, Poultry, Horse
 Other Feedstocks: compostable serviceware

Source of Feedstocks

Greenhouses/Florists: Yes
 Restaurants: Yes
 Manure: Yes

Additional Information: All material comes from Cornell University campus facilities, no waste is accepted from outside the University. A tipping fee is charged to fund the site operation. The food waste includes pre and post consumer waste along with a large amount compostable paper and dinnerware items.

Compost Process

How is waste composted? Piled in windrows

Finished Compost

Is compost for sale?: Yes
 Is compost used on site?: Yes

Composting Resources:

- **Farm-Based Composting: Manure and More** video - <http://hdl.handle.net/1813/14193>
- **Natural Rendering: Composting Livestock Mortality and Butcher Waste:**
 Fact Sheet - <http://compost.css.cornell.edu/naturalrenderingFS.pdf>
 Video - <http://hdl.handle.net/1813/7870> (English) and <http://hdl.handle.net/1813/22942> (Spanish)
- **Co-Composter:** <http://compost.css.cornell.edu/CoCompost.html>
- **Compost...because a rind is a terrible thing to waste** - <http://compost.css.cornell.edu/FoodCompostpr.html>
- **On Farm Composting Handbook** - http://palspublishing.cals.cornell.edu/nra_order.taf?_function=view&ct_id=6 or http://compost.css.cornell.edu/OnFarmHandbook/onfarm_TOC.html

For a complete listing of our composting resources go to: <http://cwmi.css.cornell.edu/composting.htm>