

Composting Basics

Outdoor Composting

Greens (nitrogen sources) - herbaceous plant material, fruits and vegetables, tea, coffee

Browns (carbon sources) - trees and shrubs, leaves, wood chips, sawdust, paper

Water - should be moist as a damp sponge

Air - turn periodically (twice/month) or when temp exceeds 160°F.

Tips & Tricks

- (1) **Make your pile large enough** -- should be at least 3' x 3' x 3' (1 cu. yard).
- (2) **Add dirt** to introduce soil microorganisms, sometimes referred to as "innoculating" the pile. Mix some soil throughout the pile.
- (3) **Chop materials**, less than 2 inches in length. Shredded leaves work beautifully.
- (4) **Consider using manures** as a nitrogen source -- cow, rabbit, horse, sheep, llama manures are good -- to encourage your compost pile to get "hot." The manures must be from animals that are herbivores. Do not use dog, cat, or human droppings as omnivores and carnivores carry *e. coli* bacteria and other pathogenic microbes.
- (5) **Top off** with 3" layer of leaves to prevent flies from being attracted to the pile.
- (6) **Let it bake** -- assemble pile and don't keep adding new materials.
- (7) **Monitor and turn** -- check the pile and add water if it begins to dry out and turn periodically to introduce oxygen throughout your pile.

Trouble Shooting

Stinky - generally too wet and too much nitrogen, add more carbon

Not heating up - Either (1) pile is too small (must be at least 3 cubic feet), (2) pile is too dry, (3) there is not enough nitrogen (greens), or (4) you are continually adding new materials

Flies - be sure to bury food scraps under 3" of leaves or other carbon sources

Rodents - be sure you don't add dairy products, meat scraps or bones

Additional Resources

High quality local commercial compost -- Purple Cow

High quality commercial compost with Probiotics -- Dr. Earth

Website - <http://web.extension.illinois.edu/homecomposting/building.html>

Mike McGrath's Book of Compost



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Worm Composting

Worms - *Eisenia fetida*, red wiggler worms, live in temperatures from 40 to 80 °F.

Feed - Most fruits and vegetables, plant material ... **AVOID** - all citrus (do not feed worms peels or fruit), garlic and onion, oily or fried foods, meat and dairy

Bedding Materials and Benefits

Newspaper - good starter substance, easy to see transformation of bedding into worm castings, easy to find the worms, avoid using paper with color inks

Peat Moss - generally healthier for worms than newspaper, use peat moss that has been harvested sustainably

Coir (shredded coconut hulls) - good insulator in warm climates, be sure to rinse your coir to remove potential salt residues, coir tends to retain moisture

Tips & Tricks

- (1) **Choose a dark or opaque bin** - worms don't like light, wash with a gentle soap like Ivory, avoid using antibacterial soaps
- (2) **Add a handful of soil** to each bin to introduce dirt for the worms' gizzards
- (3) **Add crushed egg shells periodically** - worms need calcium to reproduce
- (4) **Chop/smash fruits and veggies** - food processors are quick and work well
- (5) **Bury food** - under 3" of bedding to prevent flies

Trouble Shooting

Too wet - add more bedding material or set outside to let moisture evaporate

Too dry - mist bedding material with water

Smells like rotten eggs (sulphur) - too wet, add more bedding material, stir to aerate

Flies - be sure to bury food scraps under 3" of bedding to prevent flies, once you have them use vinegar in a bowl near the bin to trap the flies

Sow bugs, springtails, beetles - AOK ... don't worry ... part of the ecosystem

A few worms are climbing up the sides - they're looking for food

Mass exodus of worms - there's a toxin in the bin, remove toxin if possible or rescue worms and provide new bedding, soil, and crushed egg shells

Additional Resources

Best local source for worms -- Growing Power on Silver Spring Drive

Best online source for worms -- Uncle Jim's (www.unclejimswormfarm.com)

University of Illinois Chicago Extension website

<http://urbanext.illinois.edu/homecomposting/worm.html>

Bokashi

Anaerobic fermentation process using effective microorganisms (over 80 identified)

For scientific information: www.fullwiki.org/Effective_microorganism

To see video with live demonstration: <http://www.youtube.com/watch?v=FioWimCrvWE>



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