

Watering perennial plants heading into winter:

It is very important that perennial plants go into winter with soil moisture. Even though we have received adequate rainfall this fall, some areas have been dry recently. Watering now is important if soils are dry to help alleviate moisture stress and lessen the likelihood of winter damage. Although all perennial plants benefit from moist soils before winter, it is especially important for newly planted trees and shrubs due to limited root systems. This includes trees and shrubs that have been planted within the last 2 to 3 years, as they are more sensitive to drought than a well-established plant.

So how much do I water it and how often? The how much is a tricky answer, the how often to water is much easier. So let's answer the how often you should water, you should water your trees/plants whenever the soil is dry, the ground is not frozen and when the temps are near or above 40 degrees and in the middle of the day. If we water when the ground is frozen the water is not taken into the soil where we need it, so it runs off leaving the plant unwatered. By watering during the middle of the day we are allowing the water to soak in before possible freezing that night. Now back to the tricky question of how much. A good, deep watering with that moisture reaching down to at least 12 inches is ideal, and much better than several light waterings that just wet the top portions of the soil. A deep watering will help ensure that a majority of the roots will have access to water as the roots that absorb water actually are killed when soil temperatures reach 28 degrees F. So those roots near the surface don't last long in our KS winters and we must rely on the roots that are deeper to provide moisture for that plant.

How do you know if you have watered it thoroughly enough? Well you can use a metal rod, wooden dowel, electric fence post or something similar to check depth. Dry soil is much harder to push through than wet.

The way you water can be achieved in multiple ways. Trees or shrubs planted within the last year can be watered inexpensively with a 5-gallon bucket. Drill a small hole (1/8") in the side of the bucket, near the bottom, then fill it and let the water dribble out slowly next to the tree. Refill the bucket once, and you will have applied 10 gallons which should be adequate. Very large transplanted trees or trees that were transplanted two to three years ago will require more water than the 10 gallons.

Another way to water is by a soaker hose or a perforated hose. However, soaker hoses are notorious for non-uniform watering. In other words, you often receive too much water from one part of the hose and not enough from another. But if you hook both the beginning and the end of the soaker hose to a Y-adaptor it helps equalize the pressure and therefore provides a more uniform watering. It is also helpful if the Y-adaptor has shut off valves so the flow of water going through can be controlled. Too high of a flow rate can allow water to run off rather than soak in. On larger trees, the soaker hose can circle the trunk at a distance, within the dripline of the tree but at least ½ the distance to the dripline. The dripline of the tree is outermost reach of the branches. On smaller trees, you may circle the tree several times so that only soil which has tree roots will be watered. If you use a soaker hose, note the time you started watering and check frequently to determine the amount of time it takes for water to reach 12 inches deep. From then on, you can water "by the clock." or using a kitchen timer so you remember to move the hose or shut off the faucet. If you are seeing surface runoff, you should reduce the flow, or build a

berm with at least a 4-foot diameter around the base of the tree to allow the water to percolate down through the soil, instead of spreading out.

So things to remember:

- Water when the soil is dry, the ground is not frozen, in the middle of the day, and when air temps are above 40 degrees F
- Deep waterings once every week or two is better than just a few sprinkles a few times a week
- Make sure that your water is going where it's needed and not running off
- How you water doesn't matter as long as you are watering thoroughly