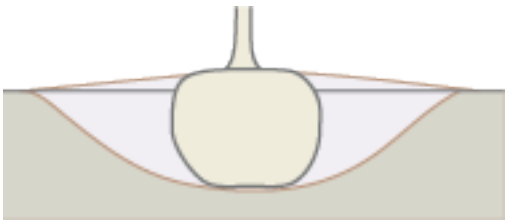
Tree Planting & Watering

How to give a tree or shrub a forever home with proper planting and watering

Planting Container Grown Trees & Shrubs

1. Determine the size of the planting hole and dig. The planting hole should be a minimum of 2 to 3 times larger than the width of the root ball. The hole should be shallow enough to allow the top of the root ball to stand 3-4" above the surrounding soil. Dig wide, not deep. Slope the sides of the planting hole so that it is wider at the top than at the bottom. Rough up the sides of the hole with a shovel or small garden trowel to give the emerging roots some purchase.

2. Place the tree in the planting hole and remove wrapping. Position the plant upright in the hole, handling it by the root ball only. For trees, use a spirit level to make sure that the trunk is as vertical as possible. Remove any containers, wire baskets, or burlap surrounding the root ball. If the root ball is very large, you can leave burlap or wire on the bottom of the root ball, but make sure it is completely removed from the sides. If the roots are beginning to circle, use a shovel or sharp knife to shave the roots off on the entire outside of the root ball. This will not hurt the tree. New roots will proceed outward from the shaved ball into the planting hole.



3. Backfill around the root ball. We recommend amending the soil with an organic compost and your native soil in a 1:3 ratio (25% compost, 75% native soil), and adding in a plant starter. Mix the native soil, compost, and plant starter before backfilling the hole. Do not amend with topsoil, potting soil, peat moss, or anything else. Once the plant is placed, shovel the soil back into the planting hole around the root ball. Make sure the top of the root ball is 3-4" above the level of the surrounding soil. Trees and shrubs should always be planted high to avoid suffocating the roots. Water the soil around the root ball. Never use your hands, feet, or garden tools to pack the soil down -- use only water and gravity to settle the soil. If needed, add more soil and water again until the backfill soil is at the correct level. Never cover the top of the root ball with soil. Exposed roots on the top of the root ball are okay.

4. Install stakes (only if needed). A properly planted tree usually will not need staking. If staking is required, install two stakes, one on either side of the tree, and connect them to the tree with a flexible material such as a tree strap. Do not use wire around the tree. Do not stake too tightly -- allow the tree to flex in the wind to strengthen the trunk and root system. Remove staking material after one year.

5. Mulch the planting site. Add a 2-4" deep layer of wood mulch to the top of the planting hole. Mulch will hold moisture in the root ball, as well as suppress weeds, moderate soil temperature, and reduce soil compaction. The mulch should cover from the edge of the planting hole to just over the edges of the original root ball. Never allow mulch to touch the trunk of the plant.

6. Water your plant. Soak the entire root ball with water immediately after planting. A tree or shrub's root system will take 2-4 years to establish. During this time, even xeric plants need regular, supplemental water. Trees and shrubs should be watered slowly and thoroughly. Roots need oxygen just as much as they need

water, so allow the root system to partially dry out between waterings. Using a moisture meter is the best way to monitor the water levels in the root system.

Proper Tree & Shrub Watering

Improper watering is one of the leading causes of plant death. By correctly watering your newly-planted trees and shrubs, you can ensure a healthy start that will result in a longer life.

Proper watering of trees and shrubs is an art form. Too much water will injure them just as surely as too little, but how do you determine your plant's needs? There is no set amount of water or watering schedule for any plant. The amount of water needed depends on the plant type, age, soil, and weather conditions. But here are a few guidelines:

- **Over-watering is generally due to frequency, not amount.** Even small amounts of water can injure plants if applied too frequently. Both frequency and amount are important, and overwatering will injure or kill a plant by depriving roots of oxygen. To check the moisture level in the soil, dig down 6" outside of the root ball and squeeze a handful of soil into a ball. If the soil stays together, the soil is wet enough. If the soil is too wet to hold shape, let it dry before watering again. If the soil crumbles and won't form a ball, continue to water.

- **Invest in a moisture meter.** For less than $10, a moisture meter is a great investment to make for a new plant. Starting 1-2 days after planting, place the probe into the root ball in a few different places to get an average reading. If the meter has a gauge that reads from 1 to 4, water until the needle registers a 4, and don't water again until the needle falls between 1 and 2. How often you need to water is something the moisture meter will tell you.

- **Water slowly and deeply.** Trees and shrubs prefer water in small amounts over a long period of time. A hose or 'bubbler' type of sprinkler set in the root zone and turned to a slow trickle is ideal. You can also use products such as a Treegator® to release water over an extended period of time. One DIY method is to take an empty 5 gallon plastic bucket, drill a few small holes in the bottom, and place the bucket on the root zone and fill with water, letting the water slowly escape and soak the root zone.

- **Always Winter water!** Colorado winters are tough. Dry winds, scarce moisture, and periods of daytime warmth that fall to freezing at night will stress even established plants. For newly-planted trees and shrubs, our winters can be deadly. After sprinklers are shut off in the fall, continue to provide slow, deep irrigation to trees and shrubs once a month at the very least. If we have a warmer period with daytime temperatures of 40°F or above -- get out and water!

- **Snow doesn't count as irrigation!** Many of the dry snows we get have moisture contents of around 30:1. That means it takes 30" of snow to produce 1" of water. The evaporation rate in our dry winter air means snowfall does very little to provide moisture to trees and shrubs.

- **For established Trees:** A mature tree can have roots that stretch up to 3 times the tree's height. This means that a 30' tall tree can have a root diameter of up to 150'! Because this can mean that the roots aren't all on your property, focus water on the drip line* of the tree AND well beyond. (* this is an imaginary line around the base of the tree that corresponds to the outer reach of the branches.)

Proper watering reduces stress on both newly-planted and established trees and shrubs. The less stress, the fewer instances of insects and diseases they will encounter, and the less significant those instances will be.

Scan this QR code or click here to be taken to our tree & shrub content on Youtube!