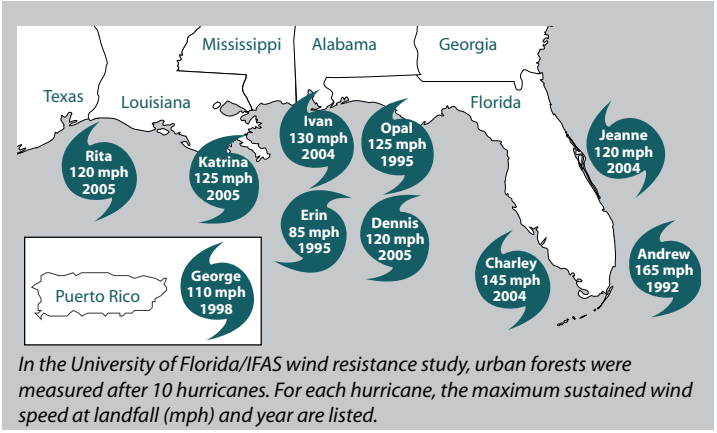
Wind Resistant Tree Species

These wind resistant tree lists were developed from research of ten hurricanes which struck the Southeast U.S. Coastal Plain, South Florida and Puerto Rico between 1992 and 2005. In addition, a survey of arborists, scientists and urban foresters contributed information to rank wind resistance. The recommended tree species are divided into the Southeast U.S. Coastal Plain region (which includes USDA hardiness zones 8 and 9) and Tropical and Subtropical regions (including USDA hardiness zones 10 and 11).



In the University of Florida/IFAS wind resistance study, urban forests were measured after 10 hurricanes. For each hurricane, the maximum sustained wind speed at landfall (mph) and year are listed.

U.S. Southeast Coastal Plain

American hophornbeam, *Ostrya virginiana*
Baldcypress, *Taxodium distichum*
Beech, blue, *Carpinus caroliniana*
Chickasaw plum, *Prunus angustifolia*
Common persimmon, *Diospyros virginiana*
Crape myrtle, *Lagerstroemia indica*
Dogwood, *Cornus florida*
Fringe tree, *Chionanthus virginicus*
Hickory, Florida scrub, *Carya floridana*
Hickory, mockernut, *Carya tomentosa*
Hickory, pignut, *Carya glabra*
Holly, American, *Ilex opaca*
Holly, dahoon, *Ilex cassine*
Holly, yaupon, *Ilex vomitoria*
Inkberry, *Ilex glabra*
Magnolia, saucer, *Magnolia x soulangiana*
Magnolia, southern, *Magnolia grandiflora*
Magnolia, sweetbay, *Magnolia virginiana*
Maple, Florida sugar, *Acer saccharum* subsp. *floridanum*
Maple, Japanese, *Acer palmatum*
Oak, live, *Quercus virginiana*
Oak, myrtle, *Quercus myrtifolia*
Oak, post, *Quercus stellata*
Oak, sand live, *Quercus geminata*
Oak, Shumard, *Quercus shumardii*
Oak, swamp chestnut, *Quercus michauxii*
Oak, turkey, *Quercus laevis*
Podocarpus, *Podocarpus* spp.
Pondcypress, *Taxodium ascendens*
Redbud, *Cercis canadensis*
River birch, *Betula nigra*
Sparkleberry, *Vaccinium arboreum*
Sweetgum, *Liquidambar styraciflua*
Tupelo, black, *Nyssa sylvatica*
Tupelo, water, *Nyssa aquatica*
White ash, *Fraxinus americana*
Winged elm, *Ulmus alata*

Palms

Cabbage, *Sabal palmetto*
Date, Canary Island, *Phoenix canariensis*
Date, *Phoenix dactylifera*
Pindo, *Butia capitata*

Tropical and Subtropical

Baldcypress, *Taxodium distichum*
Buttonwood, *Conocarpus erectus*
Cocoplum, *Chrysobalanus icaco*
Crape myrtle, *Lagerstroemia indica*
False tamarind, *Lysiloma latisiliquuum*
Geiger tree, *Cordia sebestena*
Gumbo limbo, *Bursera simaruba*
Hickory, Florida scrub, *Carya floridana*
Holly, dahoon, *Ilex cassine*
Ironwood, *Krugiodendron ferreum*
Lignumvitae, *Guaiacum sanctum*
Lychee, *Litchi chinensis*
Magnolia, southern, *Magnolia grandiflora*
Magnolia, sweetbay, *Magnolia virginiana*
Mahogany, *Swietenia mahagoni*
Mastic tree, *Sideroxylon foetidissimum*
Oak, live, *Quercus virginiana*
Oak, sand live, *Quercus geminata*
Paradise tree, *Simarouba glauca*
Pigeon plum, *Coccoloba diversifolia*
Podocarpus, *Podocarpus* spp.
Pondapple, *Annona glabra*
Pondcypress, *Taxodium ascendens*
Satinleaf, *Chrysophyllum oliviforme*
Sea grape, *Coccoloba uvifera*
Stopper, boxleaf, *Eugenia foetida*
Stopper, redberry, *Eugenia confusa*
Stopper, white, *Eugenia axillaris*
Sweetgum, *Liquidambar styraciflua*
Tupelo, black, *Nyssa sylvatica*

Palms

Alexander, *Ptychosperma elegans*
Areca, *Dypsis lutescens*
Bottle, *Hyophorbe lagenicaulis*
Blue latan, *Latania loddigesii*
Cabbage, *Sabal palmetto*
Chinese fan, *Livistona chinensis**
Coconut, *Cocos nucifera*
Date, Canary Island, *Phoenix canariensis*
Date, *Phoenix dactylifera*
Date, pygmy, *Phoenix roebelenii*
Fishtail, *Caryota mitis*
Florida silver, *Coccothrinax argentata*
Manila, *Adonidia merrillii*
Pindo, *Butia capitata*
Royal, *Roystonea elata*
Spindle, *Hyophorbe verschaffeltii*
Thatch, key, *Thrinax morrisii*
Thatch, Florida, *Thrinax radiata*
Triangle, *Dypsis decaryi*

** Caution: manage to prevent escape (as recommended by IFAS http://plants.ifas.ufl.edu/assessment.html)*

We present these lists with the caveat that no tree is perfectly wind-proof and that many other factors contribute to wind resistance including soil conditions, wind intensity, previous cultural practices, tree health and age. These lists do not include all trees that could be wind resistant. They list those species encountered during our studies in large enough numbers to run statistical comparisons.