



Watering Instructions for Trees & Shrubs

"How do I water my new plants?" may be the hardest question for a plant person to answer. Proper watering practices for new plants can be less complicated if you first consider the condition and variety of the plant, environment it's being transplanted to, and the current and longer term weather patterns. Aren't you glad you asked? It is important to know that too much water can be as detrimental to a plant as too little water. The manner in which water is applied can also affect the vigor and survival of the plant. Watering heavily and then not watering the plant again until it wilts can stress a plant at both ends of the scale. If you water too lightly, roots may never develop and/or grow outside of the original root ball.

The next step is to identify the needs of the plant.

- Likes moist soil constantly (few varieties)
- Likes moderately wet soil when watered and allowed to become dry without wilting before watering again (most plants)
- Likes dry soil (few varieties)
- Likes soil constantly wet (pond and bog plants)

Then you must identify the soil type where your plants will be located.

- *Sandy* - A soil consisting of mostly sand, with poor moisture retention
- *Loamy* (ideal soil) - A soil combination of clay and enough sand to counteract the undesirable properties of clay, with a significant presence of organic matter
- *Clay* - A soil with fine particles that become compacted and do not allow much drainage; found in most new developments

Sandy

Dig a hole (minimum 18-24 inches) and fill it with water. If it is sandy soil, the water should drain in seconds. For this type of soil, you want to use drought resistant plants. It is also recommended that you use soil amendments, such as peat, compost, topsoil, or other organic soil conditioners, to increase the water holding capacity. You can also add a polymer, such as Soil Moist, which stores the water as it swells into a gel, holding the water in reserve for when the soil becomes dry.

Loamy

Ideal or close to ideal soil. Dig a hole and fill with water. It should drain in a minute to several minutes. If you have this in your yard, consider yourself lucky. What makes this soil ideal is having micropores (small spaces) and macropores (large spaces) in the right proportions. Ideal soil should allow air exchange to the roots (macropores) and retain enough moisture (micropores) to support plant growth. When watered properly, 25% of the soil volume should retain moisture and 25% should allow air exchange. If you visualize the volume of soil you're watering (root ball of new plant and surrounding new soil) the amount of water to use each time you water should equal 25% of that total volume.

**General guideline for amount of water to use on container
and B + B plants in loamy soil, per application:**

3 gal & Small B+B = 1 1/4 gallons water

5 gal & Average B+B (30-48") = 1 1/2 gallons water

10 gal & B+B trees and shrubs 6-8' in size = 2 gallons water

20 gal & 2" Caliber Trees = 3 gallons water

Water should be applied uniformly to original root ball. Adjust water amounts accordingly with clay (less) and sandy (more) soil.

Clay

The most prevalent soil in our area and the most difficult to establish plants in. The compaction of this soil slows down root development. The lack of macropores does not allow water to drain through, which minimizes essential air exchange to plant roots. Dig a hole (if digging the hole takes more than several minutes, you may have clay soil) and fill it with water. If the water does not drain in 20 minutes or more, you have clay soil. Clay soil can be amended with topsoil, peat moss, and other organics by mixing them with the existing soil. Clay soil conditioner is also available. This is quite effective if you use it 1 part per 3 parts existing soil. This conditioner is a ceramic which should not break down in soil like other amendments. Planting in burms (raised beds) and raising plants a few inches above the soil line can also be quite beneficial. Don't forget, however, the disadvantages of planting this way - the soil will dry faster during a drought, even after it is well established, and large trees may need to be staked longer to prevent them from blowing over in strong winds.

By knowing your soil type, you should be able to meet the watering requirements of the plants you've chosen. Do not depend on irrigation systems for watering new trees and shrubs. They are great for turf and, when under "normal" weather conditions, for established healthy trees and shrubs. New plants, however, have reduced root systems and it is imperative to water them more thoroughly and uniformly around the original root ball. It is good to keep in mind when planting new plants next to established plants that the new ones will require watering more frequently.

Important points to remember:

- Water thoroughly, but not to excess based on your soil type.
- Do not depend on irrigation systems for watering new trees and shrubs.
- Weather conditions will play a large role in determining when to water. Rainy, cloudy, cooler weather means watering less often. Sunny, windy, and warmer weather requires more frequent watering. In a dry fall/winter season, water new plants through the fall and, when the temperature is mild, through January and February. Watering 1 or 2 times in January and February can make the difference between life and death or health and stress for your plants.