

## Soil Test Note 20: Home Shrubs and Trees (Supplement to Soil Test Report)

B. L. Appleton, Extension Horticulturist and Professor, Hampton Roads Agricultural Research and Extension Center  
S.E. Heckendorn, Laboratory Manager, Soil Testing Laboratory

Fertilization is not recommended for healthy shrubs and trees with good, generally green color (some cultivars normally have red, purple, or yellow colored leaves). The roots of shrubs and trees normally extend one to three times beyond the drip line or crown of the plant. (This is the shaded area directly under a plant at high noon.) If the plants are in or adjacent to a fertilized lawn, the shrubs and trees will absorb some of the lawn fertilizer and generally will need no other supplement. If the plants are mulched with an organic material, they may need no supplements because they can absorb nutrients from the decomposing mulch. Applying unneeded fertilizer wastes money, can lead to water pollution, and can cause excessive growth that can be detrimental to the plants.

If the leaves become paler and smaller than normal, if twigs are thinner and shorter, or if the bud set seems reduced, fertilization may be beneficial. A slow release fertilizer (one containing at least 50% WIN – water insoluble nitrogen) such as 18-6-12 or 17-7-11 can be surface broadcast over double the drip line or crown area of the plant. For example, if the crown of a tree covers 50 square feet, fertilize a 100-square-foot area under and around the tree. Do not place fertilizer in direct contact with tree or shrub stems.

Follow the recommended rate to use printed on the fertilizer bag. To avoid damage to the turf, never apply more than 1.5 pounds of actual nitrogen per 1,000 square feet at any one time (for 18-6-12 that would be 8.3 pounds of fertilizer per 1,000 square feet). Not as

ideal, but if using a fast release fertilizer (less than 50% WIN), such as 10-10-10, then never apply more than 1.0 pound of nitrogen per 1,000 square feet at any one time (for 10-10-10 that would be 10 pounds of fertilizer per 1,000 square feet). If more fertilizer is needed, make split applications one month apart.

The greatest uptake of fertilizer will be between bud break in the spring and leaf coloration in the fall. Apply the fertilizer at that time only if there is moisture available in the soil to dissolve the fertilizer. If it doesn't rain, water the fertilizer in, but avoid fertilizing during a drought. Also be careful not to apply too much fertilizer late in the summer since tender, late-season growth may be damaged during the winter. To protect water resources, do not allow fertilizer to fall on driveways, sidewalks, or other hard surfaces.

### Additional Information

For more information, consult *Fertilizing Landscape Trees and Shrubs*, Virginia Cooperative Extension publication 430-018, at [www.pubs.ext.vt.edu/430-018/430-018.html](http://www.pubs.ext.vt.edu/430-018/430-018.html)

Other Extension publications are available at [www.ext.vt.edu](http://www.ext.vt.edu) or from your local Virginia Cooperative Extension office.