

# REDUCING PESTICIDES

it's perfectly natural.



## COMPOST FOR YOUR ORGANIC GARDEN

Beautiful lawns and gardens are achievable without the use of pesticides. Composting is an integral part of a natural approach to garden and lawn care.

Compost is partially decomposed organic matter. Most often, organic matter is found in the form of plant residues and manure of plant-eating animals. It contains a healthy range of nutrients essential to plant growth. The gradual degradation of organic matter into compost by soil organisms releases these elements slowly, at rates and in forms plants can utilize.

### Why Compost?

Composting yard and kitchen waste is beneficial for many reasons.

- ◆ Compost is the backbone to any good soil fertility program. It contains all the basic nutrients required for vigorous plant growth. The nutrients in compost are released slowly over time and are readily available to plants. Compost helps keep soil pH levels in a range that maximizes nutrient availability to the plants. Compost improves the structure and water holding capacity of soil.
- ◆ Compost supports the growth of healthy plants. Healthy plants have an increased ability to resist attack by insects and diseases. Compost protects plants from soil-borne diseases by inoculating them with beneficial organisms that fight disease.
- ◆ Compost serves as a food source for soil dwelling creatures. These organisms assist in decomposing organic matter and help improve water and gas movement through the soil. The improved soil structure eases plant root growth through the earth.
- ◆ Composting recycles material that would otherwise end up in a landfill. Its use reduces the need for inorganic fertilizers on the lawn and garden.

### Methods of Composting: Hot versus Cold Composting

*Hot composting* requires a few simple, but specific, steps. If done correctly, it generates heat to 160°F, which will destroy most weed seeds and disease organisms. Hot composting is fast – from start to finish can take only 3 weeks. Even if the conditions for hot composting are not maintained, the organic matter in the pile will decompose and produce compost. This slower method is called *cold composting* and takes 6 – 12 months. It has the advantage of requiring a less management and works better if you have more brown material than green.

### How To Make Hot Compost

This is the most intensive composting method but it is far from being complicated.

- ◆ Your compost pile (bin) should be on level ground and have good drainage. Stockpile all the materials you will need to build a pile that is 1 cubic metre (3 cubic feet) in size.



This fact sheet has been prepared by the Toronto Master Gardeners



- ◆ Reduce the particle size of the raw materials to be composted to about 5 cm (2") pieces if possible. Fresh succulent material and smaller particles break down faster. However, very small particles such as saw dust or very finely shredded leaves may slow the process by limiting the amount of air in the pile.
- ◆ To begin, place about 12 cm (5") of coarse, woody material (e.g. small twig and plant stalks) at the bottom of the pile. This encourages air to move freely through the pile.
- ◆ A layer of brown (carbon-rich) material is added, followed by a green (nitrogen-rich) layer. Both layers should be about 12 cm (5") thick. Nitrogen-rich materials include fruit and vegetable trimmings, coffee grounds, rotted manure and grass clippings. Carbon rich materials to be composted include straw, leaves, wood shavings, saw dust and newspaper. Add 2.5cm (1") of finished compost or soil on top of the green layer. This inoculates the pile with soil microbes and also limits odors.
- ◆ Mix the layers together as you continue to build the pile (browns, greens, soil), until it is 1 m (3–4 feet) high. Maintain moisture in the pile, keeping it damp but not saturated.
- ◆ At this point, cover the bin and wait a week. As the compost pile heats up it will feel warm to the touch and may release steam.
- ◆ When the pile starts to cool down, turn it. The pile will begin to heat up again, and about a week later the temperature in the bin will reach its maximum. At this time it should be mixed again. Let another week pass. The material inside should now be sufficiently decomposed to be used as finished compost.

### How To Make Cold Compost

*Cold bin composting* involves half filling a bin with brown materials (carbon rich) and putting green materials (nitrogen rich) between brown additions. Add a layer of dirt on top. When the bin is full, start another if space permits. In a year or so, finished compost can be taken from the bottom of the bin. A bin isn't necessary but it helps keep the area neat.

*Sheet composting* involves top-dressing the soil with organic matter and allowing it to decompose over time. Leaves and wood chips are used around trees, shrubs and other plantings in this way. *Trench composting* involves digging a trench about 20cm (8") deep, filling it with kitchen waste and then covering with soil. Compost will form a few months.

### **Compost Considerations and Uses:**

- ◆ Never add meat, bones, dairy products, fats/oil, cat/dog waste or herbicide/pesticide treated plants into the compost pile.
- ◆ When layering organic material never use more than 50% of brown organic matter (e.g. wood chips, autumn leaves, sawdust, straw) as they slow the decomposition process.
- ◆ If there are rodents in your area, use galvanized screening material to enclose the bottom of the compost bin.
- ◆ Finished compost can be used as a soil amendment in the garden, as a mulch for annuals, perennials, trees and shrubs and as a top-dressing for the lawn. Compost can also be used to make compost tea that can be applied as a liquid organic fertilizer or foliar spray. Instructions for making compost tea are at [www.city.toronto.on.ca/compost/value.htm](http://www.city.toronto.on.ca/compost/value.htm).