

How to plant tree seedlings and balled and burlapped trees

Planting a tree correctly involves more than quickly purchasing a tree, digging a hole barely big enough for that tree and walking away. To ensure that a newly planted tree will have a long, healthy life, there are several factors to consider.

One very important thing to think about when planting is the time of year. People often think about planting trees in the spring and summer months when trees are in flower, full of fruit or are covered with beautiful leaves. However, the ideal time to plant is during the tree's dormant season, after leaf drop in the fall and before bud-break in the spring. This time period is the least stressful to the tree because it is not actively trying to grow.

Before purchasing the tree, there is homework to do. One of the most important things to do is to thoroughly research the tree species before the purchase and planting. The end goal is to plant the right tree in the right place. To ensure this, consider the following:

Environmental Factors: Research how your species will handle the following factors on your potential site: minimum temperature, moisture, soil, light, pollution and compaction.

Trees Purpose: Why are you planting this tree? Consider your goal and find the species that suit your purpose best. Such purposes include streamside buffer planting, shade, aesthetics, wildlife and windbreaks and screens.

Size: The potential height and width of your tree is one of the most important factors to consider. All too often, urban trees are cut down because "The tree got too big!" The truth is the tree didn't get too big, it was planted in the wrong place. Large trees can lift sidewalks, grow into pipes or utility lines, block windows, views and solar panels and shade a garden.

Crown Shape: What form will your tree have? What shape suits you best?

When buying bareroot seedlings

- Roots should be moist and fibrous.
- Deciduous seedling up to 10" in height should have roots approximately equal to the stem length; from 12"-24", look for roots approximately 10"-12" long.
- Is the tree symmetrical?
- Is there a single, well-developed leader?
- Are buds plump and healthy looking?
- The soil plug should be moist and firm.
- Avoid tall, spindly tops. Well-developed roots are more important than height of the seedling.

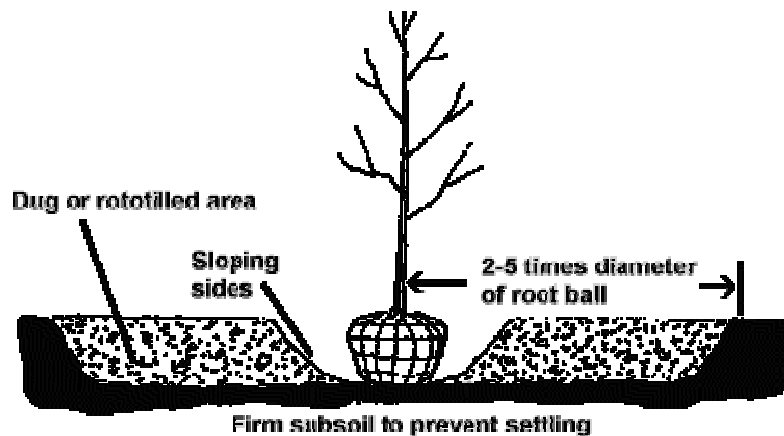
When Buying Potted or Balled Trees

- Roots should be moist and fibrous.
- Deciduous seedling up to 10" in height should have roots approximately equal to the stem length; from 12"-24", look for roots approximately 10"-12" long.
- Are pruned roots cut cleanly and no wider than an average finger?
- Are soil and roots joined tightly?
- Is the bark free of cuts and scrapes? (Reject trees with wounds wider than $\frac{1}{4}$ the circumference of the trunk)
- Are pruning wounds healed over?

Once you have thoroughly researched your tree species, it is time to plant the tree correctly. Why is this important? A good planting job will minimize trauma and transplant shock, which could result in slow growth and reduced vigor.

Planting a Containerized Balled and Burlapped Tree

If a tree is planted correctly, it will grow twice as fast and live at least twice as long as one that is incorrectly planted. The following steps should be used when planting a containerized or balled and burlapped tree:



Transporting: Load and unload gently, being careful not to break branches. Always provide support beneath balled or potted plants.

Shallow, broad planting hole: One of the most important planting procedures is the correct size planting hole. The hole should be dug to the depth of the root ball, and 3-5 times the diameter of the ball. Place the tree into this hole by holding the ball, not the trunk.

Position the tree: Balance the tree, making sure that it is straight and at the correct height (tree should be planted at the same depth that it was growing in the nursery).

Remove materials: Remove the top portion of wire basket or peel back the top portion of the natural burlap. If there is any plastic string or plastic burlap, remove now or your tree will die.

Fill hole: Fill the hole with about 1/3 of the soil that you dug to make the hole and gently pack around the root ball. Continue to fill the rest of the hole, while adding water to remove air pockets.

Fertilizer: Do not add fertilizer for the first year. Avoid fertilizing trees until late spring of the second year following planting. Fertilizers can "burn" roots or stimulate crown growth faster than the roots can supply water.

Prune: At this time, prune only dead or injured branches, do not use tree wound paint.

Tree Wrap: Remove any tree wrap that was used for shipping the tree.

Staking: Properly placed and planted trees rarely need to be staked. If staking is necessary, make absolutely certain that the stakes are removed at the end of the first year.

Mulch: Place a 3-4 inch layer of mulch in a 3-4 foot diameter circle under the crown of the tree. Pull mulch away from tree trunk so that heat and moisture are not trapped. Doing so

allows the trunk of the tree to breathe all the way to the surface of the ground. The practice of piling mulch around the base of a tree should be avoided on mature trees as well. Creating a small opening in the mulch around the trunk, or doughnut, will keep your tree happy and healthy!

Mulch is a young tree's best friend. It holds down competing weeds or grass, retains soil moisture, prevents soil cracking that can damage new roots, protects the trunk from lawnmower damage, and helps prevent soil compaction. Organic mulches such as wood chips or pine needles also contribute to better soil structure and aeration as they decompose. Avoid limestone rock and allow no mulch to touch the tree's trunk or be piled higher than 3 inches.

Watering: Make sure that the newly planted tree gets a total of an inch of water (either from rain or your garden hose) every week the first year, an inch every two weeks the second year and an inch of water every three weeks the third year.

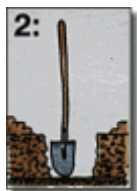
Planting a Bare Root Seedling

The following steps should be followed if you are planting a bare root seedling:

It is best to plant bare-root trees immediately, in order to keep the fragile roots from drying out. If you can't plant because of weather or soil conditions, store the trees in a cool place and keep the roots moist.



1: Unpack tree and soak in water 3 to 6 hours. Do not plant with packing materials attached to roots, and do not allow roots to dry out.



2: Dig a hole, wider than necessary, so the roots can spread without crowding. Remove any grass within a three-foot circular area. To aid root growth, turn soil in an area up to 3 feet in diameter.



3: Plant the tree at the same depth it stood in the nursery, without crowding the roots. Partially fill the hole, firming the soil around the lower roots. Do not add soil amendments (fertilizers).



4: Shovel in the remaining soil. It should be firmly, but not tightly packed with your heel. Construct a water-holding basin around the tree. Give the tree plenty of water.



5: After the water has soaked in, place a 2-inch-deep protective mulch area 3 feet in diameter around the base of the tree (but not touching the trunk).



6: Water the tree generously every week or 10 days during the first year.

Avoid Common Planting Errors

<p>Too deep. Needles buried.</p>	<p>Too shallow. Roots exposed.</p>	<p>Not perpendicular to the horizontal plane.</p>	<p>"L," "J" or "U" roots. Hole too narrow and/or shallow.</p>
<p>Planted on mound. Roots may dry.</p>	<p>Inadequate tamping. Depression may lead to drying.</p>	<p>Air pocket resulting from improper tamping.</p>	<p>THE IDEALLY PLANTED TREE</p>

Figure 7 - 9. (Source: The Forest Steward, The National Arbor Day Foundation, March/April 1996.)