Assessing and Restoring Palms

Remove or Restore?

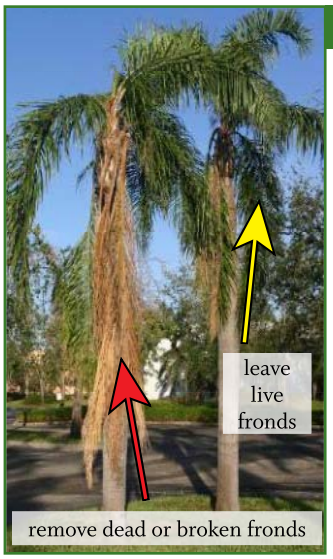
Is my palm dead or alive? Will it recover? These are commonly asked questions after hurricanes. Palms grow differently from other trees. The growing point of a palm is located at the top of each trunk, surrounded by leaves (called fronds). All fronds originate from this one point (called the bud). If the bud is severely damaged or killed, new leaves fail to develop and single-stemmed palms will die. On multi-stemmed palms, the undamaged trunks could recover as long as their buds are not damaged. If the trunk is snapped in half, the palm is dead. However, for palms left standing, the bud is often not visible or accessible, making it difficult to determine whether it is damaged. For these palms, follow these guidelines:

- **Allow at least 6 months or longer for palms to put out new growth.** New leaves may be stunted, discolored or abnormally shaped.
- **It may take 1 to 2 years or more before palms appear normal with a full canopy.**
- **Irrigate 3 times a week for 6 weeks if there is not sufficient rainfall; longer if drought persists.**

Canopy Cleaning

Step 1: Remove hanging or dead fronds that could fall and hit a person or damage property.
Step 2: Remove fronds that cover the bud so that new fronds can emerge.
Step 3: Leave bent fronds attached to the palm until new fronds fully emerge; green fronds help recovery.
Step 4: Leave fronds with any green color, even if they are yellowing or have brown tips. Establish a fertilization program to correct nutrient deficiencies (refer to publication ENH 858, Fertilizer Recommendations for Landscape Plants, http://edis.ifas.ufl.edu/EP114)

Recovery from storms is not a quick process, so have patience with your palms!



Step 1

Dead or broken fronds should be removed because they pose a hazard. Notice the bent, green fronds along the trunk in the background that are still attached. These should be kept until new foliage fully emerges because they help the palm regain energy reserves.

Step 2

Remove fronds that could impede new growth. When broken fronds cross over the top of the palm, they may suppress new growth from the bud.

Step 3

Leave bent fronds such as these for now. They are still green and providing energy to the palm.

Step 4

This palm is showing severe yellowing on the lower fronds because it lacks nutrients such as potassium and magnesium. Yellowing or browning fronds still provide energy for growth, and removing too much of this foliage reduces palm vigor. Begin an appropriate fertilization program to correct nutrient deficiencies.

Prune Palms Correctly

Correctly pruned palms

Often palms are over-pruned to look like the photo on the right. Arborists report that palms with too many fronds removed suffered more damage in hurricanes than palms that were not pruned. Removing too many fronds exposes the delicate bud to more wind and more potential damage. Palms need fronds to protect the bud and provide nutrients for growth.

Over-pruned palms

Over-pruning is harmful for palms

- Takes away food-producing fronds.
- Reduces health.
- Leads to stress and decline.
- Attracts pests.
- Takes a year or more to regrow a full canopy.
- Makes them more susceptible to wind damage.

Assessing and Restoring Pines

Remove or Restore?

Pines are very sensitive to wind damage. They can snap, uproot or lean during storms. A pine still standing after a hurricane may have internal damage that is not visible. Before making a decision, wait and see if the tree lives.

- Pines may die slowly over a period of 6 months to 2 years after wind storms.
- Some may remain green for a year or more, then suddenly turn yellow and quickly progress to brown needles.
- Pines with all brown needles are dead and should be removed.
- Monitor pines carefully for insects. Weakened pines may be more susceptible to beetles and diseases.

Canopy Cleaning

Step 1: Remove hazards, such as dead, broken and hanging branches.

Step 2: Remove branches with no needles or brown needles.

Step 3: Leave branches with yellow needles for now.

Step 4: Wait and see how pines do the following year.

What causes yellowing of the needles and pine death?

The causes are not completely understood, but it is likely due to hidden damage produced by bending and twisting during hurricane force winds. Prolonged winds may also rupture smaller roots without breaking the larger support roots. The injured stems and roots are unable to supply the water and nutrients needed in the crown, resulting in yellow needles and pine decline.