

## Get Your Compost Analyzed!

Many growers have access to organic waste materials such as manure, horse bedding, lawn clippings, or leaves and are producing compost on their own farm. Others are purchasing compost from off-farm. If you are applying compost to your fields, you should know its composition - just as you need to know the composition of a fertilizer. Also, it is important to know if the decomposition process is complete - if your compost is "finished".

Many farmers are more knowledgeable about how to make compost than they are about the nutrient availability from compost in production agriculture. In most cases, finished compost is classified as a soil conditioner rather than a fertilizer due to the relatively low levels of nitrogen, potassium, and phosphorus. Finished compost adds these elements, and others, but releases them over a longer period of time than chemical fertilizers.

A compost is considered mature (i.e. finished) when the energy and nutrient-containing materials have been combined into a stable organic mass. The composting process results in a dark-brown material in which the initial constituents are no longer recognizable and further degradation is not noticeable. The length of the time needed to achieve finished compost will vary with many factors and can take anywhere from a couple of weeks to over a year.

Making sure that a compost is finished before adding it to the soil is very important. Application of an unfinished, carbonaceous compost could adversely affect plant growth since the compost may have its own demand for nutrients as the breakdown to maturity continues in the soil. In addition, immature composts made from nitrogen-rich feedstocks are often high in ammonium, which can be toxic to plant growth. Because of the risks with use of immature composts, farmers would be wise to allow a period of at least a week between application of any compost to land and planting or seeding of crops.

Finished compost is a dilute fertilizer, having an analysis of about 1-1-1 (N-P<sub>2</sub>O<sub>5</sub>-K<sub>2</sub>O), but varying with regard to the original materials that were incorporated into the pile and how they were composted.

### *Compost Analysis*

In response to the increased interest and use of composts by farmers, the UMass Soil and Plant Tissue Testing Laboratory offers a compost test. The test will analyze the following: Extractable major and minor nutrients (phosphorus, potassium, calcium, magnesium, zinc, boron, iron, manganese and copper), water content, pH, organic matter, total nitrogen, nitrate, ammonium, carbon: nitrogen ratio, soluble salts, and extractable heavy metals (lead, cadmium, nickel and chromium). The current cost for this test is \$25.00. Contact the UMass Soil and Plant Tissue Testing Laboratory to receive more information about getting your compost analyzed: UMass Soil and Plant Tissue Testing Laboratory, West Experiment Station, University of Massachusetts, Amherst, MA 01003; (413) 545-2311.

### *Making Compost*

If you are interested in learning more about making compost on your farm, you can order hands-on manuals from the Natural Resource, Agriculture, and Engineering Service (NRAES) located at Cornell University. Two manuals available are On-Farm Composting Handbook (\$25.00) and Field Guide to On-Farm Composting (\$14.00). You can get information on ordering these resources from their webpage (<http://www.nraes.org/>), or contact them at (607) 255-7654, or [NRAES@cornell.edu](mailto:NRAES@cornell.edu).

*Frank Mangan, Allen Barker, and Steven Bodine - 2002*