

## **Transplant Shock of Trees and Shrubs**

**By Dr. Joan Spalding**

Believe it or not it's time to plant. Even with the spring snows we can throw grass seed and wildflower seed on the snows and the melting snow will force it into the ground. Larger trees and shrubs will need more care in planting especially in the decomposed granite soils here in the foothills of the mountains.

Trees and shrubs can go into transplant shock for a number of reasons. But basically it means the tree or shrub will fail to root well. Because new trees and shrubs do not have a large root system, the number one stress in establishing new roots is incorrect watering. This can mean too much or too little water. Usually, and especially with large trees they will suffer from shallow watering instead of long slow watering that doesn't drown the roots but allows them to soak up the water easily.

Plants suffering from water stress may be more susceptible to injury from other causes such as weather, insects or disease. If many stresses are being experienced the plant may not be able to function properly.

Some of the symptoms of transplant shock are leaf scorch, which first appears as a yellowing or bronzing of the tissue between the veins or along the margins of deciduous plants. Later the leaves will dry out and turn brown. Wilting, rolling or curling are other symptoms. On needled evergreens, the needles will have an overall grey green color and as the problem progresses, the needles will turn a light tan color.

One of the most common causes of plant root failure is "wet feet" caused by improper soil amendments. With large trees, we use the native soil in which the tree is naturally acclimated and a 3-part growth stimulant program that helps the tree form new roots and keep the surviving roots strong so they can begin new growth.

How to water is often a common problem. The feeder roots of a tree are located in the top 6 to 12 inches of soil so if you can water slowly to a depth of 12 to 18 inches all of the feeder roots will absorb the moisture. Sometimes people will well around the bush or shrub and flood the plant until the moisture is absorbed. This temporarily drives the oxygen out of the soil and smothers the plant's roots.

In our tree business we have learned that to maintain growth and survival for trees it's important to calculate the amount of water needed for each size and species of tree. A drip system is the most effective way to guarantee this water will be released into the roots of the tree in a manner similar to rain water. We augment this system with composted mulch to avoid the loss of moisture from transpiration.

Questions about planting large native trees can be answered by Spalding Trees LLC, members of the Commercial Arborist Society, at 303-526-1256. Spalding Trees has planted trees in the foothills since 1988.