

- (b) The fine fraction (clays from natural topsoil, sterilized composts, black peat) of soil mixes help retain moisture between rains and waterings, and is the storage space for nutrients.
- (c) Most ornamentals, including trees, have limited nutrient needs. Indoors, frequent watering necessitates regular small nutrient applications to replace leaching losses or plant uptake (follow label instructions). Outdoors, try to develop a maintenance fertility level (pH 5.7-6.2 and all nutrients "high" but not "very high") after which no more is needed. Some shrubs (e.g., azaleas, rhododendrons, some conifers prefer acid soils so keep pH below 5).
- (d) Remember that high organic matter levels (the black color in soils) help you to store fertility, especially nitrogen and phosphorus, so it won't easily leach away. Foliage plants need plenty of nitrogen through regular applications. Flowering plants require adequate phosphate which is also helpful in early root growth in all woody plants, e.g., plantations. Woody plants require adequate potash and magnesium (usually abundant in West Virginia soils).
- (e) Christmas tree plantations on old farm fields usually find enough soil fertility if nutrient levels are "medium". If "low", single or mixed fertilizer nutrients can be mixed by sprinkling some by hand into each planting slit at planting time or in a circle around the seedling after planting. Nitrogen (N) will always help to promote foliar growth and color; phosphate (P) will help early root growth; while potassium (K) and magnesium (Mg) promote woody growth and vigor. Liming would benefit demanding species on very acid sites.

Don't hesitate to send additional soil samples at any <sup>6023</sup> time if you are in doubt. Call your County Extension Office or us (293-~~2910~~ or ~~5288~~) if you need additional advice. ~~Serious greenhouse growers should request information on our specialized tests for that purpose, but there is an extra charge (\$10).~~