We have had a lot of calls concerning our trees, especially Oaks, from residences in the county.

Callers described a situation in which their tree, often oak, suddenly started developing yellow leaves with brown spots that then fall off like it is fall all over again. It is happening mainly with oaks and it happens this time of year when temps starting hitting the mid 90's or we have a large rain event.

The tree losses that are described are due to a cumulative buildup of environmental stressors that all contribute to a loss of internal tree moisture that brings the tree down below a critical threshold beyond which the tree cannot recover and can cause the early decline or loss of our trees.

Here are some likely causes of tree stressing factors that commonly contribute to the cumulative buildup of tree stress that contribute to the eventual decline and death of the tree.

1. Overwatering. Oaks are particularly vulnerable to problems due to prolonged overwatering. Typical watering frequency required to keep high water demand sod forming grasses alive will cause the roots to rot and decline over time.

2. Root disturbance. Oaks are also particularly susceptible to root disturbance. This root disturbance may be in the form of severing roots due to construction (Even if that root damage was done up to 10 years ago). The installation of a sprinkler system is one of the most destructive things that can happen for damaging a mature tree's root system and particularly so if it is a post oak!

3. Grade changes. Changing the grade of soil around oaks creates an unfavorable condition in which the addition or removal soil results in the tree roots being either too deep or too shallow for the tree to continue to undergo the gas exchange of root systems that is required for the tree to function normally and remain healthy.

4. Soil compaction. Compacting soil can compact the soil to a solid impermeable mass that prevents root growth and water and air infiltration required for the tree to continue to undergo healthy function of the root system.

5. Drought. Extended droughts cause a host of issues that can reduce tree vigor and actually cause the loss of the fine feeder roots that take up the water and minerals in the soil. It also causes dieback of the crown (loss of limbs and leaves). This type of damage will not be undone when we start to get rain again. It will take several years of normal rainfall for the tree to slowly recover and build back up to normal plant function. This is a critical period of vulnerability. Adding fertilizer at this time will only exacerbate the problem with encouraging the tree to produce foliage it does not have the healthy root system to be able to support.

6. Weed and Feed Products. These types of fertilizer with a weed herbicide are wonderful for creating weed free grass. Unfortunately, the tree is also a "broadleaf weed" that will also be susceptible to the herbicide within this product. These products clearly state on the label not to use around trees! Although not many heed this warning.

7. Damage to trunk and limbs. Damage to branches and particularly trunk damage can cause the tree to be inoculated by disease and rot pathogens that begin problems that will stick with the tree indefinitely.

Oaks are not tolerant of any changes in their environment that may change their ability to undergo gas exchange in the root system. Be especially cautious of any activity that may disturb or compact the soil around mature oak trees. This is especially true for older large trees because these trees are more susceptible to problems and less likely to be able to recover from damage. Unfortunately the trees we seem to impact with our daily activities and landscaping changes tend to be those typically large mature trees that are right around our houses, which incidentally are the most valuable trees on the property!

This information is provided by the Texas A&M Forest Service.

I hope this information has been helpful and useful to you in the ongoing care of your trees.

By Troy Luepke, Comal County Extension Agent