CIR833

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Native Trees for North Florida [1]

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In recent years, the subject of native plants has taken on new significance in Florida horticulture. Some of the reasons for this include the loss to development of natural areas in the state, coastal deterioration due to disturbance of native vegetation, and concern about water use to support exotic landscapes. The introduction of exotic plant pests that naturalize and, in some cases, out-compete native species, has become of great concern in various parts of Florida. Fortunately, relatively few of the hundreds of exotic ornamentals that have been introduced into the state fall into this category.

Many counties are considering landscape ordinances that require a percentage of native plant materials be utilized in all future developments. Several have already implemented such ordinances. This will result in a need for wider availability of native plant materials. Woody landscape plant producers, landscape designers, and home gardeners in Florida need to become informed about and prepared for the production and cultural needs of this type of plant material.

Native plants are not new to the Florida nursery industry. Many native trees are already well-represented in the inventories of north Florida nurseries. Such "staples" of north Florida horticulture as cabbage palm (*Sabal palmetto*), southern red cedar (*Juniperus silicicola*), live oak (*Quercus virginiana*), southern magnolia (*Magnolia grandiflora*), and dogwood (*Cornus florida*) are all native to the state.

Arguments For The Use Of Native Plants

A number of claims both for and against the use of native plants have been proposed. Some claims made for landscape performance of native plants are:

Energy efficiency. *Because they are adapted to our soils, temperature, and rainfall patterns, native plants require less irrigation and fertilization.*

This argument can be true only if several factors hold, namely that the right native has been chosen for the site to be landscaped, and that the original soil profile and hydrology at the site have not been altered. All too often, native topsoils have been removed and water flow patterns have been changed during development. If such is the case, an attempt to recreate the original composition of trees and shrubs

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may fail or require a great deal of extra maintenance to succeed.

Low maintenance. *Native plants are resistant to pests and diseases in Florida because they have evolved under constant exposure to these organisms.*

Plants do not evolve in isolation. The resistance to pests and diseases can sometimes be as much a factor of interactions between the plants that make up a vegetational association as the individual genetic resources of any one particular species. Native plants may not demonstrate any "advantages" in this respect when planted in disturbed sites or mixed with species not usually associated with them. And certainly, as with any new planting, regular care during establishment is necessary.

Ecological-Educational factor. *Their landscape use preserves endangered natural resources of the state.*

This argument is perhaps the best one for wider use of native plants. Florida's continued rise in population does place enormous pressures on our native vegetation. The educational benefits of native plant landscapes, particularly in teaching new residents about our state's natural bounty, have great value.

Arguments Against The Use Of Native Plants

Claims made against the landscape use of native plants include:

They are slow-growing.

Plants differ in their growth rates as much as in any other characteristic. Native plants range as widely in this category as exotics. In many cases, slow growth rates can be improved with increased nutritional levels during production. Cultivar selection and evaluation programs also improve slow growth rates. In some situations, slow growth rates may be advantageous; for example, slower growing trees will require less pruning to control size or prevent interference with power lines.

They are unattractive.

Native plants include attractive, showy trees like southern magnolia (*Magnolia grandiflora*) and more homely species such as wax myrtle (*Myrica cerifera*). Both have a niche in landscape situations. Many native trees have a subtle beauty all their own.

Their propagation is difficult, therefore plants are expensive.

Certain plants become widely available in the trade in part because they are easy to produce. This knowledge comes about through research, in both the private and public sectors. It is true that many choice native species are difficult to propagate successfully, but on the whole, this is due to lack of research efforts and unavailability of information.

They are generally unavailable.

Even with the limited knowledge of native plant propagation, there are currently over fifty nurseries listed by the Association of Florida Native Plant Nurseries, with a combined plant inventory of over 500 species. A number of native species are already represented in the inventories of many nurseries.

Landscape Situations For Native Trees

In certain landscape situations native plant usage is particularly desirable. These include:

New development with pre-existing vegetation in which a tree canopy has been retained.

Showy exotics look out of place in landscapes in which a great deal of pre-existing native vegetation has been spared the bulldozer's blade. In such developments, the use of additional native materials to "naturalize" the area can create a more harmonious and aesthetic effect.

Environmentally sensitive areas, such as the coastal strand, barrier island, and wetlands.

These areas have suffered a great deal of mismanagement and shortsighted development. Many of the plants native to these environmentally sensitive areas are particularly adapted to the specialized conditions found there. The use of these

native plants may actually help to slow further deterioration of some of these environments.

Public areas (parks, beaches, nature centers).

Native plants should be a priority in public areas for their environmental and educational value.

Site Factors To Consider When Choosing Native Species

Careful consideration to the characteristics of the planting site must be used when choosing native plant materials for landscaping. First, some concerns relating to the past history of the site must be answered.

What was the original vegetation of the area?

This knowledge will give an indication of which native plants will perform best on the site. Assuming that the answer to the next question is no, native species that once grew in a given location are likely to do best when replanted in comparison with species from very different types of native vegetation.

Have the native soil and/or hydrology been modified?

During development, topsoil is often removed, and original drainage patterns disturbed. Fill soil of very different quality may have been brought in to replace the topsoil removed. If such is the case, it may be impossible to re-establish the same species that once grew on the site, or else require a great deal of maintenance to do so.

Secondly, considerations must be paid to the present condition of each planting site. If fill soil was added during construction, its composition can vary over a short distance. Does the site accumulate standing water? What is the soil type: muck? white sand? coral rock? Is there salt spray exposure on the site? Will the landscape plants have to be integrated with turf, and possibly be subjected to turf-oriented irrigation practices? All of these factors will influence the degree of success with which particular native species will perform in a landscape.

What landscape functions need to be fulfilled?

Certain aesthetic factors come into play when choosing materials natives, just as they do with exotic plant materials. Should the trees primarily provide shade, barrier effects, or beauty in the form of flowers of fruit, or is low maintenance the main criterion for plant selection? The size of the lot also restrict the use of some species whose mature dimensions require a lot of space.

Planting Native Trees

Planting native tree species is no different than planting exotics. Consider first the time of year the tree is to be planted. Containerized trees can be planted any time. Trees that are balled-and-burlapped can be planted in winter and spring. Bare-root trees should be planted only in the spring.

Amending the backfill soil is not recommended. The crown of nursery stock should be situated at the same level in the soil as occurred in the field or the container. Large masses of circling roots in container stock should be slit lengthwise to stimulate lateral root production. It may be necessary or desirable to reduce top growth; this should be accomplished by thinning out (removing one or several, well-distributed branches at their point of origin), rather than heading back (cutting all top growth back to approximately the same level). Thinning cuts will preserve the natural shape of the tree.

The trees should be well irrigated after planting, and a 2- to 4-inch mulch of organic material is recommended. A top-dressing of a slow-release fertilizer can be applied within the dripline of the tree before the mulch. If it rains on a regular basis in the first six months after planting, additional watering may not be needed during that period. If not, periodic irrigation will be necessary. Generally, supplementary irrigation is required during the first year after planting. The frequency of irrigation (weekly, to several times per week during the first month) will depend on temperature and the water-holding capacity of the soil. Irrigation frequency can be reduced in successive months. Generally, the production of new growth is the best indication that a tree is becoming established. Supplementary fertilization one or two times per year may be desirable, at least during the first year after planting.

Using The Native Tree Selection Tables

The tables which list native tree species suitable for use in north Florida will help in making the right choices for various landscape situations. These lists are by no means a complete inventory of the tree species native to the northern part of the state, but is representative of those native trees that have proven themselves in the landscape, are available from nurseries, or are judged worthy of wider use and availability. The two tables list the characteristics and environmental requirements of various native trees.

Special attention should be paid to environmental factors such as soil pH and light requirements, and drought and salt tolerances.

Drought tolerance refers to Florida conditions only and should be interpreted as follows:

- **High** : will not require supplemental irrigation after establishment
- **Medium** : may require occasional irrigation during periods of unusual water stress
- **Low** : will require irrigation during periods of drought.

Salt tolerance should be interpreted as follows:

- **High**: will withstand direct salt spray and soil salinity
- **Medium**: should be protected from direct salt spray but will withstand moderately saline conditions
- **Low**: sensitive to salt.

Under the category of "Hardiness Zone," if a particular species can be used in central and south (subtropical and tropical) Florida as well, this has been indicated. **Subtropical** refers to the transitional area between central and tropical Florida where an occasional winter frost will occur. **Tropical** refers to southernmost mainland Florida and the Keys where winter frosts are rare to nonexistent.

In general, the best guide to determining which natives to use in a landscape situation is to become familiar with the species in the wild, and also to observe which species are performing well in nearby landscapes. Understanding the characteristics of the natural communities in which a particular species grows will provide insight into the cultural conditions necessary for that species to thrive in the landscape.

Obtaining Native Plants

Native plants should not be transplanted from the wild, unless the plants face destruction from development. Superior clones in native populations should be identified where possible, and nursery stock propagated vegetatively or by seed from them. The Florida Native Plant Society (FNPS) regularly publishes a bulletin called *The Palmetto* containing horticultural information on natives. You can obtain a copy by writing to:

- FNPS

  c/o Cameron Donaldson (*The Palmetto* editor)
  2112 Helen Street
  Melbourne FL 32901
  (321) 951-2210 (voice)
  (321) 951-1941 (fax)
  http://www.fnps.org/

The best source of information on obtaining Florida native plants is *Native Plant and Service Directory* which is published by:

- Association of Florida Native Nurseries

  P. 0. Box 434
  Melrose, Florida 32666-0434
  (352) 475-5413
  1-877-352-2366 (1-877-FLA-AFNN)
  http://www.afnn.org/

There is a place in Florida horticulture for both superior exotic and native ornamentals. The "native plant movement" should be looked upon as an impetus to add to the diversity of landscape materials at our disposal in Florida.

Table 1. Characteristics.

Scientific Name	Common Name	Natural Height	Plant Type[1]	Tree Shape[2]	Flower Color	Flower Characteristics	Flowering Season[3]
Acer rubrum	Red maple	35-50 feet	Decid	O	Red	Showy	W,Sp
Acer saccharum	Silver maple	40-70 feet	Decid	O	Pink	Inconspicuous	Sp
Acer saccharum var. Floridanum (A. barbatum)	Florida sugar maple	20-40 feet	Ever	R	Green	Insignificant	Sp
Aesculus pavia	Red buckeye	15-25 feet	Decid	R	Red	Showy	Sp
Betula nigra	River birch	45-65 feet	Decid	O	Brown	Insignificant	Sp
Bumelia spp.	Buckthorn, Saffron plum, Bumelia	20-40 feet	Decid, Ever	R	White	Insignificant	F
Carpinus caroliniana	American hornbeam	25-35 feet	Decid	O	Green	Insignificant	Sp
Carya aquatica	Water hickory	60-100 feet	Decid	O	Green	Insignificant	Sp
Carya glabra	Pignut hickory	80-120 feet	Decid	R	Green	Insignificant	Sp
Catalpa bignonioides	Catalpa	25-45 feet	Decid	R	White	Showy	Sp
Celtis laevigata	Sugarberry	40-60 feet	Decid	R	Green	Insignificant	Sp
Cercis canadensis	Redbud	20-30 feet	Decid	R	Pink, White	Showy	Sp
Charmaecyparis thyoides	Atlantic white cedar	30-90 feet	Ever	O	Purple	Cone	Sp
Chionanthus virginicus	Fringe tree	10-30 feet	Decid	R	White	Showy, Fragrant	Sp
Cornus florida	Flowering dogwood	20-30 feet	Decid	R	White	Showy	Sp
Crateagus spp.	Hawthorns	15-25 feet	Decid	O,R	White	Showy	Sp
Diospyros virginiana	Persimmon	30-60 feet	Decid	O	White	Insignificant	Sp
Fagus grandifolia	American beech	50-100 feet	Decid	R	Green	Insignificant	Sp
Fraxinus caroliniana	Water ash	40-60 feet	Decid	R	Green	Insignificant	Sp
Gleditsia triacanthos var. inermis	Thornless honey locust	20-50 feet	Decid	R	Orange	Inconspicuous	Sp
Gordonia lasianthus	Loblolly bay	30-40 feet	Ever	O	White	Showy, Fragrant	Su
Halesia caroliniana	Silverbell	15-25 feet	Decid	O	White	Showy	Sp
Ilex cassine	Dahoon holly	25-40 feet	Ever	O	White	Insignificant	Sp
Ilex opaca	American holly	30-45 feet	Ever	O	White	Insignificant	Su
Ilex vomitoria	Youpon holly	10-20 feet	Ever	O	Green	Insignificant	Sp
Juniperus silicicola	Southern juniper	25-30 feet	Ever	P	Brown	Cone	Sp
Juniperus virginiana	Eastern red cedar	10-40 feet	Ever	O	Brown	Cone	Sp

Table 1. Characteristics.

Scientific Name	Common Name	Natural Height	Plant Type[1]	Tree Shape[2]	Flower Color	Flower Characteristics	Flowering Season[3]
Liquidambar styraciflua	Sweetgum	60-100 feet	Decid	P,O	White	Insignificant	Sp
Liriodendron tulipfera	Tulip tree	80-100 feet	Decid	O	Greenish yellow	Showy	Sp
Magnolia ashei	Ashe magnolia	10-20 feet	Decid	R	White	Showy	Sp
Magnolia fraseri var. pyramidata	Pyramid magnolia	20-50 feet	Decid	P	White	Showy, Fragrant	Sp
Magnolia grandiflora	Southern magnolia	60-100 feet	Ever	P,O	White	Showy, Fragrant	Sp
Magnolia virginiana	Sweetbay	40-60 feet	Decid	O	White	Showy, Fragrant	Su
Malus angustifolia	Crab apple	15-30 feet	Decid	R	Pink	Showy	Sp
Myrica cerifera	Wax myrtle	15-25 feet	Ever	O	White	Insignificant	Su,Sp
Nyssa aquatica	Water tupelo	30-50 feet	Decid	O	Green	Insignificant	Sp
Nyssa slyvatica	Black tupelo	50-80 feet	Decid	O	White	Insignificant	Sp
Ostrya virginiana	Eastern hophornbeam	20-40 feet	Ever	V	Green	Insignificant	F,Sp
Oxydendron arboreum	Sourwood	10-40 feet	Decid	O	White	Showy	Sp,Su
Pinus clausa	Sand pine	60-80 feet	Ever	P,O	Brown	Cone	Sp
Pinus glabra	Spruce pine	30-50 feet	Ever	P,O	Brown	Cone	Sp
Pinus palustris	Longleaf pine	80-100 feet	Ever	P,O	Brown	Cone	Sp
Pinus serotina	Pond pine	40-70 feet	Ever	P	Brown	Cone	Sp,Su,F,W
Pinus taeda	Loblolly pine	80-100 feet	Ever	P,R	Brown	Cone	Sp
Planera aquatica	Water elm	15-50 feet	Decid	O	Yellow	Insignificant	Sp
Plantanus occidentalis	Sycamore	70-150 feet	Decid	O,R	Green	Insignificant	Sp
Prunus caroliniana	Cherry laurel	30-40 feet	Ever	O	White	Insignificant, Fragrant	Sp
Prunus umbellata	Flatwoods plum	10-20 feet	Decid	R	White	Showy	Sp
Ptelea trifoliata	Hoptree	10-25 feet	Decid	R,S	Green	Insignificant	Sp
Quercus alba	White oak	50-80 feet	Decid	R	Green	Insignificant	Sp
Quercus austrina	Bluff oak	25-40 feet	Decid	O	Green	Insignificant	Sp
Quercus chapmanii	Chapman oak	30-45 feet	Decid	O	Green	Insignificant	Sp
Quercus incana	Bluejack oak	20-30 feet	Decid	O	Green	Insignificant	Sp
Quercus laevis	Turkey oak	40-50 feet	Decid	O	Green	Insignificant	Sp
Quercus laurifolia	Laurel oak	60-100 feet	Ever	O	Green	Insignificant	Sp
Quercus michauxii	Swamp chestnut oak	40-100 feet	Decid	R	Yellow	Insignificant	Sp
Quercus myrtifolia	Myrtle oak	10-25 feet	Ever	O	Green	Insignificant	Sp
Quercus nigra	Water oak	60-100 feet	Ever	V	Green	Insignificant	Sp
Quercus shumardii	Shumard oak	40-60 feet	Decid	O	Green	Insignificant	Sp

Table 1. Characteristics.

Scientific Name	Common Name	Natural Height	Plant Type[1]	Tree Shape[2]	Flower Color	Flower Characteristics	Flowering Season[3]
Quercus virginiana	Live oak	50-60 feet	Ever	S	Green	Insignificant	Sp
Sabal palmetto	Cabbage palmetto, sabal palm	45-70 feet	Palm	*	White	Insignificant	Sp,Su,F
Salix caroliniana	Coastal plain willow	20-30 feet	Ever	R	Green	Insignificant	Sp
Sassafras albidum	Sassafras	20-50 feet	Decid	R	Yellow	Insignificant	Sp
Stewartia malacodendron	Virginia stewartia	10-20 feet	Decid	R	White	Showy	Su
Styrax grandifolia	Snowbell	15-30 feet	Decid	O	White	Showy, Fragrant	Sp
Symplocos tinctoria	Sweetleaf	15-35 feet	Ever	O	Yellow	Insignificant	Sp
Taxodium distichum	Bald cypress	60-100 feet	Decid	P,O	Green	Cone	Sp
Tilia caroliniana	Carolina basswood	20-40 feet	Decid	O	White	Fragrant, Insignificant	Sp
Tilia floridana	Florida basswood	30-60 feet	Decid	R	Yellow	Insignificant	Sp,Su
Torreya taxifolia	Florida nutmeg	10-40 feet	Decid	R	Yellow	Insignificant	Sp,Su
Ulmus alata	Winged elm	20-40 feet	Decid	V	Green	Insignificant	Sp
Ulmus americana	American elm	80-100 feet	Decid	V	Green	Insignificant	Sp
Vaccinium arboreum	Sparkleberry	15-30 feet	Ever	R	White, Pink	Showy	Sp
Viburnum rufidulum	Rusty blackhaw	15-25 feet	Decid	O	White	Showy	F
Zanthoxylum clava-herculis	Hercules' club, Toothache tree	25-50 feet	Decid	R	White	Insignificant	Sp

[1] Plant Type: **Decid** = Deciduous, **Ever** = Evergreen

[2] Tree Shape: **O** = Oval, **R** = Round, **V** = Vase, **P** = Pyramidal, **S** = Spreading ***** = Single stemmed

[3] Flowering Season: **Sp** = Spring, **Su** = Summer, **F** = Fall, **W** = Winter

Table 2. Environmental Requirements

Scientific Name	Common Name	Growth Rate	Soil pH[1]	Hardiness Zone[2]	Salt Tol.[3]	Light Requirements	Drought Tol.	Nutritional Needs
Acer rubrum	Red maple	Fast	W	C,N,ST	L	High	Low	Low
Uses: Shade, perimeters, parking lots, medians, boulevards, residences. Notes: Excellent red fall color. Good for wet sites.								
Acer saccharum	Silver maple	Fast	W	N	none	High	Low	Medium
Uses: Parks, shade, residences, buffers. Notes: Extreme north Florida only. Weak-wooded.								

Table 2. Environmental Requirements

Scientific Name	Common Name	Growth Rate	Soil pH[1]	Hardiness Zone[2]	Salt Tol.[3]	Light Requirements	Drought Tol.	Nutritional Needs
Acer saccharum var. Floridanum (A. barbatum)	Florida sugar maple	Fast	W	N	L	Medium	Medium	Medium
Uses: Parks, parking lots, residences, shade. Notes: Holds on to dead leaves in winter. Aphids can be a problem.								
Aesculus pavia	Red buckeye	Medium	A	N	L	Low,Medium	Low	Medium, High
Uses: Parks, residences. Notes: Often shrubby, best in half shade.								
Betula nigra	River birch	Fast	W	C,N	L	High	Low	Medium
Uses: Shade, residences, buffers. Notes: Suitable for wet sites. Attractive bark.								
Bumelia spp.	Buckthorn, Saffron plum, Bumelia	Medium	W	C,N,ST,T	M,L	Medium	Medium, High	Medium
Uses: Perimeters, parks, parking lots. Notes: Several native species reach tree size. Not all are cold-hardy. Thorny.								
Carpinus caroliniana	American hornbeam	Slow	W	C,N	L	Medium	Low	Low
Uses: Residences. Notes: Best for wet sites. Unusual sinewy branches.								
Carya aquatica	Water hickory	Slow	W	C,N	L	High	Low	Low
Uses: Residences, boulevards. Notes: Suitable for most sites.								
Carya glabra	Pignut hickory	Fast	W	C,N	L	High	High	Low
Uses: Residences, shade. Notes: Nuts can be messy.								
Catalpa bignonioides	Catalpa	Fast	W	N	L	High	Low	Medium
Uses: Parks, shade, boulevards, residences. Notes: Weak-wooded. Fruits unsightly.								
Celtis laevigata	Sugarberry	Fast	W	C,N	L	High	High	Low
Uses: Shade, perimeters, parking lots, residences, parks. Notes: Can be weedy.								
Cercis canadensis	Redbud	Medium	W	C,N	L	Medium	High	Medium
Uses: Residences, parks, boulevards. Notes: Flowers best if native sources are used.								
Charmaecyparis thyoides	Atlantic white cedar	Slow	A	C,N	L	High	Low	Medium
Uses: Parks, specimen plants. Notes: Good for wet sites.								
Chionanthus virginicus	Fringe tree	Slow	A	C,N	L	Medium	Low	High
Uses: Parks, residences. Notes: Often shrubby, subject to scale and mites.								
Cornus florida	Flowering dogwood	Medium	W	C,N	L	Medium	High	Medium

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Scientific Name	Common Name	Growth Rate	Soil pH[1]	Hardiness Zone[2]	Salt Tol.[3]	Light Requirements	Drought Tol.	Nutritional Needs
Uses: Parks, residences, medians, boulevards, buffers. Notes: Native selections are best. Pink and red forms will not flower in Florida.								
Crateagus spp.	Hawthorns	Slow	W	C,N	L	High	High	Medium
Uses: Residences, parks, boulevards. Notes: Thorny trees. Subject to fire blight. Many species available.								
Diospyros virginiana	Persimmon	Medium	W	C,N	L	High	Medium	Medium
Uses: Residences, parks. Notes: Improved cultivars available. Edible fruit.								
Fagus grandifolia	American beech	Slow	A	N	M	Medium	Medium	High
Uses: Parks, residences, shade. Notes: Shallow roots. Turf does poorly underneath. Performs best in panhandle.								
Fraxinus caroliniana	Water ash	Fast	W	C,N	L	High	Low	Low
Uses: Parks, residences, shade. Notes: Best for wet sites.								
Gleditsia triacanthos var. inermis	Thornless honey locust	Fast	W	N	M	High	High	Medium
Uses: Parks, parking lots, residences, boulevards. Notes: Very tolerant of city conditions.								
Gordonia lasianthus	Loblolly bay	Medium	W	C,N,ST	L	High	Low	Medium
Uses: Residences, shade, parks, boulevards. Notes: Suitable for wet sites. Flowers summer through fall. Can be difficult to establish.								
Halesia caroliniana	Silverbell	Slow	A	N	L	Medium	Low	High
Uses: Parks, residences. Notes: Pretty flowering tree for part shade. *H. diptera* also native.								
Ilex cassine	Dahoon holly	Medium	A	C,N,ST	M	High	Medium	Low
Uses: Parks, perimeters, residences. Notes: Red-berried. Suitable for wet sites.								
Ilex opaca	American holly	Slow	A	C,N	M	Medium,High	Medium	Medium
Uses: Boulevards, residences, parks. Notes: Showy red berries in winter.								
Ilex vomitoria	Youpon holly	Medium	A	C,N,ST	H	Medium	High	Medium, High
Uses: Parking lots, parks, perimeters, residences Notes: Showy red fruit on female trees. Often shrubby. Takes pruning well.								
Juniperus silicicola	Southern juniper	Medium	W	C,N,ST	H	High	High	Low
Uses: Perimeters, parks, residences, buffers. Notes: Well adapted to different site conditions.								
Juniperus virginiana	Eastern red cedar	Slow	W	N	M	High	Medium	Low
Uses: Buffers, parks, perimeters, residences. Notes: Many cultivars available, but most may not be adaptable to Florida.								

Table 2. Environmental Requirements

Scientific Name	Common Name	Growth Rate	Soil pH[1]	Hardiness Zone[2]	Salt Tol.[3]	Light Requirements	Drought Tol.	Nutritional Needs
Liquidambar styraciflua	Sweetgum	Fast	W	C,N	M	High	High	Low
Uses: Residences, parks, shade, buffers. Notes: Attractive fall color. Spiny fruits.								
Liriodendron tulipfera	Tulip tree	Fast	W	C,N	L	High	Low	Medium
Uses: Residences, parks, boulevards, shade. Notes: Very columnar trunk.								
Magnolia ashei	Ashe magnolia	Medium	A	N	L	Medium	Low	High
Uses: Parks, residences. Notes: Threatened species. Good in woodland understory.								
Magnolia fraseri var. pyramidata	Pyramid magnolia	Fast	A	N	L	Medium	Low	High
Uses: Parks, shade, residences. Notes: Difficult in cultivation.								
Magnolia grandiflora	Southern magnolia	Medium	A	C,N,ST	H	Medium,High	High	Medium
Uses: Residences, parks, shade, perimeters, buffers. Notes: This tree has large, leathery leaves and showy flowers. Will take part shade. T-scale can be a problem.								
Magnolia virginiana	Sweetbay	Medium	W	C,N,ST,T	L	High	Low	Medium
Uses: Residences, shade, parks, medians, boulevards. Notes: Good for wet sites. Attractive silvery foliage.								
Malus angustifolia	Crab apple	Medium	W	N	L	High	Low	Medium
Uses: Parks, residences. Notes: Edible fruit. Short-lived. Susceptible to tent caterpillars and cedar-apple rust.								
Myrica cerifera	Wax myrtle	Medium	W	C,N,ST	H	High	High	Low
Uses: Residences, parks, buffers. Notes: Can be weedy. Root suckers. Stains masonry. Very low maintenance.								
Nyssa aquatica	Water tupelo	Slow	A	C,N	L	High	Low	Medium
Uses: Parks, residences. Notes: Excellent for very wet sites. Early fall color.								
Nyssa slyvatica	Black tupelo	Medium	W	C,N	L	High	Low	Low
Uses: Shade, residences, boulevards, parks. Notes: Best suited for wet sites. Good fall color.								
Ostrya virginiana	Eastern hophornbeam	Medium	W	C,N	L	Medium	High	Low
Uses: Medians, parks, parking lots, residences. Notes: Intolerant of wet soil. Grows well in poor, dry soil. Few pests.								
Oxydendron arboreum	Sourwood	Medium	A	N	L	High	Medium	Medium
Uses: Parks, residences. Notes: Good nectar source for honey.								
Pinus clausa	Sand pine	Slow	W	C,N,ST	H	High	High	Low
Uses: Parks, shade, residences. Notes: Very tolerant of dry, sandy soil.								
Pinus glabra	Spruce pine	Medium	A	C,N	L	High	Low	Medium

Table 2. Environmental Requirements

Scientific Name	Common Name	Growth Rate	Soil pH[1]	Hardiness Zone[2]	Salt Tol.[3]	Light Requirements	Drought Tol.	Nutritional Needs
Uses: Perimeters, parks, parking lots. Notes: Susceptible to pine blister rust and borers. Attractive bark texture.								
Pinus palustris	Longleaf pine	Medium	W	C,N	L	High	High	Low
Uses: Parks. Notes: A common timber tree.								
Pinus serotina	Pond pine	Medium	A	C,N	L	High	Medium	Medium
Uses: Parks. Notes: Extermely tolerant of high and fluctuating water tables.								
Pinus taeda	Loblolly pine	Medium	W	C,N	L	High	High	Low
Uses: Parks. Notes: A tree used for lumber and pulpwood.								
Planera aquatica	Water elm	Slow	A	N	L	High	Low	High
Uses: Parks. Notes: Rare elm relative with excellent flood tolerance.								
Plantanus occidentalis	Sycamore	Fast	W	C,N,ST	L	High	Low	Medium
Uses: Parks, residences, shade, boulevards. Notes: Large, deciduous tree suited for moist sites. Exfoliating bark.								
Prunus caroliniana	Cherry laurel	Medium	W	C,N	L	Medium,High	Medium	Medium
Uses: Residences, parks. Notes: Will not tolerate hot, dry locations.								
Prunus umbellata	Flatwoods plum	Fast	W	C,N	L	Medium	Low	Medium
Uses: Perimeters, parks, residences. Notes: Edible fruit, but fruit quality variable. Early spring color. Tent caterpillars a problem.								
Ptelea trifoliata	Hoptree	Slow	W	N	L	Medium	Medium	Medium
Uses: Parks, buffers, perimeters. Notes: Flowers can be foul-smelling. Shrubby. Can be used as an informal hedge.								
Quercus alba	White oak	Medium	A	N	H	High	Medium	Low
Uses: Parks, parking lots, perimeters, residences, shade. Notes: Long-lived. Can be difficult to transplant.								
Quercus austrina	Bluff oak	Medium	A	N	L	High	Low	High
Uses: Parking lots, shade. Notes: A little-used native oak. Attractive bark.								
Quercus chapmanii	Chapman oak	Slow	W	C,N	M	High	High	Low
Uses: Parks, residences, medians, boulevards. Notes: A good, native oak for sandy sites.								
Quercus incana	Bluejack oak	Slow	W	C,N	L	High	High	Low
Uses: Residences, parks, shade, boulevards. Notes: A tough oak species suitable for poor soil.								
Quercus laevis	Turkey oak	Slow	W	C,N	L	High	High	Low
Uses: Residences, parks, boulevards. Notes: Excellent for dry, sandy sites.								
Quercus laurifolia	Laurel oak	Fast	W	C,N,ST	L	High	High	Low

Table 2. Environmental Requirements

Scientific Name	Common Name	Growth Rate	Soil pH[1]	Hardiness Zone[2]	Salt Tol.[3]	Light Requirements	Drought Tol.	Nutritional Needs
Uses: Shade, residences, parks, boulevards. Notes: A fast-growing, but comparatively short-lived oak.								
Quercus michauxii	Swamp chestnut oak	Medium	A	N	L	High	Low	High
Uses: Parks. Notes: Iron and magnesium chlorosis on some soils. Handsome specimen where there is room for it.								
Quercus myrtifolia	Myrtle oak	Slow	W	C,N	M	High	High	Low
Uses: Parks, residences, shade, boulevards. Notes: A small, native oak good for dry, sandy sites.								
Quercus nigra	Water oak	Fast	W	C,N	L	High	High	Low
Uses: Residences, shade, parks, boulevards. Notes: Perfers moist, sandy sites. Relatively short-lived.								
Quercus shumardii	Shumard oak	Slow	A	C,N	L	High	Medium	Medium
Uses: Medians, parking lots, parks, residences, shade. Notes: Few pest of disease problems. Red fall color. Handsome street tree.								
Quercus virginiana	Live oak	Medium	W	C,N,ST	H	High	High	Low
Uses: Shade, boulevards, parks, residences. Notes: A wind-resistant, long-lived oak.								
Sabal palmetto	Cabbage palmetto, sabal palm	Slow	W	C,N,ST,T	H	High	High	Low
Uses: Residences, parks, boulevards, parking lots, medians, perimeters. Notes: Florida's state tree. Small plants are difficult to transplant.								
Salix caroliniana	Coastal plain willow	Fast	W	C,N,ST	L	High	Low	Low
Uses: Parks. Notes: Grows in wet areas around lakes and ponds.								
Sassafras albidum	Sassafras	Fast	W	N	L	Medium	Low	Medium
Uses: Parks, perimeters. Notes: Spreads by runners. Leaves have spicy odor when crushed.								
Stewartia malacodendron	Virginia stewartia	Slow	A	N	L	Medium	Low	High
Uses: Parks, residences. Notes: Attractive bark. Often shrubby. Best in part shade.								
Styrax grandifolia	Snowbell	Medium	A	N	L	Medium	Low	High
Uses: Parks, residences, shade. Notes: Shade-tolerant. Can be trained as a shrub.								
Symplocos tinctoria	Sweetleaf	Medium	A	N	L	Medium	Low	High
Uses: Parks, residences. Notes: A shade-tolerant native for moist sites. Sweet-tasting leaves.								
Taxodium distichum	Bald cypress	Medium	W	C,N,ST	M	High	High	Low

Table 2. Environmental Requirements

Scientific Name	Common Name	Growth Rate	Soil pH[1]	Hardiness Zone[2]	Salt Tol.[3]	Light Requirements	Drought Tol.	Nutritional Needs
Uses: Parks, shade, residences. Notes: Pyramidal growth habit when young. Variety *nutans* common and more upright.								
Tilia caroliniana	Carolina basswood	Medium	A	C,N	L	High	Low	High
Uses: Parks, residences. Notes: Best on fertile, moist soil.								
Tilia floridana	Florida basswood	Fast	A	C,N,ST	L	Medium	Low	High
Uses: Buffers, parks, residences, shade. Notes: Sprouts vigorously from base. Good nectar source for bees.								
Torreya taxifolia	Florida nutmeg	Fast	A	C,N,ST	L	Medium	Low	High
Uses: Parks, residences. Notes: Rare and endangered native conifer.								
Ulmus alata	Winged elm	Medium	W	C,N	L	High	High	Medium
Uses: Residences, parks, medians, boulevards. Notes: Interesting corking, winged bark.								
Ulmus americana	American elm	Fast	W	C,N	L	High	Medium	Medium
Uses: Parks, residences, shade, boulevards. Notes: Susceptible to Dutch elm disease.								
Vaccinium arboreum	Sparkleberry	Medium	W	C,N	L	High	Medium	Medium
Uses: Parks, perimeters. Notes: A blueberry relative with wide soil tolerances. Often shrubby.								
Viburnum rufidulum	Rusty blackhaw	Medium	W	C,N	L	Medium,High	Medium	Medium
Uses: Parks, residences. Notes: Largely pest-free. Attractive fruit.								
Zanthoxylum clava-herculis	Hercules' club, Toothache tree	Medium	W	C,N,ST	M	Medium	High	Medium
Uses: Buffers, perimeters, parks. Notes: Thorny.								
[1]Soil pH: **W** = Wide, **A** = Acid								
[2]Hardiness Zone: **C** = Central, **N** = North, **ST** = Subtropical, **T** = Tropical								
[3]Salt Tolerance, **L** = Low, **M** = Medium, **H** = High								