

## COMPOSTING

### Methods of Composting

There are several methods of composting.

#### Passive

Passive composting requires little effort. Brown and green raw materials are placed in a pile in proper proportions, and occasionally watered to keep it moist until it is completely composted (material is no longer recognizable as leaves, grass, vegetables.) Such a pile is usually built gradually, adding material a little at a time.

Another option is to place the composting material in a commercial compost bin, and then adding water and stirring occasionally. Finished compost is removed through the bottom door as it appears ready for harvesting.

Both of these passive methods are relatively slow. Since the pile does not heat up to the extent that an active pile does, seeds which could sprout in your garden, or diseased plants which could infect other plants should not be included in the pile. This method requires very little work, but it will take much longer to get finished compost (5-12 months vs. 1-3 months for the active method).

#### Active

The active or hot composting method is the most labor intensive, but it is also much faster than the passive method. Under optimum conditions it is possible to have beautiful brown compost in just a few weeks with the active method.

Begin by building a compost pile all at once, watering as you add the material. Every few days, or weekly, the whole pile should be turned by forking it from one place to another (or from one bin to another), watering it as it is turned. While turning the pile place material from the outside of the old pile into the center of the new pile.

If using a compost thermometer, the pile should be turned if it reaches 150 degrees or if it begins to cool down to 100 degrees or below. The aeration and moistening should cause the pile to heat up again.

## Composting

A temperature of 140 degrees for a 21-day period is required to kill most seed (except for tomato seeds) and diseases. A small home compost pile is often not large enough to maintain this high a temperature for a sustained period of time. Therefore, it is usually best to exclude weed seeds and diseased plants.



### **Worm Composting**

Worm composting is generally done in manufactured worm bins, but can be done in wooden boxes or plastic storage boxes as well. Newspaper torn into narrow strips and moistened, can be used as bedding material and then worms are added along with a small amount of composted material. When making a worm bin from a plastic storage box, choose one that is opaque, if possible. Using a drill, make about twelve 1/4 inch holes in the bottom of the box to allow the worm “tea” to drain. Otherwise the box will get too wet and the worms will try to leave or may drown. Purchased worm bins usually come with bedding material. With a three-box system, the bottom section will catch and hold the worm “tea”.

Kitchen green waste is added every few days. To add new “green” material, put on plastic gloves and pull the worm castings to one side of the box; add the green materials; then push the castings back over the new material. The next time, pull the material from the opposite side of the box, add the material and cover it over, as before.

Worm bins should be kept in a shady location. Direct sun on the worm bin can “cook” the worms. New material should only be added after the previous material has been fairly well digested. If too much material is added at one time, or so frequently that it is not digested, the box may become anaerobic (smelly). Should this happen, do not add more material for a week; or add some finely shredded paper (carbon) and gently mix it into the castings, then wait a while before adding more green material.

## Composting

At some schools the cafeteria saves the green scraps from preparing lunches for use in the worm bins. Not all school districts will allow this, so check to see if this is possible at your school. Meat products, cheeses, fried foods, oils and fats, should not be put into the worm bins. These materials take a long time to decompose and tend to draw unwelcome critters (raccoons, dogs, and cats). The worms do not “eat” the waste products; rather, they digest decomposing materials.

Note that only certain species of worms (red wigglers or manure worms) can be used to digest decomposing material. They are not the usual earthworms. The earthworms usually found in garden soil are long lived, but do not multiply fast enough to use in a worm bin.



Purchased Worm Bin



Kitchen Green Waste for the Bins



Composting Worms

The worms will multiply in the bins and over time the castings can be harvested and used in the garden as a soil additive and plant food.

Worm castings should be mixed with soil at a ratio of 10 parts soil to one part worm castings because of its high nitrogen content.

Worm tea should be diluted 6:1 as it can have up to 21% nitrogen.

## Composting

### **Trenching**

To use this method, dig a trench about one foot deep. Pile the soil alongside the trench. Kitchen scraps may be placed in the trench as they become available. Cover each batch as it is put into the trench and continue to the end of the trench. Plant your crop about 12 inches away from the trench. You can also bury kitchen scraps in a small hole about one foot deep near existing plants in a garden.

### **Soil Incorporation**

Chop or shred the yard trimmings as finely as possible and spread them over the soil and around plants as mulch allowing it to decompose on the surface. It is a good idea not to work this material into the soil until it has decomposed because nitrogen will be drawn from the soil by the process of breaking down the mulch. If raw mulch that has a high carbon content and little nitrogen is worked into the soil, it is necessary to add nitrogen at the same time.