

What to Look for in A Quality Tree

◆ **Roots:** The larger the root system, the better. In **balled & burlapped trees**, for every 1 inch in stem diameter, the root ball should be at least 10 inches wide. For example, a 2 inch diameter tree should have at least a 20 inch wide root ball. **Containerized trees** should be well-rooted and hold the soil ball together, but not have excessive root growth encircling inside the container. Remove trees from their containers to inspect. Examine the main order roots on both B&B and containerized trees. These large roots originate at the root flare. They should neither be exposed nor buried too deep. Use a stiff piece of wire to probe that they are not more than a few inches deep. Their root balls should be firm and moist. **Bare root tree** roots should have well formed lateral roots that are firm, moist, white, and growing away from the trunk, not circling around.

◆ **Trunk:** Examine the entire trunk including areas under guards and wraps for mechanical wounds, swollen or sunken areas, insect borer holes and improper pruning cuts. Make sure there is no 'wobble' between the trunk and root ball; they should move together.

◆ **Branches:** Branches should diverge from the trunk at wide angles with 2-4 inches of new shoot growth from the previous year. These shoots should be flexible, with healthy, living buds.

◆ **Leaves:** Leaves should be normal size and color for that plant at that time of year and should not show spots, blights, distorted shape or wilting. *However, bare root stock should be rejected if trees have leafed out.*

◆ **Form:** Most quality trees should have a single straight leader and branches that are evenly distributed both vertically and around the circumference. Avoid plants that have been pruned into the shape of a lollipop.

References:

Hargrave, R., Johnson, G., and Zins, M. 2002. Planting trees and Shrubs for Long Term Health. University of Minnesota Extension.

Bassuk, N. and Hillman, A. 2003. 'Creating the Urban Forest: The Bare Root Method'. Cornell University.

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Choosing Quality Trees



A Basic Guide To:

- Identify A Quality Tree
- Different Planting Stock
- Selecting for Quality



VT Urban and Community Forestry Program

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Choosing Quality Trees

Why A Quality Tree is Important?

The quality of the planting stock you purchase is one of the most important factors when it comes to the long-term health and survivability of your new tree. Quality trees will establish themselves more quickly and require less pruning and maintenance in subsequent years. Money saved on the purchase of a lower quality tree will surely be spent later in earlier replacement and higher maintenance costs. A quality tree will also likely respond to stresses more favorably than less healthy trees.

To select a quality tree, it is important to critically evaluate it before purchase. This brochure will assist you, but we also recommend that you go to a local reputable nursery and ask for their assistance as well. One of the first questions to ask is 'where was the plant produced?' Plants grown locally or in similar climates are likely to be tolerant of local climate extremes.

What Type of Tree to Purchase?

Planting stock for trees and shrubs is available for purchase in different types. These types vary in terms of root mass, size, relative cost, soil type, ease of planting, handling procedure and season of availability. In order to purchase the best stock for your planting project, you should consider the differences between types of planting stock.

Trees can be purchased bare root, in containers or pots, or with the root balls wrapped in burlap (B&B).



Bare Root, Containerized, and Balled and Burlapped

Bare Root

Bare rooted trees have been dug from a nursery, but the soil has been removed.

Advantages

- Cheaper, 1/3 to 1/2 less than B&B trees.
- Easy to transport and plant.
- More root system remains intact than B&B trees.
- Easy inspection for deformed roots.
- Easier to avoid planting the tree too deeply.

Trees should be planted so that the flare at the beginning of the root system is at the soil line. With container and B&B trees, the soil may be mounded on the trunk making it difficult to see the buried root flare. The root flare of bare root trees is obvious and the proper planting depth easy to determine.

Disadvantages

- Extremely susceptible to the roots drying out.
- Species and seasonal availability is limited.
- Requires extreme care when handling roots.
- Often requires staking.
- Limited to small planting stock; > 2 inch caliper trees are not recommended.

Containerized

Trees grown in and marketed in a container.

Advantages

- Lighter than B&B trees.
- Greater species and seasonal availability.
- Entire root system intact.

Disadvantages

- Tree roots can be deformed and/or circling.
- Unable to inspect entire root system.
- Contrast between well drained potting mix and soil in the planting hole can cause water stress after planting.

Research suggests that "root-bound" trees, those in which the roots are growing too densely in the pots, are slow to recover from planting, are less healthy and could have long-term root problems. Avoid buying trees that are root bound.

Balled and Burlapped

Balled and burlapped (B&B) trees are dug from a nursery with roots in a ball of earth that is then bound up in burlap or similar mesh material.

Advantages

- Less chance of the roots drying out.
- Maintenance of soil root contact.
- Greater species and seasonal availability.
- Can obtain large caliper trees.

While both container and B&B stock are available for planting throughout the growing season, it is not recommended to plant them during the hot, dry months of summer which will only cause added stress on the newly planted trees. Focus on planting in the spring and fall.

Disadvantages

- Expensive.
- Heavy, difficult to transport and plant.
- Reduced root system. Often 90-95% of the root system is lost when dug from the nursery.
- Difficult to inspect root system.