Diagnostic Facts

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Tree and Shrub Planting Guidelines and Post-Planting Care

Jackie Smith, Diagnostic Services

Proper tree care is not as easy as planting a tree and expecting nature to take care of the rest. Plant and site selection, site preparation, plant preparation and post-planting care are all important steps to help assure success.

WARNING: You never know where you might hit electrical, water or sewer lines. Before digging contact the Underground & Overhead Lines Identification Service - Miss Dig Program @ 1-800-482-7171.

Plant and Site Selection

Plant and site selection is one of the most important decisions when planning to plant a tree or shrub. Poorly sited plants are doomed from the beginning, regardless of the care taken during and after planting.

•**Size** When choosing trees and shrubs for your yard you should consider your landscaping goals, aesthetic characteristics desired and your landscape's characteristics. Keep in mind the potential size of the tree you want to plant when making these decisions. For example, in the landscape a Douglas Fir will grow 40 to 80' in height with a 12 to 20' spread. You will need quite a large space to accommodate this tree. With a tree this tall you will also want to avoid planting below overhead utility lines. The site should provide adequate environmental requirements for the plant. The requirements for your plant are dependent on soil type, soil pH, available light, moisture, and nutrients. Select plants that are adapted to the site chosen.

•**Light** A shade intolerant tree will not survive if planted in a highly shaded area, and vice versa.

•**Pest Tolerance** When deciding on a tree or shrub it is wise to choose a native species. Native species are adapted to the environmental conditions of the area and are therefore less prone to stress caused by the environment, insects or diseases.

•**Soil** Examine soil type (sandy, loam, clay, muck) to determine the potential for compaction and/or drainage problems. Test drainage by digging a test hole as deep as your planting hole and fill with water. If water drains at a rate of less than one inch per hour, consider installing drainage, moving the site or constructing a berm. The use of more water-tolerant species will help avoid problems where drainage is poor. Before planting have soil analyzed to determine nutrient levels and soil pH. Samples can be submitted to the MSU Soil & Plant Nutrient Laboratory (517-355-0218).

Site Preparation

Dig planting holes as deep as the root ball and two to three times as wide as the root ball. Shallow holes encourage horizontal root growth that trees and shrubs produce naturally. Do not dig holes deeper than the root ball to prevent planting the tree or shrub too deep. If soils are compacted they should be replaced with a good loam soil or incorporated with several inches of organic material. Do not incorporate small quantities of sand into the site. Compaction will increase and drainage will decrease. Soil should be amended prior to planting according to soil analysis results and recommendations. Incorporate slow-release granular fertilizers into backfill soil. **Avoid using fast-release fertilizers that can dehydrate tree roots.**

Tree and Shrub Preparation

Trees and shrubs can be purchased in three forms: Balled and burlapped, container grown, and bare root. Cost and ease of transport are factors to consider when deciding which to buy.

•**Balled and Burlapped** When you are ready to plant you should remove pinning nails or ropes and cut away wrapping material. Many synthetic materials as well as chemically treated burlap are used to wrap trees. These materials degrade slowly or not at all. For ease of planting, the material can be left in the bottom of the hole as long as it is cut away from the root ball. Wire baskets, often used to protect root balls, also degrade very slowly. Remove the top 8-12 inches of wire to prevent surface roots from girdling.

•**Container Grown** Remove plastic containers from trees and shrubs. If plants are in fiber pots break away the pot entirely. They are often treated and degrade slowly. Circling or pot bound roots are often a problem in container grown plant material. If roots are circling around the root ball they should be cut in a few places. This will prevent eventual girdling root formation.

•**Bare Root** These plants are taken out of the ground dormant, the soil is washed off, and they are stored until the next growing season. The plants won't have leaves until a couple of weeks after planting. Bare root plants are handled differently than the previously discussed forms. Work with one plant at a time and keep others covered to prevent them from drying out. In order to promote root growth clip a quarter inch off the bottom of each root. The planting hole should be six inches wider and six inches deeper than the root system. Make a mound of soil at the bottom of the hole so that the crown of the plant is just above ground level (plus 2-4 extra inches if you are using mulch).

•**Backfilling** Once the plants are in place it is time to backfill the holes. Using existing soil, backfill half the soil and water thoroughly. Finish backfilling and then water again.

Post-Planting Care

•**Water** The most important post-planting care you can provide for your new tree or shrub is adequate water. Until a tree is established in the landscape it will need supplemental water, especially during periods of drought. During dry weather, trees need to be watered every 7 to 10 days throughout the first growing season. Water trees slowly, but deeply, to a depth of at least 12 inches. Trees and shrubs planted in the fall should be watered until the ground freezes.

•**Mulch** Mulching around a newly planted tree is a good idea, however if done improperly mulch can actually increase the likelihood of disease and rodent problems. Mulch with no more than two to three inches of either an organic or inorganic material out to the drip line of the tree. Be careful to keep the mulch at least 6 inches from the trunk. Do not place black plastic beneath mulch that is around trees and shrubs. Use landscape fabric that provides good weed control while allowing air and water exchange.

•**Staking** It is not necessary to stake trees unless they are top-heavy or located on windy sites. Such trees should only be staked for a maximum of one year. To prevent damage to the trunk, use strong, wide strips of rubber or canvas to support the tree. Do not brace the tree so tightly that it can not sway. Remove all tags, labels and ropes that may girdle trunks.

•**Tree Wraps** Most trees should not have their trunks wrapped. Trees planted in spring or summer near paved areas may be wrapped with a white wrap. Be sure to remove the wrap within one year of planting.

•**Don't Prune** Avoid the urge to prune freshly planted trees or shrubs. Foliage is necessary for the plant to produce food for plant growth. Severe pruning of newly planted trees will affect the trees ability to manufacture food and will decrease plant growth.

Remember, lack of planning is one of the main reasons landowners fail to grow healthy trees and shrubs. By following these guidelines you will increase the chances of successful landscape improvement.

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