

Inside Grundy County  
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June 4, 2010

### **Watering Newly Planted Trees and Lawns**

Iowans and Americans in general love their trees! This assumption is based on questions I receive every day during the growing season. Statistics indicate that U.S. residents plant about 2.5 million acres annually or roughly the size of Connecticut. According to the US Forest Service, nearly one and a half billion trees are produced and shipped annually by forest tree nurseries. Forest product nurseries produced 55% of the tree seedlings, private nurseries produced 22%, state nurseries produced 21%, and federal nurseries produced 2% during the 1990s.

According to the Iowa Department of Natural Resources, there are many benefits to planting trees including aesthetics, wildlife habitat, environmental, and products. But for homeowners, aesthetics would probably top the list in addition to environmental benefits of shade and wind protection. But like many living things, newly planted trees need tender loving care, especially watering. One acre of trees on a Iowa summer day can transpire 1600 gallons of water. So we know trees use lots of water, but one of the hardest maintenance items is calculating how much water a newly planted tree needs.

To help us with that question, Dr. Jeff Isles, ISU Extension horticulturist provides some following thoughts. In its first year, the root area of a newly planted tree will not extend much beyond the original root ball, container or bare root area that it arrived as. So the majority of water a new tree uses will come from within that circumference. We know trees that receive frequent irrigation will recover quicker than those receiving less frequent water. But over watering can kill a tree.

Water should be applied slowly to that root mass area. There are commercial bags or tubes designed to hold water and release it slowly. This is helpful especially if water is absorbed slowly by the soil. According to Dr. Isles, there is no “cookbook” recipe for watering trees but in general, but newly planted trees prefer uniform soil moisture to help it develop new roots. One gallon of water per inch of caliper per day would provide uniform water for under most conditions. Caliper is the diameter of tree trunk at chest high or 4.5 ft. on the uphill side of a tree.

However, it's important that we avoid overwatering. Most newly planted trees will do well with two watering a week.

Applying mulch near the tree (keep mulch 6 inches away from the trunk) will help conserve moisture. Trees in shady locations will not transpire as fast as trees in sunny locations. As the root system becomes established, homeowners can reduce the frequency. As a generalized recommendation, apply one gallon of water per square foot of soil surface area within and just beyond the root zone.

New lawns have similar requirements because uniform soil moisture is preferred but not saturated soils. The following advice comes from Purdue University Extension. A newly seeded lawn has special requirements. It will need to be watered two to four times a day. The seed bed should be moistened to a depth of 1 to 2 inches but not saturated. As the seed germinates and seedlings begin to grow, it is essential that the new seedlings are not allowed to dry out. Continue to water the seedlings two to four times a day if the weather conditions are dry. One method of reducing watering needs is to lightly mulch the newly seeded lawn with clean straw. Use one small square bale per 1,000 sq. ft. This is enough straw to hold moisture but allow seedlings to grow through. The straw can be left on the ground to decompose.

As the seedling turf grows (to two inches in height) and the root system penetrates deeper in the soil, the amount of water applied should be increased to moisten the soil to a greater depth to encourage deeper rooting. Thus the frequency of irrigation should gradually be reduced from two or four times per day to once a day, to twice a week. Once the new turf has been mowed two or three times, deep, infrequent waterings become preferable. This means water 1 to 1.5 inches per week once to twice per week.