

Proper Watering

Procedures and Guidelines

Proper watering of a newly installed plant is critical to its successful establishment and future growth. Though watering may seem like a simple task, proper watering is not. It is a complex subject that does not easily offer a one-size-fits-all guideline for the quantity and frequency of watering.

Main Objective

Roots need water to survive and to supply needed moisture back above ground for the process of photosynthesis for the purpose of the plant's survival and growth. However, it is critical to understand that roots also need oxygen in order to survive and function. The main objective is to never allow the soil around the roots of new plantings to be too dry and likewise never too wet.

While it is easy to understand why plants suffer when they are too dry, it must be understood that plants will suffer and perhaps die if they are too wet for a long period of time. Oxygen is not available in waterlogged soil as it occupies the same pore space as water.

How Often to Water

Plant material must be watered thoroughly at planting time. Subsequent watering will depend upon whether the plant was balled & burlapped or containerized, weather conditions, soil type, and other factors.

Irrigation systems do not provide appropriate amounts of water at the required times for newly installed plants.

A rain gauge is a wise investment if you do not have one. 1" of rain (water) per week is recommended for established plants.

How to Water

It is most important to water thoroughly after planting. This is best accomplished by setting your garden hose (nozzle removed) at the base of the plant and letting it slowly trickle to completely saturate the soil. Root masses may be 12" to 24" deep or deeper; this is how deep your water must penetrate. If runoff is a problem, you may need to allow the first soaking to penetrate, then return at a later time. An alternative method for large bedded areas is to use a sprinkler— with a rain gauge or watering can— to measure the amount at 1" to 2" of water.

Here is a guide to follow during the first growing season:

Balled and Burlapped Plants

1. Water thoroughly at time of planting.
2. Water every 5 days for the first month.
3. From then on water once every week.

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Weather and Other Factors

Watering replaces the water that has evaporated from the soil surface and the water that the plant has transpired (water extracted from the soil moves up the plant and is lost as vapor from the leaves). These two processes combined are called *evapotranspiration* and the rate at which it takes place is influenced dramatically by such factors as temperature, humidity, wind, light, day length and whether or not the soil is mulched. The faster the rate of water loss, the sooner the plants will need to be watered.

During hot, dry, or windy weather, plants transpire at a faster rate. More water evaporates from the soil in a sunny site than in a shady one.

Day length is an important factor because plants transpire only during daylight. June is usually the month with the greatest water demand because it has the longest days, even though it may not be the hottest month of the summer.

Mulching also affects the transpiration rate. A thick layer of mulch keeps the soil cool and reduces the amount of water that evaporates from the surface.

Soil type is critical in determining how water is retained and transpires. Understanding soil types will help guide you in proper watering frequency.

Essentially, sandy, well-drained soils demand a more frequent watering schedule. Plants in heavy clay soils, the most common in our area, have to be watered less frequently or you will over saturate the soil, greatly limiting oxygen; this will suffocate and kill the roots and eventually the entire plant.

Site exposure is another factor that needs to be taken into consideration. Shade vs. sun; north exposure vs. south exposure; high ground vs. low; flat vs. sloped; all can impact how the water is or isn't retained.

Watch your Plants

It is always a good idea to observe plants for signs of water need.

- Curling leaves are usually the first indication of stress. The surface area of the plant is being reduced to cut down on transpiration (loss of water from the leaves).
- Normally shiny leaves grow dull. Bright green leaves take on a blue or gray-green appearance.
- New growth wilts or droops and older leaves turn brown, dry up and fall off.