

FACT SHEET

Planting a Balled and Burlap Tree

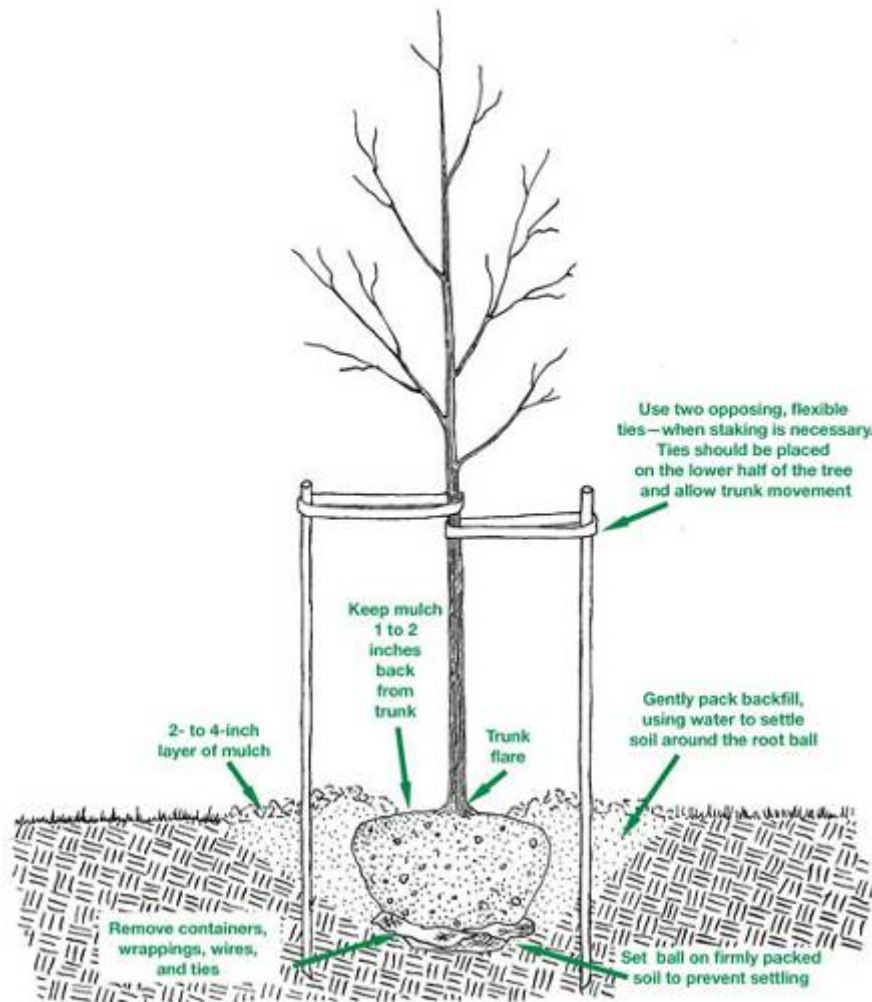
The best time to plant a balled and burlap tree is during the dormant season in the fall after the leaves drop or early spring before bud break. Weather conditions are cool and allow plants to establish roots in the new location before spring rains and summer heat stimulate new top growth. However, trees that have been properly cared for in the nursery or garden center, and given the appropriate care during transport to prevent damage, can be planted throughout the growing season. Handling the tree correctly during planting is essential to ensure a healthy future for new trees. Before planting a tree, it is important to have all underground utilities located prior to digging.

If the tree you are planting is balled and burlap, it is important to understand that its root system has been reduced by 80 to 90 percent of its original size. As a result of the trauma caused by the digging and root pruning process, trees commonly exhibit what is known as *transplant shock*. Transplant shock causes slow growth and reduced vigor following transplanting. Proper site preparation before and during planting coupled with good follow-up care reduces the amount of time the plant experiences transplant shock and allows the tree to quickly establish in its new location. Carefully follow these eight simple steps to greatly reduce the stress placed on the tree at the time of planting.

1. **Identify the trunk flare.** The trunk flare is the swollen area where the roots spread at the base of the tree. This point should be partially visible after the tree has been planted (see diagram). Often during the digging process, soil is pulled up and over the normal ground level. If the trunk flare is not partially visible before planting, you may have to remove some soil from the top of the root ball. Find it so you can determine how deep the hole needs to be for proper planting.
2. **Dig a shallow, broad planting hole.** Make the hole wide, as much as three times the diameter of the root ball, but only as deep (or slightly more shallow) than the trunk flare. It is important to make the hole wide so the roots can push through surrounding soil easily as the tree establishes itself. If you are planting the tree in the yard of a newly built home, the soil is likely to have been severely compacted by trucks, tractors and other heavy equipment. The compression from the heavy equipment greatly diminishes the pore space necessary for air and water movement through the soil. It is a good idea to break up the compacted soil with a spade or other tool for a distance of six or eight feet around the hole.
3. **Place the tree at the proper height.** Before placing the tree in the hole, check again to see that the hole has been dug to the proper depth and no deeper. If the hole is too deep, replace soil in the hole and firm it with your feet or other tool. The majority of the roots on the newly planted tree will develop in the top 12 inches of soil. If the tree is planted too deeply, new roots will have difficulty developing due to a lack of oxygen. It is better to plant the tree a little high, 2 to 3 inches above the base of the trunk flare, than to plant it at or below the original growing level. This planting level will allow for some settling (see dia-

gram). To avoid damage when setting the tree in the hole, always lift the tree by the root ball and never by the trunk.

4. **Straighten the tree in the hole.** Before you begin backfilling, have someone view the tree from several directions to confirm that the tree is straight. If it is leaning, place some soil under the root ball to make it level. Once you begin backfilling, it is difficult to reposition the tree.
5. **Fill the hole gently but firmly.** Fill the hole approximately one-third full of soil; gently but firmly pack the soil around the base of the root ball. Cut and remove any fabric, plastic, string, or wire from around the trunk and root ball to facilitate growth (see diagram). Be careful not to damage the trunk or roots in the process.



Fill the remainder of the hole, firmly packing the soil to eliminate air pockets that may cause the roots to dry out. To avoid this problem, add the soil a few inches at a time and settle with water. Continue this process until the hole is filled and the tree is firmly planted. It is not recommended to apply fertilizer at



the time of planting. Regular lawn fertilization will provide all the nutrients needed by the tree during its life.

6. **Stake the tree, if necessary.** If the tree is grown and dug out of the ground properly at the nursery, staking for support will not be necessary in most home landscape situations. Studies have shown that trees establish more quickly and develop a stronger trunk and root system if they are not staked at the time of planting. However, protective staking may be required on sites where lawn mower damage, vandalism, or windy conditions are concerns. If staking is necessary for support, there are three methods to choose from: staking, guying, and ball stabilizing. One of the most common methods is staking. With this method, two stakes are used in conjunction with a wide, flexible tie material on the lower half of the tree. This will hold the tree upright, provide flexibility, and minimize injury to the trunk (see diagram). Remove support staking and ties after the first year of growth.
7. **Mulch the base of the tree.** Mulch is simply organic matter applied to the area at the base of the tree. It acts as a blanket to hold moisture, moderate soil temperature extremes, and reduce competition from grass and weeds. Some good choices are leaf litter, pine straw, shredded bark, peat moss, or composted wood chips. A 2- to 3-inch layer is ideal. More than 4 inches may cause a problem with oxygen and moisture levels. When placing mulch, be sure the actual trunk of the tree is not covered. Doing so may cause decay of the living bark at the base of the tree and allow insects and rodents more access to the tree. A mulch-free area, 1 to 2 inches wide away from the base of the tree, is sufficient to avoid moist bark conditions and prevent decay.
8. **Provide follow-up care.** Keep the soil moist but not soaked; over watering causes leaves to turn yellow or fall off. Be sure to water the tree at least once a week, if there has been no recent rain; water more frequently during hot weather. When the soil is dry below the surface of the mulch, it is time to water. A good way to check soil moisture is to dig a hole 6 inches deep four or five feet away from the tree – if the soil is dry and powdery, it is time to water the tree. Another rule of thumb is that the soil around the tree should receive about an inch of water each week, either from natural rainfall or from watering. Continue to do this until mid-fall, tapering off for lower temperatures which require less-frequent watering.