Trees and Hurricanes
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Over the last few years I have noticed an increase in concern of how high winds impact
trees. This is especially true for trees around houses and other buildings of importance.

The University of Florida has done studies to get us some answers so we can manage our
forests to our greatest benefit. To put this complicated information as succinctly as
possible, here are the four main categories I believe determines how well a tree will hold
up in high winds.

Care of the above ground portion of trees.
Care of the roots of the trees.
Growing trees in groups but keeping them well spaced.
Species of tree.

Taking care of the above ground portion means making correct pruning cuts that
encourage one dominant trunk, a well balanced crown, and strong unions. By correct
pruning cuts I mean pruning outside the branch bark ridge when the size of the cut won’t
courage decay. On smaller trees this means making a clean cut just outside the
swelling that you often can see when a branch joins a larger one or connects off the trunk.
Also try to grow your trees with a single stem. Multi-stem trees may look nice and are
fine for shrubs and very small trees, but on larger trees they can be very weak and
dangerous. Strong unions means U shaped rather than V shaped joints in the trunk of the
tree. Multi-trunked trees often have many V shaped joints. For larger trees getting
correct pruning cuts that encourage one dominant trunk, a well balanced crown and
strong unions between branches means hiring a International Society of Arboriculture
certified arborist, as this work requires training to understand and execute, not to mention
that this type of work can often be dangerous.

Care and management of the roots of trees includes not cutting the roots and keeping the
area under the trees well mulched, and the soil porous. Remember that most roots on
trees are in the top 18 inches of soil and that the roots typically grow out 3 times farther
than the branches extend from a tree. This means that any building of roads, sidewalks,
houses, and most trenching will remove parts of a tree’s roots. The effects of the
destruction of tree roots in new developments and by other construction activities was all
too obvious to the researchers. Trees also do best if the soil is not compacted by parking
cars and other vehicles under them as a compacted soil will not have as healthy and
strong of roots growing in it. Finally, mulch that is maintained 2-4 inches deep, recycles
nutrients and protects the soil, thus creating a good place for roots to grow healthy and strong.

Trees that grow singly tended to do more poorly in strong winds because trees tend to protect each other from strong winds. For the same reasons it also believed by many that houses with structurally sound trees around them had less damage than houses not protected by trees. On the other hand trees that were crowded to close together often were stressed and weaker and did not survive as well. Thinning your forest from time to time helps correct this problem.

Finally we get to the species of trees. An important point to make is that no matter which species of tree you have, if you do not take into account the things we discussed above, any species of tree can break during high winds.

Generally strong wooded and smaller trees that were resistant to decay did the best.

Some of the larger trees that did well include live oak, post oak, shumard oak, swamp chestnut oak black tupelo, bald cypress, hickory, magnolia and believe it or not sweetgum. Some of the smaller trees included dogwood, river birch, winged elm, American hophornbeam, blue beech, tree sparkleberry, red bud and fringe tree.

Also noteworthy is that the tree that seemed to be number one in wind resistant was our state tree the cabbage palm. Note, this was only true when the green fronds were not pruned from the tree.