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Ag. News

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Many Reasons for Illness in Trees

When people see a sick tree, they often think that some sort of disease is causing the illness. Actually, a majority of the problems causing trees and shrubs to look sick stem from stress or physical injury rather than disease.

A common symptom of stress or injury is marginal leaf burn, or leaves fringed by dead tissue. This has been a common problem with numerous species of trees and shrubs this summer. Marginal leaf burns are seldom caused by leaf disease, which usually shows up as random lesions (dead areas) scattered about the leaf? Leaf burn occurs at the leaf tip or along the leaf margin because salts (plant nutrients) accumulated along leaf margins. Anything that causes the plant to pump insufficient water (stress) can result in a toxic burn of this tissue because it contains the highest level of salt.

Stress symptoms ranging from leaf burns to limb dieback or tree death can result from numerous causes. Drought is the most obvious cause of stress. This year we have had both extremely wet spring and in some cases excessive and the last most extremely dry drought conditions. Large trees show responses to stress more slowly, some of the marginal burns now being observed relate to last summer. High temperatures cause plants to pump more water and simply compound drought problems. As temperatures rise in the upper 90° F or even exceed 100° F, water loss by some trees and shrubs can equal or exceed the ability of the roots to supply water, even when the soil moisture is not deficient. I expect we will continue to see some problems with trees and other landscape plants until we receive some significant rainfall.

Because of extreme Texas temperatures each summer, freeze injury is often overlooked, yet it is one of the most common and damaging causes of stress. Direct injury to twigs and limbs is usually fairly evident, and the damaged wood can be pruned. Often the injury is more subtle, occurring on a portion of the trunk with no immediate or noticeable effect on the entire tree or shrub.

Thick bark sometimes remains intact, hiding trunk freeze injury for well more than a year. Probing the bark on the lower 3 feet of the trunk with a screwdriver or tapping with a mallet (listen for hollow sound) will usually reveal hidden freeze injury if it is present.

Just as drought causes trees to stress, so does excess water. Tree roots need oxygen in order to function properly, so roots that are waterlogged lose their ability to take up water. It can take several years for a seriously injured root system to be regenerated.

In recent years, numerous trees growing in poorly drained soil have been killed or damaged following periods of heavy rainfall. Trees with damaged roots systems are vulnerable to summer droughts and heat stress. Be sure to deeply water your landscape trees as we continue into what are normally the driest months of the year.