Reusable News

COMPOSTING

There are many aspects of composting, enough so that this will be the first in a series of occasional articles on the subject in this column. This one will deal with the basic principles of composting and the methods available to the back-yard composter. Whoever said, "They don't make topsoil any more," didn't know about composting. A handful of mature compost has the appearance, texture and earthy smell equal to that of the richest loam. It takes a thousand years to create an inch of topsoil, but only a few weeks or less to make compost from readily available material around the home. And it's a great way to get rid of stuff that otherwise would have to go to the dump -- oops, transfer station -- or down the disposal into your septic tank.

Composting is the process of providing the right conditions for the aerobic decomposition of organic matter, bacteria being the primary workhorses, but ants and worms also contribute. Decomposition of course is a natural process, but creating optimal conditions will hasten the process dramatically.

What is the chemical breakdown of the ideal ingredients for composting? They are carbon, nitrogen, oxygen and water. The ratio of carbon to nitrogen should be about 25-30 to 1; the active mixture should be damp as a wrung-out sponge, and mixing or turning over periodically will oxygenate the pile. Grass clippings average about 20-to-1 and dry autumn leaves 55-to-1; mixing equal parts approximates the ideal range. Commercial operations pay strict attention to these ratios, but the backyard composter should not be intimidated...rough guidelines and a list of basic ingredients are good enough.

High-carbon sources provide the cellulose needed by the composting bacteria for conversion to sugars and heat, and high-nitrogen sources provide concentrated protein that allows bacteria to thrive. Some ingredients with high carbon content are straw, autumn leaves, sawdust and wood chips. Those with high nitrogen content are green plant material, hay, grass clippings, fruit and vegetable scraps, seaweed, coffee grounds and animal manures. Poultry manure has lots of nitrogen but little carbon; horse manure provides both.

There are quit a few different techniques of composting, but they all utilize the two basic methods:

- Active (hot) composting allows aerobic bacteria to thrive, kills most

pathogens and seeds, and rapidly produces usable compost. If the bin, tub or barrel is properly used, temperatures can reach 130*F and actually pasteurize the compost; unpleasant odors are not a problem.

- Passive (cold) composting lets nature take its course, is much slower and leaves the pathogens and seeds viable but dormant. This is typically the case where vegetable scraps, grass trimmings and leaves are thrown in the bin or pile and let be. This often promotes anaerobic decomposition which is not only stinky but produces harmful greenhouse gases.

Subsequent columns about composting will discuss various techniques to get to the end product, for instance, open vs closed bins, tubs & barrels, worm composting and industrial or commercial composting, which is gradually catching on around the country, and which Plymouth should be doing. Compost Bins can be purchased for $27.50 at all three transfer stations and at the DPW Facility at 159 Camelot Drive.

The Reusable News is a monthly column of the Selectmen's Recycling Advisory Committee. This article was written by committee member, John Moran.