

Tree and Shrub Planting Guide

What is Transplant Shock?

Trees and shrubs are in transplant shock for multiple seasons after planting. Larger plants are in shock longer than smaller ones. Most potted or balled and burlapped trees will have up to three years of transplant shock. To overcome transplant shock, trees and shrubs need to expand their root system beyond the planting hole. A mature tree will typically have a root system at least two times wider than the spread of its limbs, which explains why a planted trees need time to develop their roots.

Digging the Planting Hole

Help a tree overcome transplant stress by planting in a wide hole at the proper depth, which is shallower than expected. Trees planted too deep struggle to establish and often suffer from a lifetime of issues.

The most common mistake when planting a tree is digging a hole that is too deep.

Identify the root or trunk flare: The flare is the part of the trunk at the bottom of a tree that starts to flare or taper out as trunk tissue transitions into root tissue.

Don't believe the packaging: The depth of the tree's original container, or root ball on balled and burlapped trees, is misleading. The root flare is commonly buried in the pot or down in the root ball on most nursery stock.

Can't find the flare? If the root flare on your new tree is not easily identifiable, gently dig into the container or root ball to search for the first root or roots coming out of the trunk. A young tree will typically have little trunk taper, making the first roots the best indicator of the root flare.

Wider is better than deeper: Most of the tree roots are in the top 12-18 inches of soil. The root flare needs to be even with the soil surface.

Loosen the soil: A wide hole with well-loosened soil provides ideal conditions for root growth. Before backfilling, roughen up the edges of the hole to help roots expand into native soil.



IDENTIFY THE ROOT FLARE: This tree's root flare was identified by finding the first two roots, which were about 6 inches below the surface of the container it came in.

Post Planting Care

MULCH: Mulch provides the finishing touch by adding a protective layer to the soil that retains moisture and prevents roots from freezing. It also mimics the natural soil environment of a forest understory.

- Add mulch in a ring as wide as the planting hole was dug
- Keep mulch away from the root flare. Do not mound mulch up around the trunk
- Apply a 2- to 4-inch layer of mulch from organic sources, such as bark or wood chips

WATERING: Trees and shrubs need 1-2 inches of rainfall a week to thrive. Plan on watering your newly planted tree for the next two summers when rainfall is inadequate, such as in dry periods from June to October.

- Water well beyond the planting hole to create favorable soil conditions for root growth
- Mimic rainfall by watering heavily once a week, as opposed to smaller, more frequent waterings
- Water the soil thoroughly to 8-12 inches of depth.
- Direct watering with a soaker hose or a garden hose on a trickle is better than a sprinkler that loses significant water to evaporation

AUTHOR

Ryan Pankau, Illinois Extension Horticulture Educator
rcpankau@illinois.edu | (217) 333-7672