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Alternatives to Invasive Plants Commonly Found in Central Florida Landscapes[1]

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Invasive plants are non-native plants that form expanding populations in natural areas and other plant communities with which they were not previously associated (Langeland 2012). Invasive plants can cause ecological impacts, such as displacing native plants and associated wildlife or altering natural water flow and fire patterns.

Some ornamentals listed as invasive by the University of Florida IFAS Assessment of Non-Native Plants in Florida's Natural Areas or by the Florida Exotic Pest Plant Council are still in commercial production and widely found in Florida landscapes. Homeowners might replace invasive plants if non-invasive alternatives are researched, publicized, and made readily available. By shifting production and use from invasive ornamentals to native or non-invasive cultivars, the nursery and landscape industry could benefit from potential revenue while fostering greater collaboration with state agencies and environmental groups.

University of Florida research and Extension efforts over the last 10 years have focused on identifying non-invasive alternatives by assessing the invasive traits of popular non-native ornamentals, related genera, and their cultivars. In more recent years, University of Florida breeding efforts have focused on producing and trialing new non-invasive cultivars. Table 1 lists native and non-invasive, non-native ornamentals as alternatives to invasive plants commonly used in Florida landscapes. Only plants considered to be generally available in the nursery trade are listed.

Alternative plants are similar to respective invasive plants as much as possible in terms of size, habit, texture, and flower color. Non-native, non-invasive plants in Table 1 were determined to be non-invasive by the IFAS Assessment of Non-Native Plants in Florida's Natural Areas (IFAS Invasive Plant Working Group 2008) or have not yet been evaluated.

References

Fox, A. M., D. R. Gordon, J. A. Dusky, L. Tyson, and R. K. Stocker. 2009. *IFAS Assessment of Non-Native Plants in Florida's Natural Areas: Status Assessment*. Gainesville: University of Florida Institute of Food and Agricultural Sciences. http://plants.ifas.ufl.edu/assessment/pdfs/Final_PDF_SS-AGR-225_04.30.09.pdf.

Fox, A. M., D. R. Gordon, C. Gantz, G. W. Knox, and S. B. Wilson. 2007. *IFAS Assessment: Infraspecific Taxon Protocol*. Gainesville: University of Florida Institute of Food and Agricultural Sciences. http://plants.ifas.ufl.edu/assessment/infraspecific_taxon_protocol.html.

IFAS Invasive Plant Working Group. 2008. *IFAS Assessment of Non-Native Plants in Florida's Natural Areas*. Gainesville: University of Florida Institute of Food and Agricultural Sciences. http://plants.ifas.ufl.edu/assessment/.

Langeland, K. A. 2012. *Help Protect Florida's Natural Areas from Non-Native Invasive Plants*. Circular 1204. Gainesville: University of Florida Institute of Food and Agricultural Sciences. http://edis.ifas.ufl.edu/ag108

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Table 1. Invasive ornamentals commonly found in central Florida landscapes and commonly available native and non-native, non-invasive substitutes

Invasive ornamental[z]		**Native substitute**	**Non-native, non-invasive substitute**[z]
Scientific name	**Common name**		
Albizia julibrissin	Mimosa	*Acacia farnesiana*, Sweet acacia *Ardisia escallonioides*, Marlberry (cold tender) *Cercis canadensis*, Eastern redbud *Chionanthus virginicus*, Fringe tree *Hamelia patens,* Firebush *Prunus umbellata*, Chickasaw plum	*Aloysia virgata,* Sweet almondshrub *Callistemon citrinus,* Red bottlebrush *Calliandra haematocephala,* Powderpuff *Handroanthus heptaphyllus (*formerly *Tabebuia heptaphylla),* Pink trumpet tree *Jatropha integerrima*, Peregrina (cold tender) *Lagerstroemia* spp., Crapemyrtle *Tabebuia impetiginosa*, Purple tabebuia
Ardisia crenata	Coral ardisia	*Ilex glabra*, Gallberry *Ilex vomitoria* (dwarf cultivars), Dwarf yaupon holly *Psychotria nervosa,* Wild coffee	*Ilex cornuta*, Chinese holly *Osmanthus heterophyllus*, False holly
Casuarina equisetifolia	Australian pine	*Juniperus silicicola*, Southern red cedar *Juniperus virginiana*, Red cedar *Pinus* spp. (native species), Pine *Quercus geminata,* Sand live oak *Taxodium distichum* var. *distichum,* Baldcypress *Taxodium distichum* var. *imbricarium,* Pondcypress	
Cinnamomum camphora	Camphor tree	*Ilex cassine,* Dahoon holly *Magnolia grandiflora*, Southern magnolia *Magnolia virginiana*, Sweet bay *Persea borbonia*, Red bay *Quercus virginiana*, Live oak *Ulmus alata,* Winged elm	*Ulmus parvifolia*, Lacebark elm
Colocasia esculenta	Elephant ear	*Canna flaccida*, Golden canna *Pontederia cordata*, Pickerelweed *Sagittaria* spp. (native species), Arrowhead	*Alocasia* spp., Elephant ear *Alpinia* spp., Shell ginger *Begonia nelumbiifolia*, Lotus-leaf begonia *Caladium* × *hortulanum*, Caladium *Canna* spp., Canna *Hedychium* spp., Butterfly ginger *Heliconia* spp., Heliconia *Philodendron bipinnatifidum*, Selloum philodendron *Strelitzia reginae*, Bird-of-paradise *Zingiber zerumbet*, Pinecone ginger
Dioscorea bulbifera	Air-potato	*Ipomoea alba*, Moonflower *Passiflora* spp. (native species), Passionvine	*Aristolochia maxima*, Florida Dutchman's pipe (See *Flowering Vines for Florida* (http://edis.ifas.ufl.edu/mg097) for additional vines)
Lantana camara	Lantana	*Evolvulus glomeratus* subsp. *grandiflorus*, Blue daze *Helianthus debilis,* Beach sunflower *Lantana depressa,* Pineland lantana (short lived) *Lantana involucrata,* Wild sage *Salvia coccinea*, Tropical sage *Stachytarpheta jamaicensis*, Porterweed	*Euryops (*formerly *Gamolepis) chrysanthemoides,* African bush daisy *Lantana camara* T2[y], T2 lantana (sterile) *Lantana camara* T3[y], T3 lantana (sterile) *Lantana camara* T4[y], T4 lantana (sterile) *Lantana camara* T9[y], T9 lantana (sterile) *Lantana montevidensis*, Trailing lantana *Rosa* spp., Rose *Salvia greggii*, Autumn sage *Salvia splendens*, Scarlet sage

Invasive ornamental[z]		Native substitute	Non-native, non-invasive substitute[z]
Scientific name	**Common name**		
Ligustrum sinense	Chinese privet	*Agarista populifolia*, Florida leucothoe *Citharexylum spinosum*, Fiddlewood *Hamelia patens,* Firebush *Ilex glabra*, Gallberry *Illicium floridanum*, Florida anise *Illicium parviflorum*, Star anise *Itea virginica*, Virginia sweetspire *Viburnum obovatum*, Walter's viburnum	*Acca sellowiana*, Feijoa or pineapple guava *Aloysia virgata*, Sweet almondshrub *Camellia* spp., Camellia *Gardenia jasminoides*, Gardenia *Ilex* × 'Nellie R. Stevens', Nellie R. Stevens holly *Ilex cornuta*, Chinese holly *Leucophyllum frutescens*, Texas sage *Viburnum odoratissimum*, Sweet viburnum *Viburnum odoratissimum* var. *awabuki*, Awabuki viburnum *Viburnum suspensum*, Sandankwa viburnum
Lonicera japonica	Japanese honeysuckle	*Gelsemium sempervirens*, Carolina jessamine *Lonicera sempervirens*, Coral honeysuckle	*Jasminum polyanthum*, Pink jasmine *Millettia reticulata*, Evergreen wisteria *Trachelospermum jasminoides*, Confederate jasmine (See *Flowering Vines for Florida* (http://edis.ifas.ufl.edu/mg097) for additional vines)
Nandina domestica (species type or wild type)	Nandina, Heavenly bamboo	*Agarista populifolia*, Florida leucothoe *Itea virginica*, Virginia sweetspire	*Nandina domestica* 'Firepower'[y], 'Firepower' nandina (non-fruiting) *Nandina domestica* 'Gulfstream'[y], 'Gulfstream' nandina (non-invasive) *Nandina domestica* Harbor Belle™[y], Harbor Belle™ nandina (non-invasive) *Nandina domestica* 'Harbour Dwarf'[y], 'Harbour Dwarf' nandina (non-invasive)
Ruellia simplex (R. brittoniana)	Mexican petunia	*Silphium asteriscus*, Starry rosinweed *Sisyrinchium angustifolium*, Blue-eyed grass *Stachytarpheta jamaicensis*, Blue porterweed *Stokesia laevis*, Stokes' aster	*Ruellia simplex (*formerly *brittoniana)* 'Purple Showers'[y], 'Purple Showers' Mexican petunia (sterile, non-invasive) *Eranthemum pulchellum*, Blue sage *Plectranthus* spp., Plectranthus *Plumbago auriculata*, Plumbago *Ruellia simplex* R10-102[y], Mayan Purple Mexican petunia (sterile) *Ruellia simplex* R10-108[y], Mayan White Mexican petunia (sterile) *Salvia farinacea*, Mealycup sage *Salvia greggii*, Autumn sage *Salvia leucantha*, Mexican sage
Triadica sebifera (syn. *Sapium sebiferum)*	Chinese tallow tree, Popcorn tree	*Acer rubrum*, Red maple *Betula nigra,* River birch	*Lagerstroemia* spp., Crapemyrtle *Vitex agnus-castus*, Chaste-tree
Schinus terebinthifolius	Brazilian pepper	*Citharexylum spinosum*, Fiddlewood *Hamelia patens,* Firebush *Hydrangea quercifolia,* Oakleaf hydrangea *Ilex cassine,* Dahoon holly *Ilex vomitoria*, Yaupon holly *Viburnum obovatum*, Walter's viburnum	*Citrus* spp., Citrus *Cocculus laurifolius*, Laurel-leaf snailseed *Ilex cornuta*, Chinese holly *Viburnum odoratissimum*, Sweet viburnum *Viburnum odoratissimum* var. *awabuki*, Awabuki viburnum *Viburnum suspensum*, Sandankwa viburnum
Sphagneticola trilobata (Wedelia trilobata)	Wedelia	*Gaillardia pulchella*, Firewheel *Helianthus debilis*, Dune sunflower *Mimosa strigillosa*, Powderpuff	*Arachis glabrata*, Rhizoma perennial peanut *Euryops (*formerly *Gamolepis) chrysanthemoides,* African bush daisy *Ipomoea* spp., Ornamental sweetpotato

[z]As listed by the University of Florida/IFAS Status Assessment. The initial component of the IFAS Assessment of Non-Native Plants in Florida's Natural Areas (IFAS Invasive Plant Working Group 2008) is the Status Assessment (Fox, Gordon, Dusky, Tyson, and Stocker 2009), in which evidence is reviewed concerning ecological impacts, potential for expansion, difficulty of management, and economic value of non-native species.

[y]Non-invasive cultivar derived from the invasive species as determined by the University of Florida/IFAS Infraspecific Taxon Protocol (Fox, Gordon, Gantz, Knox, and Wilson 2007). The Status Assessment is generally applied at the species level. It is only applied independently to infraspecific taxa (e.g., cultivars, varieties, or subspecies) if these taxa can be clearly distinguished in the field and are not likely to revert. Other infraspecific taxa (those indicated by this footnote) may be assessed using the Infraspecific Taxon Protocol (Fox, Gordon, Gantz, Knox, and Wilson 2007).