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PLANTING LANDSCAPE TREES

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The performance of a landscape tree depends a great deal on how it is planted.

In order for a tree to grow well as it matures, almost all of its roots will have to grow in the soil of the planting site. Amending the back-fill soil will seldom be beneficial. Also, amending only the back-fill soil merely creates another artificial container from which the roots must grow to ensure satisfactory tree growth.

If the soil at the planting site will not satisfactorily sustain a tree, extensive conditioning and modification of the entire rooting area would be needed but is seldom practical. Roots grow and develop in moist soil where oxygen is available. Roots grow little or not at all in dry soil, in compacted soil, or in soil that is saturated.

Trees will have shallow roots if planted on shallow soils with impervious layers or an underlying shallow water table.

Digging the Hole

Plant a young tree "high," whether it is bare-root, balled or container grown. Dig the hole no deeper than necessary - approximately 2 inches less than the depth of the soil in the container or the depth of the soil ball. Planting the tree deeper or in loose soil may lead to future crown rot problems. Loose soil in the bottom of the hole will settle, causing the tree to be planted deeper than intended.

Soils compacted by construction, vehicular traffic or former agriculture use must be broken up before planting to ensure adequate air and water penetration. After loosening compacted soil by shovel or equipment, irrigate thoroughly and delay planting for 2 weeks to allow the soil to settle.

In soils of reasonable tilth, the planting hole should be at least twice the diameter of the container or root ball. In more compacted soil, the hole should be 3 to 4 times the diameter of the root ball. In either case, the sides of the hole should be almost vertical and roughened to provide easier root penetration. When planting bare-root trees, make the hole large enough to take the roots without crowning. Backfill the hole with soil dug from the hole or use more friable surface soil if the soil from the hole is mainly hard clods. Take care to not cover the root ball of container-grown trees because the finer-texture backfill soil can prevent wetting of the rootball.

Fertilizing

Adding fertilizer, soil amendments or root stimulants to the planting hole or backfill soil is not recommended. Most nursery-grown trees are well fertilized during production and seldom respond to fertilizing at planting except in the most infertile soils.

Pruning

The less a young tree is pruned the more total growth the tree will make. However, the growth may not be where you want it or where it will develop the most desirable structure. After planting, remove broken, dead or diseased branches and those interfering with more desirably placed ones. Remove or cut back branches that will compete with the leader (the top-most shoot). Leave small shoots along the trunk below where you want the lowest permanent branch; remove low large branches or cut them back to 2 or 3 buds. These low shoots will protect the trunk and increase its strength. Check the tree every 2 to 3 weeks during the growing season to see how the tree is doing and to direct its growth by pinching back shoots that are too vigorous or you know you will not want later.

Staking

Staking requirements depend on the ability of a tree to stand upright and the particular landscape situation. The more freedom the top of a tree has to move, the better it is able to develop structure to stand upright and withstand storms. NO STAKES are necessary for the many trees that can stand by themselves and that have branches to the ground or are planted where little or no protection is needed. Most conifers, trees with upright growth habits and trees planted bare root usually do not need support.

PROTECTIVE STAKES are needed for trees that can stand without support but that need protection from equipment, vehicles or animals. To protect trees from equipment and vehicles, stakes need only be high enough to be seen so as not to be a tripping hazard. Three taller stakes with wire mesh or other covering may be needed to prevent animal damage.

ANCHOR STAKES are needed for trees whose trunks can hold them upright but whose roots may not be able to support the trunks upright, particularly in a wind when the soil is muddy. Usually stakes used for protection from equipment are tall enough for ties to the tree trunk to hold the roots securely and still allow the top to move in the wind.

SUPPORT STAKES are required for trees unable to stand by themselves. Top support for these trees should be as low on the trunk as possible but high enough to return the tree upright after deflection. use 2 or 3 support stakes and if possible, tie the trunk to them at only one height to allow the trunk below the tie to bend in the opposite direction from the

top during a wind. Tie material should contact the trunk with a broad, smooth surface and elasticity to minimize trunk abrasion and girdling.

Competition from Turf and Weeds

When trees are planted in a turfed area, keep the turf at least 12 inches away from the trunk of young trees the first 2 to 3 years or longer. The growth of young tress may be retarded by turf growing close to their trunks, even though additional water and fertilizer are applied. A 24-inch diameter of bare soil about the tree trunk will also reduce damage to young trees by lawnmowers. Mechanical damage to the trunks of young trees can have a severe dwarfing effect.

Watering

The basin for watering the newly planted tree should be so constructed that water will drain away from the trunk. Even though the soil is moist at the time of planting, thoroughly irrigate the tree to settle the soil around the root system. Remember that most of the root volume occupies a rather limited area, particularly through the first growing season. Lighter and more frequent watering may be needed until the roots become established in the parent soil. If the parent soil is poorly drained, be careful not to overwater the tree. Once established, thorough, infrequent irrigation around the "dripline" (ends of branches) is most beneficial for good tree growth.