

Confused by Fertilizers? Read On! **Ruth Axelrod, Frederick County Master Gardener**



Newly composted and mulched bed. Photo by RH Axelrod.

The awesome, uncanny burst of spring growth has passed and now, if we have not done it yet, is the time to fertilize our soil and mulch our trees and garden beds against the heat and drought of summer.

Buying the correct fertilizer can be confusing even for the most experienced of us. So, here are some suggestions from the research scientists at the University of Maryland's Home and Garden Information Center (HGIC).

Instead of thinking about fertilizing plants, the new way of thinking focuses on ensuring the fertility of our soils. Testing our soils every 3-5 years tells us exactly what they need by way of amendments to support the types of plant life growing there. We can buy kits to check the basics--pH (acidity) and levels of nitrogen (N), phosphorus (P) and potassium (K)--or, for less than \$20, obtain more detailed reports from regional soil testing laboratories. For more information on soil testing and fertility, including contact and pricing information for many regional labs, go to the University's Home and Garden Information Center, www.hgic.umd.edu, highlight Publications, click Online Publications and Choose a Subject by clicking Soil, Mulch and Composting.

Commercial fertilizers are marked with the percentage of N, P and K, in that order, i.e., 12-6-4. In the absence of specific instructions from a soil testing lab, we can calculate how much fertilizer our lawns need by focusing on the amount of nitrogen in the mix. For example, a 12-6-4 fertilizer contains 12% nitrogen, so divide 1 pound by 0.12, to

determine that 8 pounds of fertilizer is needed for each 1,000 square feet of lawn. Most of us in Frederick County have lawns of cool-weather tall, fine fescue, which should be fed half that amount now and half in late fall (see the HGIC fact sheets for recommendations about other types of turf). Other plants need different amounts of the basic N, P and K. Most problems with plants in our gardens are caused by abiotic, that is, environmental conditions. Fertilizing is by no means a cure-all, but keep in mind that N supports green and leafy growth, P helps root, fruit and flower development and P promotes disease and drought tolerance.

What type of fertilizers should we use? Organics are the most eco-friendly, of course, and one way to feed our lawns is grasscycling. Also high on the list is compost. We can make on our own, purchase it at stores, or fill our bags or truck beds with Frederick County's high-quality, hot-cured compost and exit, for a few dollars, from 9031 Reichs Ford Road. If we purchase other fertilizers, since the term organic has not yet been standardized, we need to read the labels carefully to learn what the actual ingredients are. It is important that lawn and garden fertilizer have at least 40% of its nitrogen (N) in a slow-release form: look for the terms water insoluble nitrogen (WIN); sulfur-, resin- or polymer-coated urea, IBDU or urea formaldehyde. (Sound nasty? Then stick to compost, which has been nature's principle fertilizer for half a billion years.) Water soluble, quick-release fertilizers are helpful--particularly for vegetable gardens, with their intense, quick growth--but they wash out of the soil easily while WIN fertilizers bond to it.

And WIN fertilizers are less likely to cause environmental problems by washing out into the Chesapeake Bay, where N and P encourage excess algae growth that blocks sunlight and sucks oxygen from the water, thereby killing other plants, shellfish, crabs and fish.

For more information about the Frederick County Master Gardener/Horticulture Program, visit www.frederick.umd.edu/mg or call Susan Trice at the University of Maryland Extension Frederick County office, (301) 600-1596. University of Maryland Extension programs are open to all citizens without regard to race, color, gender, disability, religion, age, sexual orientation, marital or parental status, or national origin.