

# Is Your Tree Well Grounded?

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**I**n addition to anchoring and stabilizing a tree, the root system absorbs water and nutrients needed for normal growth and survival. The roots serve as an important storage area for energy reserves.

**There needs to be a good balance or ratio of roots to shoots** (i.e., top growth). Without a good root system, this balance is thrown off; there are fewer stored energy reserves, and the tree is unable to absorb what it needs from the soil.

Roots can be damaged or lost due to drought, excess moisture, or fluctuations in soil moisture. Transplanting and construction also cause root loss. **This loss of roots can be compounded by root rots** caused by soil borne fungi. These fungi often attack the roots of already weakened trees.

We have had several successive years of below average rainfall. These drought conditions, along with occasional very wet periods, have **increased**

**the occurrence of root rots.** This situation happened more than usual last year and we are continuing to observe it.

**Symptoms of root rots are similar to those of general decline.** Foliage may be lighter colored, smaller in size, sparser, or scorched in appearance. Early coloration and leaf drop may occur, and overall growth may be stunted. Since root rots occur in the soil, we cannot visually see the extent of the infection. There are times that a tree is just too far gone before visible symptoms are seen.

Several soil fungicides are available that can be used for treatment of root rots. But **focusing on prevention and tree health is the key.** Start by selecting the right tree for the right place and planting properly, at the correct depth.

**Install and maintain mulch** at 2" to 3" depth.

Remember to avoid excessive mounding that holds moisture around the trunk. This can lead to rots in the collar area. Maintain a gap of a few inches between mulch and trunk.

**Proper watering is essential.** Soak deeply and allow the soil to dry slightly between waterings so it crumbles when handled. Avoid overwatering, which can kill roots from lack of oxygen and favors water-loving root rots.

**Improve and build up your tree's root system.**

**Mycorrhizae** are beneficial fungi that augment the tree's roots and absorb moisture and nutrients. Mycorrhizae are often lacking in our urban soils and need to be reintroduced or established (especially if fungicides have been used). They also compete with and discourage detrimental fungi, such as root rots.

**Slow-release fertilization** can increase

nutrient availability and uptake. The goal is to encourage root

growth, improve the root to shoot ratio and general vigor, and increase stored energy reserves.

**Root stimulant products** actually promote root growth and improve the soil conditions. These improved soil conditions affect moisture and aeration, nutrient retention and availability, and add more diversity to the soil. This allows for a better rooting environment.

Many of these practices for control and prevention of root rots are easily done. The Certified Arborists at Wachtel Tree Science & Service can provide the expertise and guidance to develop the best management plan for your trees and then implement it. Call today for an evaluation. Make sure your trees are well grounded.

