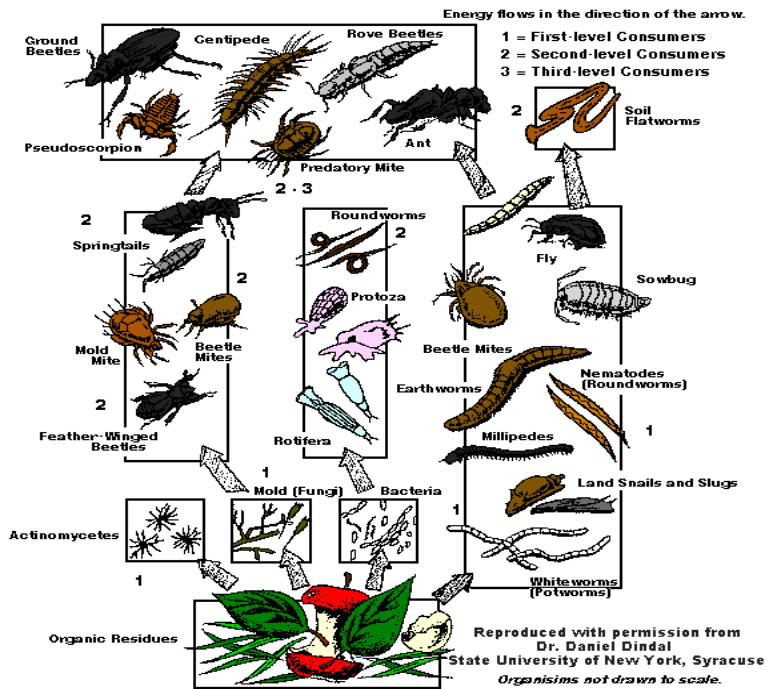


## Energy Flow in the Composting Foodchain



### MATERIAL HIGH IN CARBON

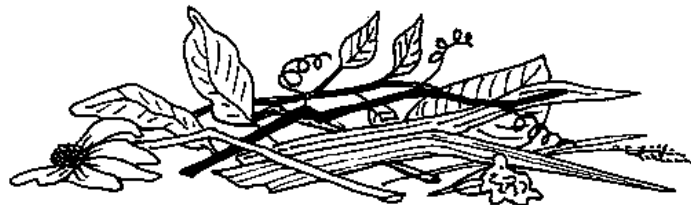
#### Brown/dry:

Leaves, Hay, Straw, Mixed paper, Bark, Sawdust, Wood chips, Newspaper, Corncob & stalks, Corrugated cardboard

### MATERIAL HIGH IN NITROGEN

#### Green/moist:

Grass clippings, Alfalfa, Vegetable scraps, Coffee grounds, Manure, seaweed, green leaves.



### TOUBLE SHOOTING

PROBLEM	CAUSE	SOLUTION
Ammonia smell	Too much nitrogen	Add brown (carbon) materials
Bad or rotten smell	Not enough air	Turn pile
	Pile too wet	Add more materials, cover bin when raining
Pile does not heat up	Lack of nitrogen	Add green (nitrogen) materials
Pile damp and warm only in the middle	Pile too small	Add more materials



For more information  
Contact Beth Clawson at 657-8213  
or [clawsonb@msu.edu](mailto:clawsonb@msu.edu)

MSU Extension Van Buren County  
219 E. Paw Paw St., Ste. 201  
Paw Paw, MI 49079-1448

MICHIGAN STATE  
UNIVERSITY  
EXTENSION



Michigan State University Extension prohibits discrimination in all its programs and activities based on race color, national origin, gender religion, age, disability, political beliefs, sexual orientation, and marital or family status.

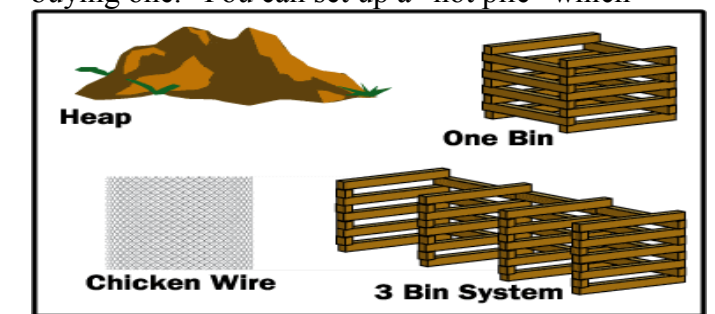
## BUILDING A COMPOST PILE

### STEP 1 - SELECT A SITE

Locate a site that is discrete yet convenient to get to. It should be located at least 2 feet from any structure. Select a surface that is bare so the microorganisms and worms are able to get to the pile. Wind will provide good air circulation and the sun will warm the pile however, too much and it will dry the pile out. Select a site near a water source. There should be good drainage so the water doesn't accumulate around the pile. Check local zoning ordinances for requirements on setting up a compost pile.

### STEP 2 - SELECT A STRUCTURE

A compost structure can be built or purchased. It comes in many shapes and sizes. The one you choose will depend on the amount of work you are willing to put into maintaining it and the expense of building or buying one. You can set up a "hot pile" which



decomposes quicker but, takes more effort or a "cold pile" which basically allows nature to do the work. Compost structures range from a pile on the ground to a commercial compost bin. They can be made from

concrete blocks, wooden pallets, garbage cans or chicken wire. Compost structures can have single or multiple compartments. Commercial composting units also come in a variety of styles. Shop around and find a structure that will work for you.



### STEP 3 - ADD MATERIALS

All organic material can be composted. Kitchen scraps are also a good source of material for the compost pile. Nitrogen and carbon are the most important elements in a typical compost pile. Nitrogen is essential for cell growth and function. Materials that are green and moist (coffee grounds, grass clippings) are good nitrogen sources. Carbon provides both an energy source and the building material for cells. Materials that are brown and dry (straw, leaves) are good carbon sources.

- Start the compost pile by clearing and wetting down the area where your site will be located.
- Place a layer of twigs and other brown materials on the bottom to provide some aeration at the base.
- Add a mixture of 1 part green and 2 parts brown material.
- Add several shovels full of soil.
- Add water and mix to make it as wet as a wrung out sponge.

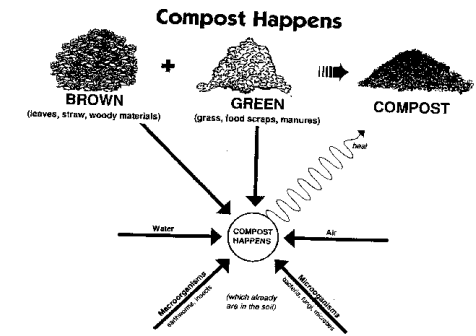
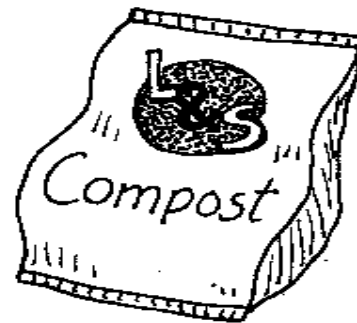
- Turn pile and maintain moisture level to speed up decomposition time.

### STEP 4 - MAINTENANCE

Add new layers of composting material to the pile along with soil. Water regularly to keep moist. Turn the pile often to ensure an adequate oxygen supply. Break up large pieces of material for quicker composting. Commercial additives may be useful but are not necessary. A shovel full of compost, garden soil, spoiled milk or yogurt will bring in the microorganisms needed to do the job. Bury new composting material to avoid attracting pest. To destroy weed seeds and disease pathogens, the pile must maintain 130 degrees F for 3 consecutive days. Use this compost in an area where plants are not susceptible to the same disease.

### STEP 5 - USING FINISHED COMPOST

Finished compost is earthy smelling and crumbly and dark brown in appearance. Once your compost is done, it can be used to improve soil structure in your garden or lawn as well as improve insect/disease resistance in your garden plants and trees. It can be used in potting mixes and for sowing seeds indoors. Use nutrient rich compost tea to perk up your plants.



### MATERIALS TO AVOID

- Dog or cat feces** -- May contain disease-causing parasites transferable to humans.
- Glossy or colored paper** -- May contain toxic inks.
- Coal or charcoal ashes** -- Contain sulfur oxides and other compounds toxic to the soil.
- Plants recently treated** -- May add toxic substances with pesticides or to the pile and finished long-lived chemicals compost such as arsenic.
- Lime** -- No need to add to pile because pH naturally fluctuates as decomposition occurs the final product is usually stable and pH neutral.

### MATERIALS REQUIRING EXTRA CARE WHEN COMPOSTING

- Meat or animal products** -- May attract pests, including dairy foods which can create odors while decomposing.
- Oils or foods cooked in oil -- May attract pests.
- Diseased plants -- May spread disease to other plants.

Invasive weeds and seeds -- May not be destroyed if temperatures are not hot enough, may sprout and overrun compost area. Some weed seeds may survive the compost process.