

# Planting Trees and Shrubs

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## When to Plant

In general, the best time to plant trees and shrubs is in the spring or fall. If they are planted at other times, do not let them dry out. Cultural practices that reduce water loss due to transpiration or increase water uptake improve the tree's chances of survival.

## How to Plant

Start by digging a planting hole that is three times the diameter of the root ball. The hole needs to be wide because the plant roots must push through the surrounding soil to get established. In most new home sites and development areas, the soil has become compacted by heavy equipment. This compacted soil is unsuitable for healthy root growth. Break up the soil in a large area around the tree — this gives newly emerging roots room to expand into loose soil. Also make sure the sides of the planting hole are sloped instead of vertical.

The planting hole should be no deeper than the soil ball of the plant. It is better to plant a little shallow rather than too deep. The majority of roots on a newly planted tree or shrub will develop in the top 12 inches of soil. If the tree is planted too deep, new roots have difficulty developing due to a lack of oxygen. When you plant the tree or shrub a bit shallow, this allows for settling of the plant.

Before putting the tree into the hole, identify the flare of the trunk. The trunk flare is where the roots spread at the base of the tree. You want the trunk flare to be partially visible after the tree has been planted. If the trunk flare is not visible on the soil ball, remove soil from the ball until you find the flare. The trunk flare should be above ground when the tree is planted.

After placing the tree in the hole, use the soil that was removed from the planting hole to fill in around the tree. It was once a common practice to amend the soil with sphagnum peat or topsoil before filling the planting hole. But, research has not shown any benefit to amending the soil. Sometimes soil amendments can decrease drainage and produce a nitrogen deficiency for the tree – from the decomposition of the soil amendments.

Fill the planting hole about one-third full, and then gently but firmly pack the soil around the base of the root ball. If the tree is balled and burlapped, cut and remove the string and wire from the trunk. To eliminate air pockets that can cause roots to dry out, continue filling the hole in this way: add a few inches of soil at a time, firmly pack the soil, and then settle with water. Do **not** add fertilizer at the time of planting.



# After Planting

## Staking and Wrapping

For growth purposes, small trees and most shrubs do not need to be staked. But if lawn mower damage or vandalism is a concern, protective stakes placed around the plant will help. Large trees need to be staked after they are planted.

Tree wraps for young trees are not recommended. Wrapping has not been proven to reduce sunscald or frost cracks. However, wrapping does provide winter protection from rodents. If you use a wrap for this purpose, it should only be in place during the dormant season.

## Mulching

Get trees and shrubs off to a good start with mulch. Research shows that mulching trees at the time of planting results in a 400 percent increase in fine root development in the top six inches of soil. Mulch eliminates the competing grass around the tree, protects the trunk against lawn mowers, and serves as a blanket to hold moisture and protect against harsh soil temperatures.

At planting, mulch the tree or shrub with a 2- to 4-inch layer of organic material. Some good choices for mulch are leaf litter, shredded bark, peat moss or wood chips. If a deeper layer of mulch is applied, this depth does not significantly reduce soil oxygen levels — but it can slow the warming of the soil in the spring. This slower warming can reduce root growth.

When you place mulch around a tree, make sure that the trunk is not covered. This could cause the living bark at the base of the tree to decay. To avoid moist bark conditions and prevent decay, keep a mulch-free area – about 1 or 2 inches wide – around the tree.

## Watering

After planting, water the tree or shrub thoroughly. Concentrate the water over the root ball and entire planting area. A general rule of thumb is that plants need about an inch of water that soaks into the soil each week.

Large amounts of water can fall in a short time during a thunderstorm, but the water may fall on the soil faster than the soil will absorb it. An inch of rain falling in a very short period of time on clay soil normally does not translate into an inch of usable water for the plant.

Follow the practice of watering plants once a week, barring sufficient rain. Water plants more often during hot weather. Continue watering until mid-fall, tapering off for lower temperatures that require less frequent watering.

Avoid over-watering as well. Too much water will cause the leaves to turn yellow and drop. Also, avoid letting water sit on leaves overnight. This can lead to increased disease problems. If you're watering with an overhead sprinkler, start watering in the morning and stop early in the day so that the plants have time to dry before cool night temperatures set in.

