



Simple Steps to Aid Stressed Trees

by Dr. Kelby Fite

Many factors can influence the health of trees and shrubs in the short and long term. Weather plays a key role in how trees are able to grow and thrive. Drought conditions, storms with heavy winds and excessive rain and snowfall all impact tree health. Condition of the soil and other limitations of the growing site can also put undue stress on trees. When stress occurs, there may not always be immediate evidence of a problem. Trees may decline slowly as issues wear down their resistance to damaging insects and diseases. Less growth, off-color or smaller than normal foliage, early leaf drop, cracked bark and dying branches are all indications that a tree may be under stress.

What can be done to help plants experiencing stress? Providing optimal growing conditions can help aid in recovery and position trees to best withstand future issues.

Irrigation – Most large landscape plants require at least one inch of water per week during the growing season from either rainfall or irrigation. This is approximately 750 gallons of water per 1000 square feet beneath the crown. For new transplants, root damaged trees or plants growing in sandy soil, water should be provided at least twice a week. Water should be concentrated on the root ball of new plantings. On established plantings in clay or loam soils, the recommended quantity of water should be supplied at least once each week.

Mulch - Mulch helps conserve soil moisture and reduces competition for water from weeds. It adds organic matter to the soil, promoting root development and improving the soil's moisture-holding capacity. Mulched natural areas eliminate competition for water and nutrients from turf or other ground covers. Any organic mulch (wood chips, shredded bark, bark nuggets, pine straw or leaves) are good for mulching. Wood chips from tree pruning operations are particularly effective and inexpensive as mulch.

Mulch should be applied to a depth of 2-4 inches around landscape plants. Do not exceed this depth around trees, as this could be detrimental. Mulch should be applied to the "dripline" of the plant whenever possible. However, a narrow mulch ring around plants is better than none. Do not apply mulches against the stem and root collar of plantings.

Fertilization – Maintaining adequate soil fertility helps prevent nutrient stress. Slow release fertilizers are generally optimum for the growth of woody plants. Don't use agricultural grade fertilizers. They have a high salt content that can intensify stress. For best results, plan fertilizer treatments on soil analysis results.

Please note that if drought is the issue, fertilizer should be applied once soils are recharged by rainfall. Applying nutrients during a drought will have little impact on plant growth because water is the limiting factor. High salt fertilizers can severely injure plants if applied to dry soils.

Pest Management – Insect pests and disease organisms weaken trees by defoliation or by causing stem and root damage that impedes absorption and translocation of water and nutrients. Stressed plants are particularly prone to pest infestations. Pests should be managed using a technique of periodically inspecting plants for pests and other plant health problems. When detected, pest infestation levels are maintained using cultural, biological and/or chemical treatments so that they can't impact plant health.

Pruning – Remove any dead, damaged or dying branches. It helps to reduce pest problems. Selectively thin plants with exceptionally dense branching habits. This reduces the demands for water and nutrients. Thinning must be done judiciously because excessive pruning can weaken the plant.