

Why Compost?

by Lois Braun

- 1) Produces a valuable organic amendment for your garden:
 - nutrients to feed plants,
 - organic matter to conserve soil moisture and improve soil tilth,
 - reduces the energy used to produce and transport garden inputs.

RECYCLING!

- 2) Keeps valuable organic matter and nutrients
 - out of your trash → reduces odor problems
 - reduces problems with dogs etc
 - out of the landfill → reduces energy used in hauling
 - reduces methane and nitrous oxide emissions

Composting is Microbial Husbandry: it is a complex ecosystem of bacteria, fungi, protozoa, nematodes, microscopic insects, and earthworms.

Key points:

1. These organisms are very small. They can only eat what they come into close contact with.
2. Their metabolism speeds up in warmer weather.
3. Like us, they give off heat as a product of respiration.
4. They need some of the same things we need to live, in relatively balanced proportions:
 - A balance between air (oxygen) and moisture (water)
 - A balanced diet consisting of:

“Brown stuff” = carbon-rich compounds (carbohydrates, cellulose, etc) for energy
(dried leaves, straw, stemmy weeds, wood chips or shavings, paper or cardboard)
and

“Green stuff” = nitrogen-rich compounds (proteins) for growth and reproduction
(green grass clippings and other green plant material, spoiled food of any sort, fruit and vegetable peelings, coffee grounds, tea bags, egg shells, meat scraps, urine, etc)

Balance

- Too dry or too much brown stuff? → won't "cook" (carbon "ties up" other nutrients)
- Too wet → water excludes air → anaerobic organisms produce
 - noxious odors
 - methane and nitrous oxides
- Too much green stuff? → decomposition is too fast and nutrients are lost
 - tends to matt and exclude air → anaerobic organisms
 - bad odors

If you err, it is better to err on the side of too dry or too brown.

Do not put the following in compost (at least not at home):

- Dog or cat feces (due to a parasite they carry),
- Plants infested with diseases or insects you don't want in your garden,
- Weeds that have gone to seed or which have rhizomes they can spread by,
- “Compostable” plastic bags.

Do not forget to “inoculate” your compost with soil or mature compost!

The decomposer micro-organisms that do the work of composting are found naturally in soil. Once you have made compost you can keep it going with your compost like with sourdough bread.

Why is turning helpful? Turn to move the dry outside in and the moist inside out to get more uniform decomposition. Turning also incorporates oxygen into the center of the pile, where it

may have been depleted. Lack of oxygen may inhibit microbial activity, slowing decomposition. Turning is like stoking a fire, and is necessary if you want the compost to heat up. But heating up is not necessary so turning is not necessary.

Why does size of compost heap or bin matter? Small heaps do not heat up enough to kill pathogenic organisms or weed seeds because, due to their large surface area to volume ratio, they dissipate too much heat from their relatively large surface area. Conversely, large heaps become anaerobic in the center. Effective heating for killing pathogens can only be accomplished in commercial composting systems which are turned frequently with large scale mechanical equipment.

Myths about Composting

- Can't put in meat scraps, bones, or other animal products. What else are you going to do with them? Just try to bury them well to keep them from attracting critters.
- Can't put in baked goods. Ditto.
- Compost piles must heat up. No, cold composting is fine; it will just be slower and won't kill pathogens. As long as it isn't anaerobic, cold composting may actually be more efficient at retaining nutrients.
- Compost must be completely mature before it can be spread.
- Composting is complicated.—No! **Compost Happens!**