



PLANTING TECHNIQUES

Planting techniques focus on the plant, site conditions, planting procedures and maintenance during establishment.

Plant refers to the stock type such as bare-root, balled and burlapped, container and mechanical tree-spade. Each stock type has potential artifacts associated with production, harvesting or handling that should be addressed when detailing steps in planting.

Bare-root plants as the name implies are harvested, processed, stored, shipped, handled and planted without soils or other media attached to the roots.

Container plants refer to any plant produced and sold in a container with intact soil or growing media.

Balled and burlapped (B&B) plants are grown in field soils and harvested with an intact soil ball wrapped in burlap or other mesh material. B&B harvesting is typically associated with trees and large shrubs.

Mechanical tree spade transplanting usually focuses on semi-mature trees or mature shrubs.

Site conditions refer to the soil type (sand, loam, clay) and drainage. Adequate drainage is essential for survival of most plants either newly planted or established. Any soil that does not readily drain should be examined to determine the cause. Clay soils can be conditioned and aerated by adding sufficient amounts of organic matter. Soils with a high water table may need to be drained by installing a subsurface drainage tile to carry off excess soil moisture. Raising the planting level with several inches of friable soil may be necessary in some locations to provide a porous soil condition necessary for good growth.

Planting procedures include: the planting hole; positioning the plan; fertilizing if necessary; backfilling the hole; staking; mulching and watering.

Maintenance during establishment primarily focuses on watering. There is no specific timetable for watering in any soil type. An indication of a plant's water needs can be attained by carefully checking for soil moisture 6-8" deep in the root-zone. If soil is moist leave it alone and check every day or two until soil begins to feel dry. Then, water thoroughly with a small stream as was done when planting. Water again only when soil begins to feel dry at this 6-8" depth or if wilting occurs on the plant's foliage. Maintain this watering practice for the first growing season.

Understanding variations within stock or plant type and site conditions aid in tailoring planting practices to encourage plant establishment.

The reverse side of this fact sheet outlines planting procedures for: **B&B Trees**

B&B Tree

Notes:

1. Prune to remove dead, damages, broken, or weak branches; lightly thin the interior of the crown. Prune to maintain a central leader on appropriate species. Soil/root ball should have adequate moisture prior to positioning the plant in the hole. Examine the trunk/root crown and inspect the soil/root ball for the true top of the root system. Planting depth is referenced to the top of the root system.
2. Dig the planting hole 1/2" wider than the edge of the soil/root ball. Due to poorly drained soils the top of the root system is elevated with the top 1/8 - 1/4 of the ball above existing grade. Soil should be added to smooth the transition from finished planting grade to the existing grade. The bottom of the hole should be firm and shaped as a plateau for positioning the soil/root ball.
3. Orient the plant in the hole with respect to optimum viewing; the plant should be set firmly on the base of the hole; align the plant so that it is plumb (straight) in the hole. Remove twine, basket wire and burlap from the top of the soil/root ball; remove excess soil down to the level of the roots.
4. Define the backfill soil/mix; for example, Backfill with existing soil; Backfill with a 50/50 blend of existing soil and topsoil; If requiring an amended backfill mix, identify the amendments and the percentages of amendments and soil in the mix.
5. Back fill in 3 layers by packing the soil around the root ball to stabilize the plant, remove any air pockets in the backfill, and minimize or eliminate future soil settling which may cause a shift in plant orientation. Begin backfilling by slicing soil at an angle from the edge of the hole and use it to stabilize the soil/root ball and ensure that the plant is plumb in the hole. The second layer is then applied and packed around the soil/root ball. Additional soil is added to the third layer to develop a smooth transition from finished planting grade to the surrounding existing grade, cover the top of the soil/root ball and shape a saucer over the soil/root ball area. (A saucer is shaped over the soil/root ball area to collect water and allow its gradual percolation into the soil/root ball. The saucer may remain or be knocked down after the plant has become established.)
6. Mulch is applied at a 3" depth over the planting area following the soil contour. Elevated planting levels typically extend the width of the mulch ring. Do not allow the mulch to come in contact with the tree trunk.
7. Apply nutrients (based on a soil test) at the appropriate rate and method for the plant.
8. Stake the tree with appropriate stakes (2" x 2" wooden stakes, metal posts, guide wires and anchors, etc.). Staking specifications may call for 1, 2, or 3 stakes per tree. Stakes are evenly disturbed around the tree with one stake positioned on the windward side. Stakes are driven through the backfill into the undisturbed subgrade. Poly/canvas strapping is used to firmly secure the trunk to the stakes. Stakes are typically removed after one year however in the case of larger plants they may stay in place for two years.
9. Water soil/root ball area and backfill adequately after planting.

