

# Lightning Strikes on Trees

Texas A&M AgriLife Extension Service — Galveston County Office



Lightning can inflict significant damage to a tree as it did in March to the pine tree pictured above growing in a home landscape in Clear Lake. Being struck by lightning does not automatically spell doom to a tree as many such trees are able to make a remarkable recovery over time if provided good care.

PHOTO CREDIT:  
Joanne Hardgrove



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Dr. William Johnson is a horticulturist with the Galveston County Office of Texas A&M AgriLife Extension Service. Visit his website at <http://aggie-horticulture.tamu.edu/galveston>.

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**Q: One of my pine trees was recently struck by lightning a few weeks ago during a severe thunderstorm. Is there anything I can do to save the tree or is it likely to die?**

**A:** Lightning striking a tree in one's landscape is a traumatic experience for both the tree and its caretaker. After checking to see if one's own limbs are intact, attention quickly shifts to the wel-

fare of the tree. The week following an electrical storm, local Extension offices often field questions from concerned homeowners regarding the prognosis for beloved trees and what care might be given to help them survive or recover.

This week's question was asked by Joanne Hardgrove. Joanne is a Galveston County Master Gar-

dener and one of her neighbors asked her about the prognosis for a pine tree in her home landscape that had been struck by lightning. Unfortunately and quite accurately for the concerned tree steward, the best answer to these urgent questions is often, "time will tell but don't give up on the tree yet."

A lightning strike can affect



a tree in many ways. Some are immediately obvious and some are not. Sometimes the trunk and/or large branches are splintered. A strike may make continuous grooves in the trunk or main branches.

In many cases, the apparent damage may appear minimal while internal injury to the vascular tissues of the trunk and roots is extensive and gradually manifests itself over a period of months or even years.

In some cases, the majority of the damage occurs to the main roots of a tree as the electrical discharge (up to 100 million volts at thousands of amperes) vaporizes the water inside the roots, creating superheated steam. People standing above such roots during a storm may be electrocuted even though they are standing a good distance from the tree's trunk.

It is difficult to predict which trees will be struck by lightning and which are most likely to be seriously injured. In general, lone trees, those tallest in a group or those growing in moist soil have the highest probability of being struck.

In the considerable body of lightning lore, certain tree species are commonly listed as more lightning-attractive than others. These include maple, ash, tulip tree, sycamore, poplar, oak, elm, pine, spruce and hemlock. Some of these species, like sycamores, are likely targets because they tend to tower over other species. Pines and hemlocks may be lightning-prone because of the water that collects on their needles during thunderstorms.

Homeowners typically want to take immediate action to help a damaged tree survive the aftermath of a lightning strike. In most cases, however, there is little that can be done to help a tree recover.

Should one apply any of the various wound dressing concoctions commonly used? While most wound dressing concoctions do no harm to the tree, many dressings develop cracks over time that can harbor insects or hold water that lead to decay. Applying a wound dressing may make the caretaker performing the operation feel better, but it is not recommended.

If the lightning damage has created hazardous broken branches, these should be taken care of quickly. However, in most cases, it is best to wait 6 months before doing major (expensive) corrective work.

If, during this waiting period, the tree shows no obvious signs of decline, then it may be worth the expense to do major corrective pruning. In many cases, it will become obvious at some point during the waiting period that the tree will not recover and that removal is the best option.

My experience has been that a lightning strike does not automatically spell doom to a tree as many such trees are able to make a remarkable recovery given adequate care and time.

**Q: I have three peach trees growing in my back yard and each tree is a different variety. All three trees produced a good crop of leaves this spring but produced a sparse number of flowers and an**

**even sparser number of fruit this spring? What would cause this to happen?**

A: Despite the cold front that occurred in early January, the winter season was relatively mild. Nut and fruit trees (except for citrus) need a specific number of chill hours each winter to regulate their growth and flowering.

Peach trees must be exposed to a minimum number of chill hours over a winter season in order to set flowers and fruit in the spring. If a tree doesn't experience enough chill hours in the winter the flower buds might not open at all in spring, or they might open unevenly.

Chill hours are usually defined as range of temperatures below 45 degrees and above 32 degrees Fahrenheit; however, some models for calculating chill hours rely on slightly different temperature ranges. Nearly all models used for calculating chill hours take into account temperatures above 60 degrees; temperatures above 60 degrees during the winter season will reduce the chill hour total.

We exceeded the 60-degree temperature mark on many, many days so air conditioners were running a lot over the winter season. It's not surprising that peach flowering was so sparse this year.