

## New and Not So New Lawn Grasses for Florida<sup>1</sup>

L.E. Trenholm and J.B. Unruh<sup>2</sup>

There are many warm-season lawn grasses to choose from, and maybe the time has come to think of species other than St. Augustinegrass. There are a number of reasons why this has been the predominant lawn grass in Florida for many years, but other species may become more important over time. As concerns about water use by lawns increases and municipalities consider limiting the amount of turf that can be used in the landscape, requirements for drought tolerant grasses may be in place before long. In this fact sheet, we'll look at some of the lawn grasses that have been around for a long time as well as some of the newer releases.

### St. Augustinegrass

There are some general characteristics of St. Augustinegrass. It is pretty shade tolerant, although most cultivars need 6-7 hours of sunlight to persist. It can tolerate wide pH ranges, from the acidic soils often found inland to the high pH of coastal areas. Sod establishes quickly in most environments. Chinch bugs are the main insect problem, while grubs and mole crickets can also cause problems. Disease pressure is common under high water and/or nitrogen regimes. And, of course, it does need water to stay green and will need supplemental irrigation if rainfall

is not adequate. Thatch buildup is common in a mature lawn, again especially under high irrigation or nitrogen applications. The loss of certain herbicide uses in recent years make weed control challenging. St. Augustinegrass should be fertilized regularly throughout the year to maintain green color and cover. There are a number of cultivars within this species to choose from, including some new varieties released within the last few years.



**Figure 1.** 'Amerishade' St. Augustinegrass after 20 days without mowing.

### 'Amerishade'

'Amerishade' was released around 2002 as a very slow-growing, shade tolerant dwarf St. Augustinegrass. Research at the University of Florida showed that it could easily tolerate 14-18 days

1. This document is ENH1033, one of a series of the Environmental Horticulture Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Original publication date April 6, 2006. Please visit the EDIS web site at <http://edis.ifas.ufl.edu>.
2. L.E. Trenholm, Associate Professor, Turfgrass Specialist, Department of Environmental Horticulture, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL 32611, J.B. Unruh, Associate Professor, Turfgrass Specialist, West Florida Research and Education Center, Institute of Food and Agricultural Sciences, Jay, FL 32565

The Institute of Food and Agricultural Sciences (IFAS) is an Equal Opportunity Institution authorized to provide research, educational information and other services only to individuals and institutions that function with non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, marital status, national origin, political opinions or affiliations. U.S. Department of Agriculture, Cooperative Extension Service, University of Florida, IFAS, Florida A. & M. University Cooperative Extension Program, and Boards of County Commissioners Cooperating. Larry Arrington, Dean

without mowing, even in the summer. The problem is if the grass is injured due to cold, insects, disease, etc., its slow growth habit makes recovery difficult. It is susceptible to disease in Florida's humid environment and does not have good cold tolerance. 'Amerishade' has experienced significant winterkill at research plots in Jay and Gainesville.

### 'Classic'

'Classic' is a cultivar released by Woerner Turf. It appears to have better cold tolerance than many other St. Augustinegrass cultivars. This cultivar is currently being evaluated in northwest Florida, however, results are preliminary. Most of the information on this cultivar is based on observation only. Some throughout north Florida have reported good results with 'Classic', especially in terms of staying green throughout more of the winter than other grasses, while others around the state claim poor establishment and disease problems. This cultivar needs more research and more time in the landscape to see how it persists.

### 'Delmar'

'Delmar' is a dwarf cultivar with small leaf blades and a dense growth habit. It does well in shade (needs at least 4 hours of sunlight a day) and also will do well in full sun. 'Delmar' has good cold tolerance, although it will go dormant in north Florida in the winter. Like other dwarf grasses, it tends to become thatchy, particularly under high fertilization and irrigation regimes. 'Delmar' is also susceptible to brown patch when conditions are favorable.

### 'Floratam'

'Floratam' continues to be the most commonly used St. Augustinegrass. It can be distinguished by wider leaf blades and thicker stolons than most other St. Augustinegrasses. Because of the wide leaves, it's more difficult for 'Floratam' to grow as densely as some of the other grasses, so there is more space between leaves and less carpet effect. This is often objectionable to those homeowners who long for that Kentucky bluegrass look. 'Floratam' was released in the early 70s and at that time was widely used because it had good resistance to chinch bugs. Over time, however, and with repeated use of the same

pesticides, much of this resistance has been lost. Other problems with 'Floratam' include poor shade tolerance relative to other St. Augustinegrasses. In two years of research conducted at UF, 'Floratam' showed the least shade tolerance of any St. Augustinegrass cultivar. It should have at least 6-7 hours of sunlight daily (8 would be better) to maintain good cover. Spraying herbicides? Read those labels carefully, many of them may say "Not for use on 'Floratam'." More than one lawn care technician has failed to double check this and has damaged a lawn by using a product that injured the 'Floratam'. In spite of some of these problems, there is a definite comfort level with 'Floratam'. We know how to manage it and are pretty familiar with what it takes to keep it green and weed-free. It transplants well after being harvested and establishes rapidly.



**Figure 2.** A 'Floratam' St. Augustinegrass lawn under high maintenance.

### 'Mercedes'

'Mercedes' is not widely used in Florida but is sometimes found in the northern areas of the state. It is generally noted for cold tolerance and is used further north of Florida. It is coarse-textured and can be mowed at heights up to 3 inches.

### 'Palmetto'

'Palmetto' appeared in the late 1990s. It has semi-dwarf characteristics (shorter, thinner leaf blades than 'Floratam'), which make it more appealing to many people. It has better drought and shade tolerance than 'Floratam' but research has shown its shade tolerance is not as good as some of the dwarf cultivars. Like any St. Augustinegrass, 'Palmetto' may have insect or disease issues and

appears to require about as much water as the other St. Augustinegrass cultivars.



**Figure 3.** 'Palmetto' St. Augustinegrass in the landscape.

### 'Raleigh'

'Raleigh' was developed at North Carolina State University, so it has very good cold tolerance. It is often used in north Florida and some of the other southern states because of this. It is susceptible to chinch bug damage, grey leaf spot, and brown patch.

### 'Sapphire'

'Sapphire' is a new release for use in home lawns. Universities across the southern United States are currently evaluating this cultivar, however, data are not available at this time.

### 'Seville'

'Seville' is another dwarf that also performs well in shade or full sun. Like 'Delmar', it grows densely due to small leaf blades and has a dark green color. Its cold tolerance is not as good as 'Delmar's'.

## Zoysiagrasses

There are many zoysiagrass cultivars grown commercially, but use of this species has been limited in Florida. Zoysiagrasses generally have good shade tolerance. They handle traffic well and are adapted to a wide range of soil types. Many of the zoysiagrass cultivars have excellent cold tolerance and are often used in northern climates. Generally speaking, however, zoysiagrasses are slow-growing, making establishment difficult, especially when planting by plugs. Some zoysiagrasses are also susceptible to nematodes, which are very difficult to manage in the

home lawn. Zoysiagrass is also susceptible to brown patch disease and their main insect pests are the hunting billbug and mole cricket. Many zoysiagrass varieties have been evaluated in Florida at part of the National Turfgrass Evaluation Program (NTEP). Table 1 is a summary of five years of quality data taken at Gainesville and near Pensacola.

### 'Crowne'

'Crowne' is noted for low water use requirements, cold hardiness, and rapid recuperative ability.

### 'El Toro'

'El Toro' was selected for quick establishment, improved cool-season color, cold tolerance, and reduced thatch buildup. It was the number one performing zoysiagrass in the NTEP trial conducted from 1997-2000 (Table 1).

### 'Emerald'

'Emerald' zoysiagrass was released in 1955. It has very fine leaf blades and may be used for top-quality lawns where time and money allow for adequate maintenance. Emerald produces excessive thatch and is susceptible to dollar spot, leaf spot, and brown patch. It was the number one performing fine-textured zoysiagrass in the NTEP trial conducted from 1997-2000 (Table 1).

### 'Empire'

'Empire' is a low-growing cultivar that is gaining popularity in Florida. It has fairly fine-textured leaves and a very dense growth habit. It maintains a nice green color and establishes more quickly than many other zoysiagrasses. It does not do as well in shade as other zoysiagrass cultivars. 'Empire' is being planted in numerous communities in Florida and it seems to do well throughout the state. It is susceptible to brown patch.

### 'Meyer'

'Meyer' has been in use since the 1950s and is often seen in ads as the "miracle grass." It is very slow to establish and is susceptible to nematodes. Once established, it is low maintenance and tolerant



**Figure 4.** An 'Empire' zoysiagrass lawn.

of cold temperatures. 'Meyer' zoysiagrass performed very poorly in the NTEP trial conducted from 1997-2000 (Table 1) and its use in Florida is discouraged.

### **'Ultimate'**

'Ultimate' is a new University of Florida cultivar being grown for home lawns that should become available in the next year or so. It was selected for quick establishment and shade tolerance.

## **Centipedegrass**

Centipedegrass is sometimes referred to as “the poor man's grass” because it does not like to be highly managed. It does best with very low annual rates of nitrogen. When managed as a low input turf, it does not grow quickly and mowing needs are reduced compared to most other species. This species does not naturally have a dark green color, but is a lighter shade of green. Sometimes people overfertilize it to induce deep green coloring, but this can actually be detrimental to the grass over time. Overfertilization is a factor contributing to “centipedegrass decline” as it makes the grass weaker and more susceptible to attack from fungal organisms. This species is very susceptible to ground pearl insects for which there is no control. Two-lined spittlebugs are another serious pest of centipedegrass. There are only a few centipedegrass cultivars available, many of which have been selected for cold tolerance. Centipedegrass is used predominantly in north and central Florida and in other southern states.

### **'Common' (Red or Yellow Stem)**

'Common' (Red or Yellow Stem) is the predominate variety available. Most centipedegrass purchased through retail outlets is common centipedegrass unless noted otherwise.

### **'Centennial'**

'Centennial' has good cold tolerance and will do well in acidic soils. It must be established vegetatively as sod, sprigs, or plugs

### **'Hammock'**

'Hammock' is a new release from the University of Florida that should be available within the next year. It is reportedly more heat tolerant than other centipedegrasses and requires less frequent mowing due to a slow growth habit. It appears to go into winter dormancy more quickly than other centipedegrasses making it unacceptable for northern climates. It was selected for use in South Florida.

### **'TennTurf'**

'TennTurf' was released in 1999 and was selected for cold tolerance.

## **Other Species**

### **Bahiagrass**

Bahiagrass always gets a bad rap for its prolific seedheads, sparse growth habit, and pasture-like characteristics. But as water restrictions increase, this is the grass that can survive without much water. It will go into dormancy when water is limiting, but recovers rapidly when it receives water. Like centipedegrass, this is a low maintenance grass that does best at low fertility levels and has relatively few insect and disease problems. Mole crickets are the major insect of this grass.

### **Bermudagrass**

Bermudagrass is great for a high maintenance lawn, where reel mowers and pesticide budgets are not an issue. It provides about as manicured a lawn as you'll find in a warm-season grass, but at the expense of much more maintenance. It is not recommended for a low-input lawn.

## **Seashore Paspalum**

OK, let's talk maintenance. The 'Sea Isle 1' cultivar was released in 1999 by the University of Georgia with a primary audience of athletic fields and golf course fairways. Homeowners who saw it fell in love with its carpet appeal and a number of people gladly replaced their St. Augustinegrass and gave it a try. As many of them discovered, seashore paspalum is very susceptible to disease, particularly in response to stress. The lawn must be mowed at least twice a week, or its very likely to be scalped, and that will set it up for disease outbreak. We do not recommend seashore paspalum for home lawn use unless one understands the high maintenance requirements of this species.

### **So, Where Does this Leave Us?**

There are a lot of grasses out there for use in home lawns, all of which have some problems and some good points. When choosing a lawn grass for your home, remember that this is a long-term investment and that you must be realistic about what you can afford, what you can manage, and what you are looking for in the first place. The higher maintenance lawns may be beautiful, but think about the work and expense. Also keep in mind water restrictions and how much irrigation water might be available for your lawn in the future. Lastly, think about your environment and pick a grass suitable for the conditions around your property. With all this in mind, you will have a good chance at choosing a grass that will add to the beauty and value of your home and not be a continual maintenance headache.

**Table 1.** Ranking of Average Turfgrass Quality Ratings of Commercially Available Zoysiagrass Cultivars Grown at Two Florida Locations from 1997-2000 as part of the National Turfgrass Evaluation Program (NTEP).<sup>1</sup>

Cultivar <sup>2</sup>	Establishment Method <sup>3</sup>	Texture <sup>4</sup>	Turfgrass Quality Rating (1 = best)	
			Gainesville	Pensacola
El Toro	Vegetative	Medium	1	1
De Anza	Vegetative	Coarse	2	5
Jamur	Vegetative	Coarse	3	3
Zeon	Vegetative	Fine	4	6
Miyako	Vegetative	Coarse	5	7
Emerald	Vegetative	Fine	6	4
Zorro	Vegetative	Fine	7	8
Victoria	Vegetative	Fine	8	2
Chinese Common	Seeded	Coarse	9	9
Korean Common	Seeded	Coarse	10	12
Meyer	Vegetative	Coarse	11	11
Zenith	Seeded	Coarse	12	10
<sup>1</sup> Rankings of mean turfgrass quality are achieved by assigning "1" to the highest mean, "2" to the second highest mean, etc. for each location. Rankings should only be used to determine the general performance of a cultivar at a given location.				
<sup>2</sup> Only named, commercially available varieties are included in the table. Not all varieties may be available in Florida.				
<sup>3</sup> Seeded varieties are direct seeded. Vegetatively established varieties can be established by sod, sprigs, or plugs.				
<sup>4</sup> Textural classes were determined from data taken at the Gainesville location as published by <a href="http://www.ntep.org">http://www.ntep.org</a>				

Table 2. Common lawn grass species used in Florida. Some of the species may vary by cultivars for characteristics listed.

Environment	Bahiagrass	Bermudagrass	Centipedegrass	Seashore Paspalum	St. Augustinegrass	Zoysiagrass
<b>Area Adapted To</b>	Statewide	Statewide	N. Florida and Panhandle	Statewide	Statewide	Statewide
<b>Mowing Height (in inches)</b>	3-4	0.5-1.5	1.5-2	1.5-3	1.5-4	1-2
<b>Soil</b>	Acid, sandy	Wide range	Acid, infertile	Wide range	Wide range	Wide range
<b>Leaf Texture</b>	Coarse-medium	Fine-medium	Medium	Fine-medium	Coarse-medium	Medium
<b>Drought Tolerance</b>	Excellent	Good	Medium	Medium	Poor	Medium
<b>Salt Tolerance</b>	Poor	Good	Poor	Excellent	Good	Good
<b>Shade Tolerance</b>	Poor	Poor	Fair	Poor	Good	Good
<b>Wear Tolerance</b>	Poor	Good-excellent	Poor	Good-excellent	Poor	Good-excellent
<b>Nematode Tolerance</b>	Very good	Poor	Poor	Good	Good	Poor
<b>Maintenance Level</b>	Low	High	Low	High	Medium	Medium-High
<b>Establishment Methods</b>	Seed, sod	Sod, sprigs, plugs, some seed	Seed, sod, sprigs, plugs	Sod, plugs, sprigs	Sod, plugs, sprigs	Sod, plugs, sprigs