Don’t Be Your Plants' Worst Enemy

Texas A&M AgriLife Extension Service — Galveston County Office

PHOTO CREDIT: Dr. William M. Johnson

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Improper use of string trimmers will damage trunks of landscape trees. Damaged trunks show scars and callus growth from repeated injury to the base of the tree caused by string trimmers.

Have you ever had a landscape tree die, even though it was properly planted, fertilized and watered? If so, you would be in the company of many homeowners who were well-meaning in their actions but unknowingly played an adversarial role that would eventually result in the demise of a tree.

Anyone can become a tree’s unintended worst enemy—especially when string trimmers and lawn mowers are used improperly.

Avoid String Trimmer and Mower Damage

String trimmers (also called line trimmers, weed eaters and weed whackers) that utilize multiple strands of monofilament line for cutting weeds and edging lawns can be wonderful and timesaving devices. However, in addition to hazards posed to an operator when improperly used, string trimmers can be very damaging to landscape trees—especially young trees.

Young trees have relatively thin bark. When a rapidly rotating monofilament line makes contact with a tree's trunk, part of the bark or even interior tissue will be removed with each contact of the line. Under repeated contact over time, you can even remove an entire ring of bark around the trunk—thus girdling the tree. Even more, lawn mowers pushed hard or dragged around the base of young trees can inflict damage also.

To explain why this damage poses problems, it is important to understand that carbohydrates are manufactured by the leaves and serve as the primary energy needed to sustain plant health and growth. Carbohydrates are also transported downward to the roots (which cannot make food for themselves) through a specialized thin layer of cells under the bark.

Nutrients absorbed by the roots from the soil are transported upward to leaves and other parts of the plant. Think of this process as the plant's version of the human "circulatory system." Using the same analogy, when a major blood vessel is cut or ruptured, serious consequences are likely to result.

Thus, damage that occurs when string trimmers or lawn mowers remove patches of bark will impact the tree's ability to transport food and nutrients. Roots become deprived of carbohydrates produced by the leaves. Leaves in turn are deprived of the soil nutrients and water needed to produce carbohydrates.

If the bark is partially damaged, plants typically become stunted and function poorly. When a complete ring of bark is removed (known as girdling), the carbohydrate needs of the roots and the water needs of the leaves are not sustained.

Such situations will eventually lead to the death of the plant. In addition to interfering with food and water movement, the open wounds created by mowers and trimmers can provide entry points for disease organisms that can cause decay.

Many sickly, stunted trees that were planted years ago but haven't grown well have been damaged in this way. Look at the base of their trunks and you will often see scars and callus tissue formed from repeated injury inflicted to the base of the tree.

To help prevent these problems, do not allow grass to grow close to the base of young trees for the first three to five years after planting. Keep an area at least two feet out from the trunk free of grass. A 3-to-4 inch layer of mulch spread evenly over the area (but pulled back slightly from the trunk) will also help by decreasing the possibility of string trimmers being used near the base of trees.

Whether you maintain your landscape yourself or have someone to do it for you, don't let this kind of needless damage happen to your landscape trees.

Don't Damage Roots

Trees also are vulnerable to root damage from construction and/or filling. Construction is probably the biggest killer of mature trees. If you plan on doing construction—whether building a new home, adding on to an existing one or even putting in a patio or repairing driveways or sidewalks—tree roots will likely be an issue.

Tree roots extend well beyond the reach of the branches, and most feeder roots (those that absorb water and nutrients from the soil) are located in the upper 8 inches to 12 inches of the soil.

This makes them much more vulnerable to damage than most people realize. If you will be doing construction or filling around valuable existing trees, consider consulting with a licensed arborist before the work is done to make sure the trees are damaged as little as possible.