





NATIVE PLANT MATERIALS FOR URBAN LANDSCAPES



PLANT MATERIALS TEAM

Donald Surrency, Plant Materials Specialist, Team Leader (Alabama, Georgia, South Carolina) Athens, Georgia

Charles Owsley, PMC Manager, Jimmy Carter PMC Americus, Georgia

Malcome Kirkland, Asst. Manager, Jimmy Carter PMC Americus, Georgia

Larry Vanzant, Biological Technician Americus, Georgia

Annette Potter, Secretary/Computer Specialist Thomson, Georgia

Prepared & Edited by: Donald Surrency, Plant Materials Specialist – Team Leader USDA-NRCS, Athens, Georgia

Lina Undayag, Program Assistant USDA-NRCS National Plant Materials Center, Beltsville, Maryland

TABLE OF CONTENTS

PLANT MATERIALS FOR URBAN LANDSCAPES	1
INTRODUCTION	1
City Parks	2
Olympic Sites	4
5 YEARS AFTER THE OLYMPICS	6
GRANT PARK	9
PHOENIX III PARK, ATLANTA	10
WOLF CREEK VENUE	15
PHOENIX III	16
PHOENIX II PARK	19
PHOENIX III PARK	
PHOENIX III PARK	21
URBAN STREAMBANK STABILIZATION	23
FAILED SEPTIC SYSTEMS	
STORMWATER RUNOFF	
MUNICIPAL WASTEWATER TREATMENT	
NATIVE PLANT INFORMATION GUIDES (PERENNIALS, TREES AND	
ORNAMENTALS)	

PLANT MATERIALS FOR URBAN LANDSCAPES

INTRODUCTION

The use of native plants in urban ecosystems for erosion control is rapidly increasing in popularity. To advance the technology propagation techniques, cultural establishment and management requirements, the selection of well adapted native species and other technical information must be developed. Therefore, agencies and private consultants have limited information available on native plants for urban ecosystems.

Native plants have a wide range of application, aesthetic value, low cost, and the innate ability to improve an ecosystem. They have the potential to improve water quality because they require fewer nutrients (commercial fertilizers that leach into the groundwater) than hybrid plants and non-native species. In addition, they can also restore wetlands, stabilize streambanks, provide buffer zones, control erosion, help purify the air, beautify the landscape, improve habitat for wildlife and to reduce contaminates in storm water runoff.

In 1993, an urban conservation initiative in Metropolitan Atlanta, Georgia was begun to emphasize and demonstrate the use of native plant species. In addition, the Natural Resources Conservation Service (NRCS) was requested by the City of Atlanta to provide plant materials assistance to stabilize and enhance more than 20 city parks that will be impacted by the 1996 Olympic games. The Atlanta Committee for the Olympic Games requested technical assistance and erosion control guidance at four (4) Olympic venue sites and the Centennial Park.

1

As Atlanta and other southern cities experience rapid growth, solutions are needed to ease the strain on infrastructures and natural resources. Some of the resource problems and conditions facing Atlanta include poor water quality, soil erosion and sedimentation, inadequate water supplies, deterioration of streambanks, misuse of environmentally sensitive land, air pollution, inadequate waste treatment operations and poor storm water management.

Few agencies or private consultants provide information about using native plants as treatment method for natural resource problems. The Urban Plant Materials Center can fill that market niche. NRCS tested native plant at public sites throughout Atlanta and the plant list included hundred of native species of native trees, shrubs, perennials and grasses. The native plant program is an ideal showcase for teaching the public how native plants can be used in urban landscapes.

Urban landscapes can reap the benefits of native species. Their use as a water conserving alternative to the traditional lawn eliminates the need for expensive irrigation equipment. Additionally, costs associated with maintenance and chemical applications are drastically reduced.

City Parks

In 1996, the Natural Resources Conservation Service (NRCS) Jimmy Carter Plant Materials Center assembled and propagated native species to stabilize and enhance city parks in Atlanta for the Olympic Games.

2

Native species (grasses, trees and shrubs) were selected for streambank stabilization, erosion control, restoring wetlands, buffers and improving aesthetics in urban areas.

At Grant Park where approximately 150,000 people visit annually provided the ideal location to design and plant a self guide tour of native plants that were used for erosion control, beautification and water quality.

Grant Park in downtown Atlanta is a showcase for the NRCS Plant Materials Native Plant Program. Native species were planted throughout the park and were monitored and evaluated by NRCS plant materials specialists. Since 1996 the native species have helped to prevent erosion, provides food and shelter for wildlife, rebuilding depleted soils and restores the natural beauty of Grant Park.

Because hundred of thousands of Georgians visit Grant Park each year to relax, recreate or to take in the Atlanta Zoo or the Civil War museum; the park offers an ideal setting for public education.



This KIOSK was developed and installed in the summer of 1996 as a community outreach project. The KIOSK is located between the entrance to the zoo and museum. It offers information about the native plants growing in Grant Park; including maps and brochures that lead visitors on a walking tour. The KIOSK features nine of the native that can be found in the park's 28 native plant beds and encourages the public to explore the benefits native plants offer in urban environments.

Olympic Sites

The Jimmy Carter Plant Materials Center provided the plant technology to establish native species at four (4) Olympic venue sites and Centennial Park.

Native warm-season grasses for Wolf Creek Shooting venue consisted of a mixture of switchgrass, indiangrass, big bluestem, little bluestem and a Southeast wildflower mix for beautification. The barren slopes, droughty soil conditions, rock outcropping made it very difficult to stabilize the abandoned landfill.



Wolf Creek Shooting venue in 1999, 3 years since native grasses were planted. No second year fertilization or maintenance has been done.

5 YEARS AFTER THE OLYMPICS



Wolf Creek site – This area was planted on May 31st, 1996. This site was hydroseeded with Indiangrass, Switchgrass, Little Bluestem, Kleingrass and Southeastern Wildflower mix. After planting the area, no mowing or fertilizer has been added. Seven pounds of each seed was mixed per 1000 gallon tank. (Size of the Hydroseeder).



Wolf Creek Venue – Mixture of Switchgrass and Indiangrass.



Wolf Creek Venue – Wet areas that consists of Indiangrass, Switchgrass, Pink Muly, and River Birches.



Wolf Creek Venue – Wet areas that consist of Indiangrass, Switchgrass, Pink muly and River Birches.



Wolf Creek Venue – A mixture of klein grass, switchgrass, Indiangrass, and little bluestem.

GRANT PARK



Grant Park – Native azaleas in bloom. A native plant self guided walking tour was developed for Grant Park.

PHOENIX III PARK, ATLANTA



Phoenix III – Corner of Georgia Avenue and Hill Street. Canna lily and Chinese Snowball.



Phoenix III – Corner of Georgia Avenue and Hill Street. Canna lily and Chinese Snowball.

PHOENIX III PARK



Phoenix III Park – Hill Street – Scarlet hibiscus and Blackeyed Susan.

PHOENIX II PARK



Phoenix II Park – Georgia Ave. – Switchgrass and Marsh Mallow.

PHOENIX III PARK



Phoenix III Park – Corner of Connally Street and Georgia Ave. Smooth hydrangea, Scarlet Hibiscus, Marsh Mallow and Canna Lily. These plants are good for zeroscaping because of low moisture and nutrient requirements.

PHOENIX II



Phoenix II – Georgia Ave. – A plant that is truly out of place but have performed extremely well. Virginia Sweetspire is a plant that can survive in dry, hot as well as moist and shady locations.

WOLF CREEK VENUE



Wolf Creek Venue – The entrance to the parking lot area. This area has not been maintained since it was planted in May 1996. Plants pictured are Ogeechee Lime, River Birch, Little Bluestem, switchgrass, Black eyed Susan and eastern gamagrass.

PHOENIX III



Phoenix III – Corner of Georgia Ave. and Connally Street. Plants shown are Scarlet Hibiscus, Marsh Mallow and Lantana.

PHOENIX III



Phoenix III – Georgia Ave. – Cave-In-Rock Switchgrass (Panicum virgatum) plants grouped together makes an excellent urban planting. The low moisture and nutrient requirements are an advantage.

PHOENIX III



Phoenix III – Georgia Ave. – A grouping of Virginia Sweetspire and Sweetshrub native plants enhances the aesthetics in urban landscapes.

PHOENIX II PARK



Phoenix II – Corner of Georgia Ave. and Martin Street. Switchgrass and Marsh Mallow are good native companion plants to use in urban areas.

PHOENIX III PARK



Phoenix III – Georgia Ave. – Marsh mallow and Switchgrass.

PHOENIX III PARK



Phoenix III – Inside the park shot of a grouping of Switchgrass.



Phoenix III Park – A beautiful assortment of False Blue Indigo, Switchgrass, and Sweetshrub. All plant were planted in May 1996.

PHOENIX II



Phoenix II Park – Along the sidewalk Hypericum frondosum has performed extremely well under the condition in this park. These plants were planted May 1996. Since this time these plants have not received any additional care (water or fertilizer).



URBAN STREAMBANK STABILIZATION

Urban Conservation – Gwinett County

AmericaCorp members tie black willow cuttings to create live fascines. After these are installed they will sprout to form a dense thicket and root mat.



A combination of live fascines, core fabric brush mattresses live stakes, seeding and mulching has been installed.

Native Plant Materials for Urban Landscapes



Urban Streambank Stabilization – Gwinett County



Urban Streambank Stabilization – Gwinett County

One year after installation, live stakes, fascines, brush mattresses, and seed provide stabilization.



District Conservationist Steve Leslie inspects urban streambank stabilization site after one growing season.



Streambank stabilization techniques shown here include tree and shrub plantings, live stakes, fascines, brush mattresses, seeding, riprap and grading and shaping.

Failed Septic Systems

Problems from urban areas, failed home septic tank systems and other land disturbing activities continue to detrimentally impact 30-50% of our nations waterways. The treatment of wastewater from small towns, communities and municipalities is a serious problem. Constructed wetlands have received considerable attention as a low cost efficient (BMP) best management practice for solving problems associated with failed septic systems, municipal wastewater treatment and stormwater management.

The USDA-NRCS Jimmy Carter Plant Materials Center has developed the plant technology on the recommended native wetland plants to use in constructed wetlands for failed septic systems, municipal wastewater treatment and stormwater management. Two wetland plants have been tested and released as new plant varieties that can tolerate nutrient concentrations that exist in the wastewater.



Constructed wetland on Lake Murray, South Carolina is effective.



Failed Septic System in Warrenton, GA – New system provides adequate treatment of the wastewater from the resistance. Plants were evaluated and selected from study located in South Carolina, North Carolina, Georgia, and Alabama.

Stormwater Runoff

The 1987 amendments to the Clean Water Act focused attention on urban runoff. Stormwater (runoff) is the surface and ground water that results from precipitation. In developed areas, urban stormwater is the major component of sewer and stream flows. As an areas becomes more developed the maximum rate and volume of runoff rise; the amounts of pollutants carried in these water increase accordingly.

Storm-water treatment wetlands are small, constructed ecosystems designed to enhance stormwater quality that has suffered as a result of urbanization and development. These natural systems can be aesthetically integrated into a variety of developments as part of the functioning drainage and landscaping.

To function, the wetland must be designed to create a shallow basin of soil, plants, water and detritus that collectively remove several types of pollutants through physical, chemical and biological processes. These processes all occur naturally and are only enhanced by design. Sedimentation is the dominant removal process for particulate pollutants operating within a storm-water treatment wetland. Sheet flow conditions across the wetland reduce runoff velocities. In addition, hydraulic resistance and physical filtration are supplied by the vegetation, which enhances sediment removal. The root network of the plants helps secure sediments, reducing the potential for resuspension. A second removal process is the adsorption of pollutants to the surfaces of bottom sediments, wetland vegetation and organic detritus. Adsorption is a key removal process for phosphorus, trace metals and certain hydrocarbons.



Mobile, AL – Stormwater Constructed Wetland treats runoff from parking lot at Hank Aaron Baseball Stadium.



Hilton Head, SC

Stormwater System will treat runoff from 100 acre Condo development in Hilton Head, SC. The series of wetlands will treat 100% of the stormwater that drains from the parking decks, streets, roof tops and lawns. Stormwater treatment wetland systems offer a new management technique for addressing stormwater quality, TMDL, as well as addressing flood mitigation, habitat creation, and aesthetics. These systems can be designed into new developments or integrated into the drainage paths of existing developments with relative ease.

Municipal Wastewater Treatment



Augusta, GA – Municipal Constructed Wetland System.

There are more than twenty (20) municipal wastewater systems in operation in Georgia. The 500 acre constructed wetland system in Augusta, Georgia is the largest in the Southeast.



Lakeland, Georgia. Most of the municipal constructed wetland systems are providing adequate treatment for small towns and communities, such as Lakeland, Georgia.

Native Plant Information Guides

These plant information guides provide valuable information for plant uses in urban landscapes. Information on flower color, bloom time, foliage, hardiness zones, height spacing, light requirements, cultural requirements is available on native plant materials.

Perennial Information Sheets												
Botanical Name (Common Name)	Flower Color	Bloom Time	Foliage	Hardiness Zone	Height	Spacing	Light Require- ments	Cultural Require ments	Fertilization Schedule	Other Comments		
Amsonia cilata (Texas Bluestar)	Pale blue	Early spring	Dormant in winter	7-8	1'-2'	1'-2'	Sun to afternoon sun	Dry, san	d preferred	Needs good drainage		
Andropogon ternarius (Spilit Beard Bluestem)	Silvery- white	Late summer to mid-fall	Coppery in fall and winter	6-9	2'-5'	2'	Sun	Dry				
Andropogon virginicus (Broomsedge)	Blooms not showy	Late summer to late fall	Copper brown in fall	6-11	2'-5'	2'	Sun to afternoon sun	Dry to moist				
Arundo donax (Giant reed)	I											
Asarum arifolium (Wild Ginger)	Purply- brown	Spring	Not evergreen	3-7	3"-5" carpet	1'	Shade to morning sun	Moist				
Asclepias tuberosa (Bufferfly Weed)	Orange	Early Summer	Dormant in winter	4-9	18'-30'	2'-3'	Sun to afternoon sun	Heat and d	rought tolerant	Unusual seed pods		
Baptisia alba (White False Indigo)	White	Early Summer	Dormant in winter	5-9	2'-3'	2'	Sun	Moist				
Canna (Mixed Canna Lilies)	Varies: yellow, orange, pink, red	Summer to early fall	Dormant in winter	Perennial in zones 7- 10	Varies: 18"-7'	9"-18"	Sun to morning sun	Dry to moist				
Chasmanthium latifolium (River Oat Grass)	Green seed heads in summer	Summer	Dormant in winter	6-8	2'-5'	2'-3'	Part shade	Moist		Pale gold fall color		
Coreopsis auriculata (Mouse Ear Coreopsis)	Yellow to gold	Early to mid-spring	Rosettes almost evergreen	6-8	16"-24" in bloom	1'	Sun to afternoon sun	Moist				

			Pere	nnial Info	rmatior	n Sheets				
Botanical Name (Common Name)	Flower Color	Bloom Time	Foliage	Hardiness Zone	Height	Spacing	Light Require- ments	Cultural Require ments	Fertilization Schedule	Other Comments
Coreopsis lanceolata (Lanceleaf Coreopsis)	Yellow	Late spring		3-8	1'-2'	Spread 2'	Sun	Well-d	rained soil	Should deadhead
Dicentra exima (Fringed Bleeding Heart)	White to pink or purple	Early spring to frost	Sometimes evergreen	To zone 6	9"-12"	Forms 12"- 18" clumps	Shade	Moist		Bluish-green fern-like foliage
Echinacea purpurea (Purple Coneflower)	Purple	Early summer to frost	Dormant in winter	3-9	40"	18"-24"	Sun to afternoon sun	Dry to Moist		
Eragrostis spectabilis (Purple Lovegrass)										
Eupatorium coelestinum (Wild Ageratum)	Lavandar- blue	Late summer to mid-fall	Dormant in winter	6-9	18"-24"	2'-3'	Sun to part shade	Moist to dry		
Geranium maculatum (Wild Geranium)	Pink, white, lavender	Early spring	Almost evergreen	5-8	1'-2'	2' in drifts	Shade to morning sun	Moist		
Hemerocallis (Mixed)	Varies: many shades except blue	Late spring to fall	Dormant in winter	3-9	Varies: 12"-48"	15"-30"	Sun to part sun	Dry to Moist		
Humerocallis fulva L. 'Sumter Orange' (Sumter Orange Daylily)	Orange					12"	Sun to shade	Moist, friable soil	At planting 300#/ac 5-10-15 Maintenance: 300#/ac 5-10-15 early spring & at flower bud	Reproduces rapidly by underground stolons
Hymenocallis caroliniana (Spiderlily)	White	Early spring	Dormant in winter	6-10	2'	2'-3'	Sun to part shade	Use in wa	ter or garden	
Heuchera americana (Coral Bells)	Pale yellow or purple	Early spring	Almost evergreen	5-8	18"	2'	Shade to morning sun	Moist to dry		

Perennial Information Sheets												
Botanical Name (Common Name)	Flower Color	Bloom Time	Foliage	Hardiness Zone	Height	Spacing	Light Require- ments	Cultural Require ments	Fertilization Schedule	Other Comments		
Iris brevicaulis (Lamance Iris)	Blue-violet			5	8"-10"		Sun	Medium Wet		cover tuber when planting		
Iris cristata 'Alba' (White Crested Iris)	White	Early Spring	Dormant fall to April	5-7	6"	1'	Shade to morning sun	Moist				
Iris fulva (Red Louisiana Iris/Copper Iris)	Brick red to orange	Early spring	Evergreen in shallow water or flower bed	6-9	18" to 5'	12" -18"	Sun to afternoon sun	Moist; seas	onally flooded	Cover tuber when planting		
Iris hexagona (Dixie Iris)	•									Cover tuber when planting		
Iris (Mixed)												
Juncus effusus (Soft Rush)					24"-36"	18"-24"		Moist				
Lantana camara (Common Lantana)	White, yellow, pink, orange	Summer to fall	Semi-evergreen	9-10	2'-4'	Spread: 2'- 6'	Sun	Dry to Moist				
Lantana camara 'New Gold' (Yellow Lantana)	Yellow	Sum	mer to fall	9-10			Sun					
Lobelia cardinalis (Cardinal Flower)	Red	Late summer to October	Short-lived; winter rosette; reseeds	4-10	2'-4'	1'	Sun to part shade	Moist to wet				
Marshallia grandiflora (Barbara's Button)	White to pale pink	Late Summer to early fall	May have winter rosette	7-8	18"-3'	1'	Sun to afternoon sun	Moist to wet		Fragrant flowers		

Perennial Information Sheets											
Botanical Name (Common Name)	Flower Color	Bloom Time	Foliage	Hardiness Zone	Height	Spacing	Light Require- ments	Cultural Require ments	Fertilizatio n Schedule	Other Comments	
Mitchella repens (Partridge Berry)	Bloom: White Fruit: Red	Bloom: Fall Fruit: fall and winter	Evergreen	4-8	1"-2"mat	1'	Sun to s	shade			
Monarda didyma (OswegaTea)	Red	Late spring, early summer	Winter Rosette	5-7	2'-4'; sometime s 6'	3'	Sun to part shade	Moist			
Monarda fistulosa (Bee Balm, Wild Bergamot)	White to purple	Late spring, to m	nid-summer	4-8	2'-4'; sometime s 6'	3'	Sun	Moist to dry			
Muhlenbergia capillaris (Sweetgrass)	Pink	Early fall	Almost evergreen	6-11	18"-4'	2'	Sun	Moist to dry			
Oenothera tetragona (Sundrops)	Yellow	Mid-spring to early summer	Reddish winter rosette	5-8	1'-2'	2'	Sun to part shade	Moist to dry			
Panicum virgatum (Switchgrass)	Greenish	Mid-summer to fall	Dormant in winter	4-9	3'-4'	3'	Sun to afternoon sun	Moist			
Pentstemon digitalis (Beardtongue)	White	Late spring to early summer	Winter Rosette	4-9	18"	2'	Sun to afternoon sun	Moist to dry			
Peltandra virginica (Green Arum)	Greenish- yellow	Late spring	Dormant in winter	5-9	1'-2'	2'	Sun to part shade	Shallow,	fresh water or bog		
Phlox carolina (Carolina Phlox)	pink, white, lavender	early to mid- summer	Winter rosette	6-8	1'-3'	18"	Sun to part shade	Moist preferred			
Phlox pilosa (Downy Phlox)	pink to purple	early spring to early summer	Dormant after blooming	4-8	8"-20"	1'	Sun to part shade	Dry			

			Peren	nial Info	rmatio	n Sheet	ts			
Botanical Name (Common Name)	Flower Color	Bloom Time	Foliage	Hardiness Zone	Height	Spacing	Light Require- ments	Cultural Require ments	Fertilization Schedule	Other Comments
Pityopsis graminfolia (Sildgrass Golden Aster)	Dark yellow	late summ	er to late fall	6-11	1' with a 1'-3' bloom stalk	1'	Sun to part shade	Dry to m	oist with good c	Irainage
Polystichum acrostichoides (Christmas fern)	N/A	N/A	Evergreen	5-10	18"-24"	2'	Shade to morning sun	Moist		
Pontederia cordata (Pickerel Weed)	Purple	Late spring to early fall	Dormant in winter	4-9	2'-4' above water	2'	Sun to afternoon sun	Water		
Rudbeckia fulgida 'Goldsturm' (Black-eyed Susan)	Golden yellow	Late summer to early fall	Winter Rosette	6-8	2'-3'	3'	Sun to part shade	Moist		
Rudbeckia hirta (Black-eyed Susan)	Golden yellow	June- August	Reseeding annual	3-9			Sun to part shade	Dry to moist		
Salvia farinacea 'Victoria' (Perennial Blue Salvia)	Violet-blue	Summer to early fall	Dormant in winter	Half-hardy perennial	18"		Sun			
Salvia lyrata (Lyreleaf Sage)	Pale blue to white	Early spring	Evergreen	6-9	2"-4" mat 1'-2' flowers	1'	Sun or shade	Dry or sea	sonally wet	
Schizachyrium scopariu (Little Bluestem)	ım							Moist to dry		
Sedum neveii (Creeping Sedum)	White				3"-4"	12"	Sun	Moist to dry		
Senicio aureus (Golden Ragwort)	Yellow	Early spring to summer	Evergreen	3-9	2"-4" mat, 2'-3' in bloom	18"	Sun to shade	Moist to Dryish		

Perennial Information Sheets											
Botanical Name (Common Name)	Flower Color	Bloom Time	Foliage	Hardiness Zone	Height	Spacing	Light Require- ments	Cultural Require ments	Fertilization Schedule	Other Comments	
Silene virginica (Fire Pink)	Red	Mid- spring to mid summer	Reddish green in winter	4-8	1'	18"	Shade to part shade	Moist to dry			
Sorghastrum nutans (Indian Grass)	Bright gold	Late sumi f	mer to early all	3-9	4'-5'	3'-5'	Sun	Dry to moist			
Spartina patens 'Sharp' (Cord Grass)		I									
Stokesia laevis (Stokes Aster)	Blue, white	Summe	r-early fall	5-9	20"-24"	12"-18"	Sun	Dry to moist			
Tradescantia virginiana (Virginia Spiderwort)	Blue to lavendar	Early spring to summer in the morning	Evergreen	5-8	2'	2'	Sun to shade	Dry to moist			
Tridens flavus (Purpletop)											
Verbena canadensi 'Homestead Purple' (Rose Verbena)	Purple	Spring to fall	Dormant in winter	7-10	18"	1"	Sun	Dry to moist			
Xanthorhiza simplicissima (Yellow Root)	Purplish		Deciduous	5	2'		Shade	Average			

			Tre	e Inform	ation \$	Sheets				
Botanical Name (Common Name)	Flower Color	Bloom Time	Foliage	Hardiness Zone	Height	Spacing	Light Require- ments	Cultural Require ments	Fertilization Schedule	Other Comments
Acer rubrum (Red Maple)	Males: Red	Early spring	Deciduous	3-9	50'-120'	50'-100'	Sun to part sun	Wet to dry		
Acer saccharum 'Legacy' (Sugar Maple)	Greenish- yellow	April	Deciduous	4-8	60'-75'	Spread 2/3 of height	Sun to shade	Moderat	ely moist	Good fall color
Aesculus flava (Yellow Buckeye)	Yellow	May		3-8	60'-75'		Full sun to part shade	Moist, will-drained		
Aesculus pavia (Red Buckeye)	Red	Early spring	Deciduous	6-8	15'-25'	25'	Part sun	Moist		
Amelanchier x grandiflora 'Autumn Brilliance' (Downy Serviceberry)	White	March	Deciduous	4-9	20'-25'	Spread: varies	Full sun to part shade	Moist to dry		Good fall color
Asimina triloba (Common pawpaw)	Maroon	Early spring	Deciduous	6-8	5'-20'	20'	Sun to shade	Moist		Green fruit
Betula nigra (River Birch)	Yellow-green	Early spring	Deciduous	4-8	50'-90'	Grove:30' Specimen 80'	Sun	Wet to moist		
Cercis canadenis (Eastern Redbud)	Rosy purple	Early spring	Deciduous	5-8	20'-35'	30'	Sun to part sun	Moist to dry		Fruit: 2"-3" beans

Tree Information Sheets												
Botanical Name (Common Name)	Flower Color	Bloom Time	Foliage	Hardiness Zone	Height	Spacing	Light Require- ments	Cultural Require ments	Fertilization Schedule	Other Comments		
Chionanthus virginicus (Fringetree)	White	Early spring	Deciduous	6-9	20'-30'	20'	Sun to part sun	Moist to dry		Nuts in fall		
Cornus kousa (Kousa Dogwood)	Creamy white	May or June	Deciduous	5-8	20'-30'	Spread: 20'-30'	Sun	Acid, well-dı	ained, sandy			
Fagus grandifolia (American Beech)	Yellow-green	Spring	Deciduous	4-8	70'-80'	Grove: 50' Specimen 75'-100'	Shade to part sun	Moist		Nuts infall		
Hamamelis macrophylla (Southern Witchhazel)	Yellow	November	Deciduous	3-8	15'-30'	20'-25'	Sun or shade	Moist		Good fall color		
Hamamelis virginiana 'Arnold's Promise' (Witchhazel)	Yellow	Fall to early winter	Deciduous	5-8	15'-20'	30'-40'	Shade to part sun	Moist to dry				
Ilix vomitoria (Yaupon Holly)	Greenish white	Mid April	Evergreen	7-10	15'-20'	Less than h	eight in spread	Dry to wet		Scarlet fruit		
Illicium floridanum (Florida Anise Tree)	Maroon to red	Early spring	Evergreen	8-9	15'-25'	10'-20'	Shade to part sun	Moist to wet				
Liriodendron tulipifera (Tulip Poplar)	Yellow-green	Late spring or early summer	Deciduous	5-8	75'-100'	35'-50'	Sun to part sun	Moist				

Tree Information Sheets													
Botanical Name (Common Name)	Flower Color	Bloom Time	Foliage	Hardiness Zone	Height	Spacing	Light Require- ments	Cultural Require ments	Fertilization Schedule	Other Comments			
Magnolia grandiflora (Southern Magnolia)	Creamy white	Late May and June	Evergreen	8-9	60'	Specimen: 50' Screen: 10'	Shade to part sun	Moist					
Magnolia pyramidata (Pyramid Magnolia)	White	June	Deciduous	6-9	10'-20'								
Oxydendrum arboreum (Sourwood)	White	Mid Summer	Deciduous	6-8	20'-30'	20'	Sun to part sun	Moist to dry					
Prunus carolinia (Carolina Cherrylaurel)	White	March- April	Evergreen	7-10	20'-30'	15'-25'	Full sun to part shade	Moist					
Quercus alba (White Oak)	Yellow	Early spring	Deciduous	4-8	50'-100'	Grows wider than tall	Sun to part sun	Moist, we	ell-drained	Fall: Large Acorns			
Quercus coccinea (Scarlet Oak)			Deciduous	4-9	70'-75'	Spread: 40'-50'	Full sun	Dry, sandy soil					
Quercus prinus (Chestnut Oak)			Deciduous	4-8	60'-70'	Spread: 60'-70'	Sun	Dry to moist		Dark brown nuts			

Ornamental Information Sheets												
Botanical Name (Common Name)	Flower Color	Bloom Time	Foliage	Hardiness Zone	Height	Spacing	Light Require- ments	Cultural Require ments	Fertilization Schedule	Other Comments		
Callicarpa americana (American Beautyberry)	Fruit: Purple or white	Fall to winter	Deciduous, early fall	6-11	4'-6'	6'-8'	Sun to shade	Dry to r	noist; rich or po	or; acid		
Calycanthus floridus (Common Sweetshrub)	Dark red	Spring	Deciduous	6-8	6'-8'	4'-12'	Shade to part shade	Moist, rich, a	acid to neutral			
Ceanothus americanus (New Jersey Tea)	White	June and July	Deciduous	4-8	3'-4'	Spread: 3'- 5'	Sun or shade	Dry, light,	well-drained			
Cephalanthus occidentalis (Buttonbush)	Creamy white	August	Deciduous	5-10	3'-6'			Moist to wet				
Clethra alnifolia (Sweet Pepperbush)	White or pink	In summer on new growth	Deciduous	4-9	3'-6'	4'-6'	Sun to shade	Moist to wet				
Clethra alnifolia 'Rosea' (Pink Sweet Pepperbush)	Pink	In summer on new growth	Deciduous	4-9	3'-6'	4'-6'	Sun to shade	Moist to wet				
Conradina canescens (Gray Conradina)	Lavendar, white, purple	Spring	Evergreen	8b	18"-3'	3'-5'	Sun to afternoon sun	Dry				
Cornus amonum (Silky Dogwood)	Yellowish white	June	Deciduous	5-8	6'-10'	Spread: 6'- 10'	Part shade to full sun	Moist to dry				
Elaeagnus umbellata (Autumn-olive)	Silvery-white	May-June	Deciduous	3-8	12'-18'	Spread: 12'-18'	Sun to shade	Moist to dry				

Ornamental Information Sheets												
Botanical Name (Common Name)	Flower Color	Bloom Time	Foliage	Hardiness Zone	Height	Spacing	Light Require- ments	Cultural Require ments	Fertilization Schedule	Other Comments		
Euonymus americanus (Hearts-a-Burstin')	Fruit: Red- bursts open to show seeds	Early fall to winter	Deciduous	6-9	4'-8'	4'-5'	Shade to morning sun	Moist to dry				
Fothergilla gardenii (Dwarf Fothergilla)	White	Мау	Deciduous	5-8	2'-4'	3'-4'	Sun to afternoon sun	Moist to dry				
Hamamelis vernalis (Vernal Witchhazel)	Yellow- orange	February- March	Deciduous	6'-8'	15'-20'	10'-15'	Sun to afternoon sun	Moist				
Hibiscus mutabilis (Confederate Rose)												
Hydrangea arborescens 'Annabelle' (Smooth Hydrangea)	White	Early summer	Deciduous	6-8	6'-8'	3'-4'	Shade to part shade	Moist				
Hydrangea quercifloia (Oakleaf Hydrangea)	White	Late spring	Deciduous	6b-8	6'-12'	6'-8'	Shade to part shade	Moist to dry		Flower turns pink then purple		
Hydrangea serrata 'Preziosa' (Preziosa Hydrangea)	Rose-pink	Early summer	Deciduous	6-7	5'-6'	3'-4'	Sun to part shade	Moist to	semi-dry	Flowers get darker in autumn		
Hypericum frondosum 'Sunburst' (Golden St. Johnswort)	Yellow to gold	Early summer		6-7	3'-4'	3'-4'	Part shade	Moist to dry				
llex glabra (Inkberry)	Creamy	Late May	Evergreen	4-9	6'-8'	Spread: 8'- 10'	Sun to shade	Moist				

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Botanical Name (Common Name)	Flower Color	Bloom Time	Foliage	Hardiness Zone	Height	Spacing	Light Require- ments	Cultural Require ments	Fertilization Schedule	Other Comments		
llex vomitoria 'Schilling's Dwarf' (Yaupon Holly)	Greenish- white	Spring	Evergreen	7-10	3'-4'	4'-5'		Wet to dry				
Itea virginica 'Henry's Garnet' (Virginia Sweetspire)	White	Late spring	Deciduous	6-9	3'-4'	3'-4'	Shade to part shade	Moist to dry				
Kalmia latifolia (Mountain laurel)	White to pink	Late spring		5-8	10'-15'	15'-20'	Shade to sun	Moist to dry				
Leucothoe axyillaris (Doghobble)	White	April and May	Evergreen	5-8	2'-4'	Spread: 3'- 6'	Shade to part shade	Moist				
Leucothoe fontanesiana (Fetterbush)	White	May	Evergreen	5-8	3'-6'	Spread: 3'- 6'	Shade to part shade	Moist				
Lyonia lucida (Fetterbush Lyonia)	Pinkish white	Мау	Evergreen	7-9	3'-5'		Part shade	Moist				
Myrica cerifera 'Club Med' (Club Med Waxmyrtle)			Evergreen	8-9	10'-15'	Spread: 10'-15'	Sun to part shade	Moist				
Myrica cerifera 'Luray' (Southern Waxmyrtle)	Pale blue- female only	Fall and winter	Evergreen	7-9	15'-20'	20'	Sun to part sun	Wet to dry				
Myrica cerifera pumila (Dwarf Waxmyrtle)	·		Evergreen	8-9	3'-4'		Sun to pa	art shade				

Ornamental Information Sheets												
Botanical Name (Common Name)	Flower Color	Bloom Time	Foliage	Hardiness Zone	Height	Spacing	Light Require- ments	Cultural Require ments	Fertilization Schedule	Other Comments		
Myrica cerifera pumila 'Fairfax' (Dwarf Wax Myrtle)			Evergreen	8-9	4'-5'		Sun to pa	art shade				
Myrica cerifera pumila 'Georgia Gem' (Georgia Gem Wax Myrtle)			Evergreen	8-9	12"-18"	Spread: 30"-36"	Sun to pa	art shade				
Osmanthus americanus (Wild Olive/Devilwood)	Creamy white	Early spring	Evergreen	8-9	15'-25'	30'	Sun to part sun	Dry to moist				
Rhododendron alabamense (Alabama Azalea)	White with yellow botches	April	Deciduous	7-8	5'-6'	Compa	ct, suckers	Dry, open	woodlands	Fragrant flowers		
Rhododendron arborescens (Sweet Azalea)	White to light pink	May, June-July	Deciduous	4-7	8'-20'	Sprea	ıd: 8'-20'	Moist, acid				
Rhododendron atlanticum (Coastal Azalea)	White to pink	April	Deciduous	5-8	3'-6'	Spread: 3'- 6'	Part shade to shade	Good drainage				
Rhododendron austrinum (Florida Azalea)	Yellow, cream, coral, red	Early spring	Deciduous	7-9	6'-10'	6'-8'	Shade to sun	Moist				
Rhododendron canescens (Piedmont Azalea)	Pink to white	Early spring	Deciduous	7-9	8'	6'-12'	Sun to part sun	Wet to moist				
Rhododendron flammeum (Oconee Azalea)	Scarlet	April	Deciduous		6'	Spread: 6'	Part shade to shade	Good drainage				

Ornamental Information Sheets													
Botanical Name (Common Name)	Flower Color	Bloom Time	Foliage	Hardiness Zone	Height	Spacing	Light Require- ments	Cultural Require ments	Fertilization Schedule	Other Comments			
Rhondodendron maximum (Rosebay Rhododendron)	Rose	June	Evergreen	3-7	10'-15'	15'	Shade to part sun	Moist, a	acid, rich				
Rhododendron prunifolium (Plumleaf Azalea)	Orange-red to red	July- August	Deciduous	5-9	8'-10'		Part shade to shade	Good drainage					
Rhododendron viscosum (Swamp Azalea)	White	Summer	Deciduous	6-9	5'-7'	5'-12'	Sun to part sun	Wet but not soggy					
Rhus aromatica (Fragrant Sumac)	Yellowish	March- April	Deciduous	3-9	2'-6'	Spread: 6'- 10'	Full sun to part shade	Dry to moist					
Sabel minor (Dwarf Palmetto)	White	May or June	Evergreen	8-9	3'- 6'	Specimen: 8' Ground cover 3'	Shade to part sun	Wet to moist					
Salvia greggii 'White' (White Texas Sage)	White	Late spring and summer	Evergreen	7-10	2'	Spread: 2'	Sun to part sun	Good drainage					
Salvi greggii 'Cienego D'Oro' (Yellow Texas Sage)	Yellow			7-10	15"		Sun to part sun	Good drainage					
Salvi greggii 'Furman's Red' (Red Texas Sage)	Red	Spring t	hrough fall	6-10	3'		Sun to part sun	Well-dra	ained soil				
Salvia greggii 'Desert Blaze PPAF' (Variegated Texas Sage)	Red	Spring and fall	Semi- evergreen	7b-10	15"		Sun to part sun	Well-dra	ained soil				

Ornamental Information Sheets													
Botanical Name (Common Name)	Flower Color	Bloom Time	Foliage	Hardiness Zone	Height	Spacing	Light Require- ments	Cultural Require ments	Fertilization Schedule	Other Comments			
Sambucus canadensis (Elderberry)	Yellowish- white	June-July	Deciduous	3-9	5'-12'			Moist to dry					
Vaccinium crassifolium (Creeping Blueberry)	Rosy-red	May	Evergreen	7-8	6"	Spreads		Acid, sandy, well-drained					
Vaccinium crassifolium 'Bloodstone' (Creeping Blueberry)	Rosy-red	Мау	Evergreen	7-8	6"-8"	Spreads		Well-dra	ained soil				
Vaccinium crassifolium 'Wells Delight' (Creeping Blueberry)	Rosy-red	Мау	Evergreen	7-8	6"	Spreads		Well-dra	ained soil				
Vaccinium darrowii (Evergreen Blueberry)	White to pink	Spring	Evergreen	8-9	6"-2'	1'-3'	Sun to part sun	Moist to dry		Fruit: blueberry			
Vaccinium myrsinites (John Blue)													
Viburnum acerifolium (Mapleleaf Viburnum)	Creamy white	Spring	Deciduous	4-8	4'-5'	3'-4'	Shade to part sun	Moist to dry					

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Botanical Name (Common Name)	Flower Color	Bloom Time	Foliage	Hardiness Zone	Height	Spacing	Light Require- ments	Cultural Require ments	Fertilization Schedule	Other Comments		
Euonymus americanus (Hearts-a-Burstin')	Fruit: Red- bursts open to show seeds	Early fall to winter	Deciduous	6-9	4'-8'	4'-5'	Shade to morning sun	Moist to dry				
Fothergilla gardenii (Dwarf Fothergilla)	White	May	Deciduous	5-8	2'-4'	3'-4'	Sun to afternoon sun	Moist to dry				
Hamamelis vernalis (Vernal Witchhazel)	Yellow- orange	February- March	Deciduous	6'-8'	15'-20'	10'-15'	Sun to afternoon sun	Moist				
Hibiscus mutabilis (Confederate Rose)												
Hydrangea arborescens 'Annabelle' (Smooth Hydrangea)	White	Early summer	Deciduous	6-8	6'-8'	3'-4'	Shade to part shade	Moist				
Hydrangea quercifolia (Oakleaf Hydrangea)	White	Late spring	Deciduous	6b-8	6'-12'	6'-8'	Shade to part shade	Moist to dry		Flower turns pink then purple		
Hydrangea serrata 'Preziosa' (Preziosa Hydrangea)	Rose-pink	Early summer	Deciduous	6-7	5'-6'	3'-4'	Sun to part shade	Moist to	semi-dry	Flowers get darker in autumn		
Hypericum frondosum 'Sunburst' (Golden St. Johnswort)	Yellow to gold	Early summer		6-7	3'-4'	3'-4'	Part shade	Moist to dry				
llex glabra (Inkberry)	Creamy	Late May	Evergreen	4-9	6'-8'	Spread: 8'- 10'	Sun to shade	Moist				

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Ilex vomitoria 'Schilling's Dwarf' (Yaupon Holly)	Greenish- white	Spring	Evergreen	7-10	3'-4'	4'-5'		Wet to dry				
Itea virginica 'Henry's Garnet' (Virginia Sweetspire)	White	Late spring	Deciduous	6-9	3'-4'	3'-4'	Shade to part shade	Moist to dry				
Kalmia latifolia (Mountain-laurel)	White to pink	Late spring		5-8	10'-15'	15'-20'	Shade to sun	Moist to dry				
Leucothoe axyillaris (Doghobble)	White	April and May	Evergreen	5-8	2'-4'	Spread: 3'- 6'	Shade to part shade	Moist				
Leucothoe fontanesiana (Fetterbush)	White	May	Evergreen	5-8	3'-6'	Spread: 3'- 6'	Shade to part shade	Moist				
Lyonia lucida (Fetterbush Lyonia)	Pinkish white	May	Evergreen	7-9	3'-5'		Part shade	Moist				
Myrica cerifera 'Club Med' (Club Med Waxmyrtle)			Evergreen	8-9	10'-15'	Spread: 10'-15'	Sun to part shade	Moist				
Myrica cerifera 'Lurray' (Southern Waxmyrtle)	Pale blue- female only	fall and winter	Evergreen	7-9	15'-20'	20'	Sun to part sun	Wet to dry				
Myrica cerifera pumila (Dwarf Waxmyrtle)			Evergreen	8-9	3'-4'		Sun to pa	art shade				

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Botanical Name (Common Name)	Flower Color	Bloom Time	Foliage	Hardiness Zone	Height	Spacing	Light Require- ments	Cultural Require ments	Fertilization Schedule	Other Comments		
Myrica cerifera pumila 'Fairfax' (Dwarf Wax Myrtle)			Evergreen	8-9	4'-5'		Sun to pa	art shade				
Myrica cerifera pumila "Georgia Gem' (Georgia Gem Wax Myrtle)		Evergreen	8-9	12"-18"	Spread: 30"-36"	Sun to pa	art shade				
Osmanthus americanus (Wild Olive/Devilwood)	Creamy white	Early spring	Evergreen	8-9	15'-25'	30'	Sun to part sun	Dry to moist				
Rhododendron alabamense (Alabama Azalea)	White with yellow botches	April	Deciduous	7-8	5'-6'	Compac	ct, suckers	Dry, open	woodlands	Fragrant flowers		
Rhododendron arborescens (Sweet Azalea)	White to light pink	May, June-July	Deciduous	4-7	8'-20'	Spread	d: 8'-20'	Moist, acid				
Rhododendron atlanticum (Coastal Azalea)	White to pink	April	Deciduous	5-8	3'-6'	Spread: 3'- 6'	Part shade to shade	Good drainage				
Rhododendron austrinum (Florida Azalea)	Yellow, cream, coral, red	Early spring	Deciduous	7-9	6'-10'	6'-8'	Shade to sun	Moist				
Rhododendron canescens (Piedmont Azalea)	Pink to white	Early spring	Deciduous	7-9	8'	6'-12'	Sun to part sun	Wet to moist				
Rhododendron flammeum (Oconee Azalea)	Scarlet	April	Deciduous		6'	Spread: 6'	Part shade to shade	Good drainage				

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Rhododendron prunifolium (Plumleaf Azalea)	Orange-red to red	July- August	Deciduous	5-9	8'-10'		Part shade to shade	Good drainage					
Rhododendron viscosum (Swamp Azalea)	White	Summer	Deciduous	6-9	5'-7'	5'-12'	Sun to part sun	Wet but	not soggy				
Rhus Aromatica (Fragrant Sumac)	Yellowish	March- April	Deciduous	3-9	2'-6'	Spread: 6'- 10'	Full sun to part shade	Dry to moist					
Sabel minor (Dwarf Palmetto)	White	May or June	Evergreen	8-9	3'-6'	Specimen: 8' Ground Cover 3'	Shade to part sun	Wet to moist					
Salvia greggii 'White' (White Texas Sage)	White	Late spring and summer	Evergreen	7-10	2'	Spread: 2'	Sun to part sun	Good drainage					
Salvia greggii 'Cienego D'Oro' (Yellow Texas Sage)	Yellow			7-10	15"		Sun to part sun	Good drainage					
Salvia greggii 'Furman's Red' (Red Texas Sage)	Red	Spring t	hrough fall	6-10	3'		Sun to part sun	Well-dra	ained soil				
Salvia greggii 'Desert Blaze PPAF' (Variegated Texas Sage)	Red	Spring and fall	Semi- evergreen	7b-10	15"		Sun to part sun	Well-dra	ained soil				

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Botanical Name (Common Name)	Flower Color	Bloom Time	Foliage	Hardiness Zone	Height	Spacing	Light Require- ments	Cultural Require ments	Fertilization Schedule	Other Comments		
Sambucus canadenis (Elderberry)	Yellowish- white	June-July	Deciduous	3-9	5'-12'			Moist to dry				
Vaccinium crassifolium (Creeping Blueberry)	Rosy red	May	Evergreen	7-8	6"	Spreads		Acid, sandy, well-drained				
Vaccinium crassifolium 'Bloodstone' (Creeping Blueberry)	Rosy red	May	Evergreen	7-8	6"-8"	Spreads		Well-d	rained soil			
Vaccinum crassifolium 'Wells Delight' (Creeping Blueberry)	Rosy red	May	Evergreen	7-8	6"	Spreads		Well-d	rained soil			
Vaccinium darrowii (Evergreen Blueberry)	White to pink	Spring	Evergreen	8-9	6"-2'	1'-3'	Sun to part sun	Moist to dry		Fruit: blueberry		
Vaccinium myrsinites (John Blue)	·											
Viburnum acerifolium (Mapleleaf Viburnum)	Creamy white	Spring	Deciduous	4-8	4'-5'	3'-4'	Shade to part sun	Moist to dry				

About the Authors

Donald Surrency Team Leader-Plant Materials Specialist With USDA-NRCS in Athens GA Provides technical assistance to AL, GA and SC

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