UF | IFAS Extension
UNIVERSITY of FLORIDA

Hort-4

Post-Hurricane Tree-iage

Terra Freeman
Urban and Commercial Horticulture Agent
UF/IFAS Extension St. Johns County

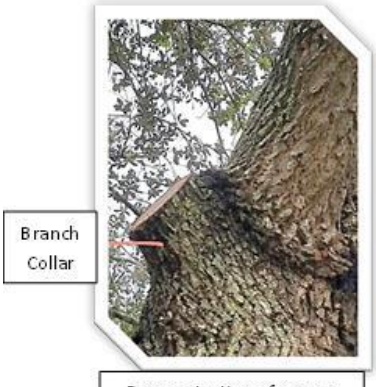
Safety First

Immediately following a storm, focus should be removing potential hazards to humans, animals or property. Trees and limbs are considered a hazard when they would strike a target if they were to fall. If a tree is leaning on a power line, alert the power company to the situation and do not attempt to remove the tree yourself. Many situations require the help of a professional such as a certified arborist. Such situations include a tree or limb that is leaning towards a house, reaching limbs that require climbing to prune or implementing restoration pruning. To locate a certified arborist in your area, visit the International Society of Arboriculture web site at http://www.isaarbor.com/findanarborist/findanarborist.aspx. Storm damage cleanup can be very dangerous and safety should always remain the number one priority.

Assessing Tree Restoration Candidates

An important step in determining if a tree is a candidate for restoration is careful examination of its overall structure to ensure the main trunk, limbs and roots are intact and without large wounds or visible cracks. While many trees can recover from complete leaf loss or even significant canopy damage, major damage to the trunk is often irreparable. Several interrelated factors must be considered when assessing whether or not a tree is a candidate for restoration, including the extent of damage, age, species, structure and health of the tree.

Young trees with a trunk diameter of less than ten inches are good candidates for restoration because they can handle having more of their canopy removed than older trees. Also, trees with smaller broken branches (less than 4 inches in diameter) are more likely to recover from pruning than large diameter branches (more than 8 inches in diameter). Decay-resistant species, such as live oak and buttonwood, are also good candidates for restoration since they have a strong ability to compartmentalize wounds.



Demonstration of proper pruning cut made just outside the branch collar

Trees with overall good health will recover faster than those with poor health and ones that had extensive decay before the storm are more likely to decline than to recover. Another way to determine if a heavily damaged tree is likely to recover, is to monitor how aggressively it is sprouting. The more it is sprouting, the more likely it is to recover.

Proper Pruning

Remove broken branches as soon as possible to reduce likelihood of the wood tearing. Be sure to make a smooth pruning cut just outside the branch collar to allow for proper healing of the wound. The branch collar appears as a swollen area where the branch and trunk overlap. This strong union possesses chemical and physical properties that will retard decay from spreading into the trunk, which is why it is important to leave the branch collar intact. Cut right outside of the branch collar- do not cut off the branch collar! Do not cut flush to the trunk as this will remove the trees natural ability to retard decay around the wound.

An Equal Opportunity Institution

Replanting a Fallen Tree

When considering whether or not to stand up a fallen or leaning tree, size and age are important factors. Small trees with a diameter less than four inches or those that have been recently planted have a better chance of developing a root structure that will remain firm in the ground than larger tree and are therefore good candidates for replanting and staking. For best chances of recovery, immediately cover roots with a tarp or moist burlap to prevent them from desiccating until replanting, which should be done as soon as possible. Before replanting fallen trees, examine the roots and make clean cuts on any jagged or torn roots. When backfilling with soil from the site, do not bury the top root where it meets the trunk. Irrigate the root zone about three times a week for several months to encourage formation of new roots, unless there is sufficient rainfall or the ground is saturated from heavy rains. Refrain from fertilizing for a year as this could further stress the tree. Stake the tree for 6 months to a year.

Mature trees or ones with a trunk greater than four inches do not regenerate new roots where large roots have been severed as well as those of smaller roots (less than one inch in diameter), and are therefore more susceptible to falling over in subsequent storms. Trees with trunk diameters from four to eight inches could be stood up and staked, although may pose a hazard later on. It is not recommended to upright trees with diameters over eight inches as they are likely to be a hazard in the future.

Defoliation

Depending on the type of tree, wind-induced defoliation may be temporary. Deciduous trees and broadleaf evergreens may take a few weeks to several months to regenerate following a storm. Patience is key, as they may not grow back until the following spring or early summer. If at this point they have not regenerated, the tree is not likely to recover. Pine trees are a different story. If all the needles are brown or lost, it will not recover. Palms are different as well, in that all of their new growth stems from one bud near the top. It may take six months following the storm for a palm to produce new growth from its bud, and up to two years before it regains its full set of leaves.

Severe leaf loss can interrupt the trees ability to photosynthesize and store energy. As a response, the tree may send out epicormic shoots, also known as water sprouts, at the tips of branches. While the energy used to produce these sprouts will temporarily weaken the tree, allowing these sprouts to grow will help the tree to rebuild its energy reserves and will ultimately strengthen the tree.

Certain species, such as live oaks, will defoliate after a storm as a survival mechanism to reduce wind resistance. Defoliated trees that were healthy prior to the storm and did not incur major branch damage do not require any special treatment after the storm unless they were inundated with salt water. Salt water can cause damage to the root system, and should be leached out with irrigation. Do not apply fertilizer or other chemicals as they contain salts which could exacerbate the damage.

References:

Restoring Trees after a Hurricane: https://edis.ifas.ufl.edu/pdffiles/EP/EP30000.pdf
Assessing Hurricane-Damaged Trees and Deciding What to Do: http://edis.ifas.ufl.edu/pdffiles/FR/FR17200.pdf

Photo Credit: Terra Freeman, UF/IFAS Extension St. Johns County

October 2017

An Equal Opportunity Institution