

HOW DOES COMPOSTING WORK?

Biology

Organic waste material is layered up and decomposes through the actions of the soil micro-organisms. They start the process of decaying matter by breaking down plant tissue. Soon, fungi and protozoans join in and later centipedes, millipedes, beetles and earthworms do their part. These micro-organisms work best when sufficient oxygen, moisture and nitrogen are supplied.

Materials

Anything growing in the yard, leaves, weeds, grass clippings, kitchen waste (except meat, bones, dairy products, and fatty foods) are potential food for the tiny micro-organisms working in the pile.

Surface Area

Material decomposes faster if the micro-organisms have more surfaces with which to work. Chopping garden waste with a shovel, running it through a shredding machine or lawnmower, speeds it's composting.

Size

The ideal size for the pile is four feet wide and four feet high by any convenient length. Smaller piles have trouble holding heat and larger piles may have aeration difficulties.



Moisture and Aeration

The microbes work best when the pile is as moist as a wrung-out sponge and has plenty of air passages. Too much sun will dry out the pile and too much water will make it soggy.

Time and Temperature

The hotter the pile, the faster the composting. Ideal composting temperatures range from 100° - 140°F. With proper amounts of water, air, and materials, compost can be made in 2 - 3 months.

Carbon to Nitrogen (C/N) Ratio

All living organisms need relatively large amounts of the element carbon (C) and smaller amounts of nitrogen (N). To speed composting, combine carbon-rich "brown" materials such as leaves with nitrogen-rich "green" materials such as grass clippings. The ideal compost combination is thirty parts carbon to one part nitrogen.

WHAT'S WRONG WITH MY COMPOST?

SYMPTOMS

The compost has a bad odor

The center of the pile is dry

Compost is damp and warm only in the middle

The pile is damp and sweet-smelling but won't heat up

Pest problems: birds, animals, rats, dogs, etc.

PROBLEMS

Not enough air, pile too wet

Not enough water, too much woody material

Pile too small

Lack of nitrogen

Undesirable food wastes

SOLUTIONS

Turn it, add coarse materials such as straw, corn stalks, etc.

Turn, moisten, add fresh green wastes, chop coarse wastes

Get more material, mix old ingredients into a new pile

Mix in a nitrogen source such as fresh grass clippings, fresh manure, bloodmeal or ammonium sulfate

Remove any fish, meats, bones or dairy products. Cover or bury vegetable scraps