

Turfgrasses: Right Choice – Right Care

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Dr. J. Bryan Unruh
Extension Turfgrass Specialist
University of Florida/IFAS



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Selecting the Right Turfgrass

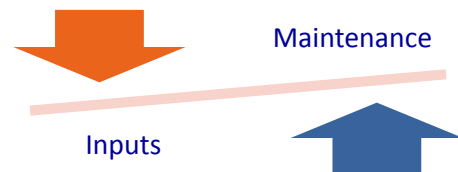
- What type of lawn is desired or expected?
 - Better Homes and Garden Showcase?
 - Average lawn?
 - Parking area?



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Selecting the Right Turfgrass

- What level of maintenance will the lawn be given?
 - Most turfgrasses will respond to a wide range of maintenance levels, however, there is an optimum.



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Maintenance Level

Low Input

Fertilized infrequently
Mowed as needed
Seldom watered

Moderate Input

Fertilized multiple times per year
Mowed weekly
Watered as needed

High Input

Frequent fertilization with low rates (spoon-feeding)
Mowed frequently
Irrigation to prevent wilt



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Region of Adaptation

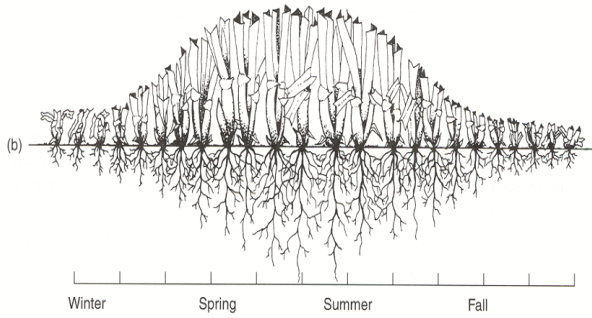
- Warm-season (*Southerners*)
 - Centipedegrass
 - St. Augustinegrass
 - Bermudagrass
 - Zoysiagrass
 - Bahiagrass
 - Seashore Paspalum
- Cool-season (*Yankees*)
 - Kentucky bluegrass
 - Tall Fescue
 - Perennial ryegrass
 - Annual ryegrass
 - Sheep Fescue
 - Hard Fescue
 - Red Fescue
 - Rough Bluegrass



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Warm Season Growth Cycle

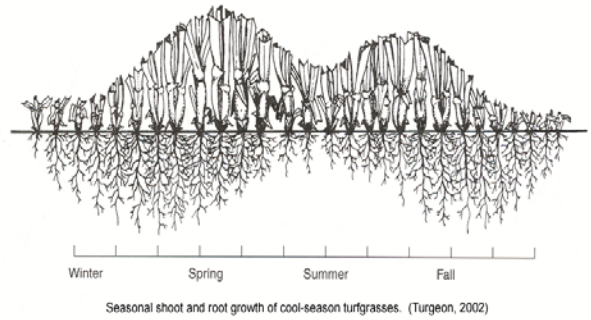
Seasonal shoot and root growth of warm-season turfgrasses. (Turgeon, 2002)



Turgeon, A. J. 2002. Turfgrass Management

Cool Season Growth Cycle

Seasonal shoot and root growth of cool-season turfgrasses. (Turgeon, 2002)



Turgeon, A. J. 2002. Turfgrass Management

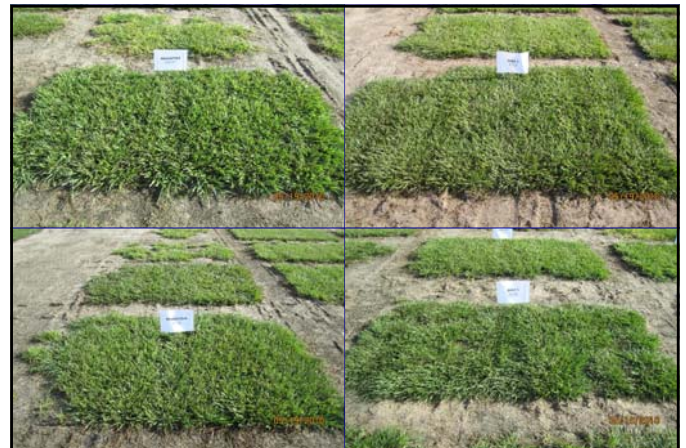


Bahiagrass

- Advantages
 - Excellent drought tolerance
 - Low fertility requirements
 - Low maintenance
 - Tolerant of sandy, infertile soils
 - Establishes from seed
- Disadvantages
 - Produces abundance of seedheads
 - Open growth habit encourages weed competition
 - Susceptible to mole crickets
 - Coarse stems are difficult to mow
 - Not wear tolerant

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Bahia grass

Current UF/IFAS Fertility Recommendations
(lbs. N 1000 ft⁻² yr⁻¹)

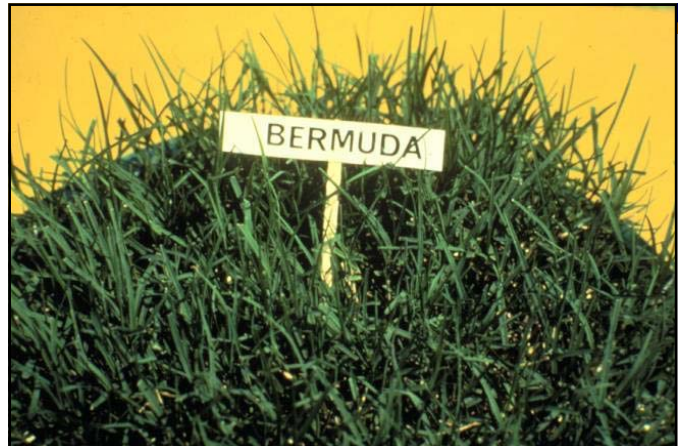
North Florida: 2-3 lbs. N 1000 ft⁻² yr⁻¹

Central Florida: 2-4 lbs. N 1000 ft⁻² yr⁻¹

South Florida: 2-4 lbs. N 1000 ft⁻² yr⁻¹



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Bermudagrass

• **Advantages**

- Vigorous, light to dark green, dense turf.
- Well adapted to most soils and climatic regions in Florida.
- Excellent wear, drought, and salt tolerance.
- Establishes rapidly.

• **Disadvantages**

- Large number of cultural and pest problems
- Dormant bermudagrass must be overseeded to maintain year-round green color.
- Low shade tolerance.

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Bermudagrass Cultivars

- **Tifway (419)** – fine textured; dark green color, and forms few seed heads.
 - Most widely used bermudagrass.
- **TifSport** – improved fairway type grass with better certification standards.
- **TifGrand** - Tolerance of 60% to 70% shade.
- **Celebration** – a selection of common bermudagrass from Australia.
- **Seeded Varieties** – Many new varieties being tested and many on the market.
 - NuMex Sahara, Yuma, Princess 77.

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Bermudagrass

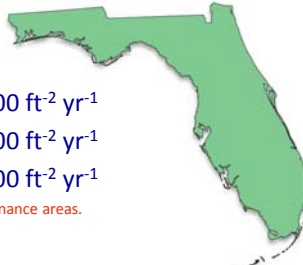
Current UF/IFAS Fertility Recommendations
(lbs. N 1000 ft⁻² yr⁻¹)

North Florida: 3-5 lbs. N 1000 ft⁻² yr⁻¹

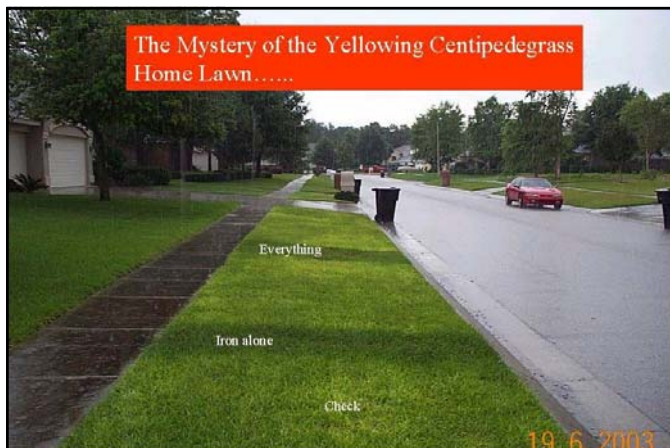
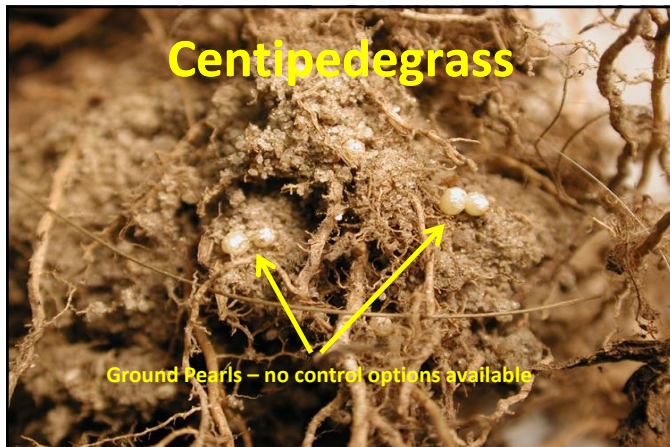
Central Florida: 4-6 lbs. N 1000 ft⁻² yr⁻¹

South Florida: 5-7 lbs. N 1000 ft⁻² yr⁻¹

**These rates are likely too high for low maintenance areas.



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Centipedegrass Cultivars

- Common (yellow or red stem)
 - Most commonly found
- TifBlair (Georgia release)
 - Cold tolerance claims
- Hammock (Florida release)
 - South Florida ONLY

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Centipedegrass

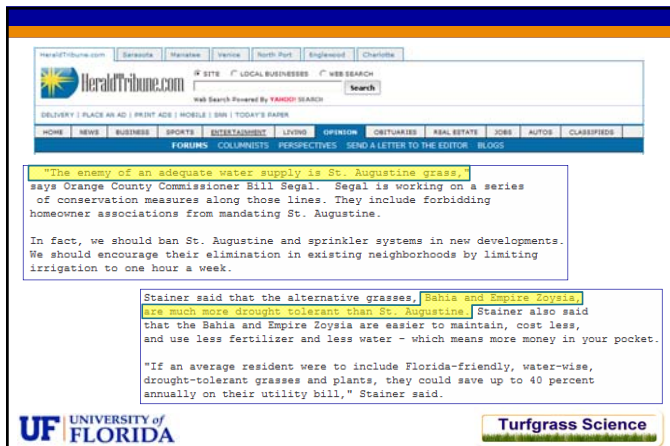
Current UF/IFAS Fertility Recommendations
(lbs. N 1000 ft⁻² yr⁻¹)

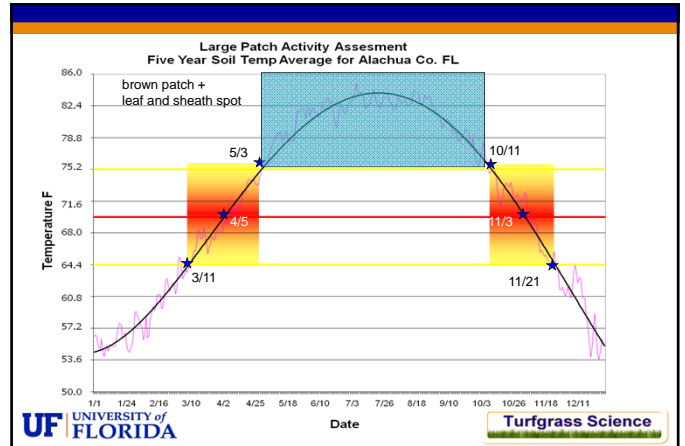
North Florida: 1-2 lbs. N 1000 ft⁻² yr⁻¹
 Central Florida: 2-3 lbs. N 1000 ft⁻² yr⁻¹
 South Florida: 2-3 lbs. N 1000 ft⁻² yr⁻¹

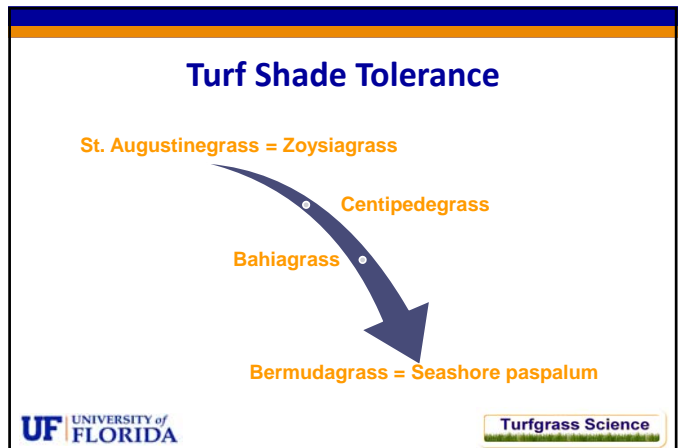
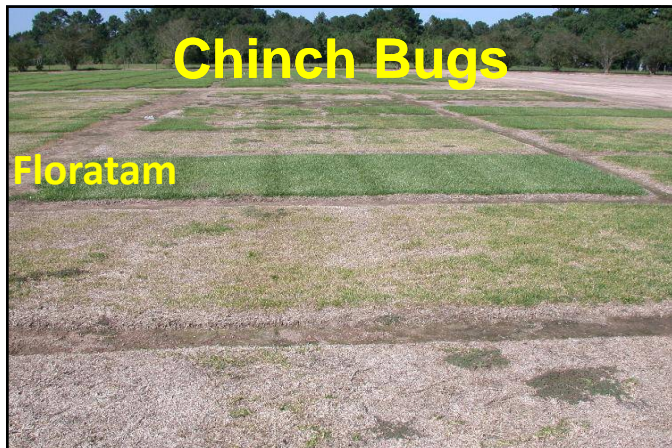


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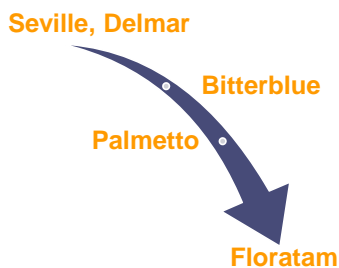








St. Augustinegrass Shade Tolerance



How Do I Manage Turf in the Shade?

- Remove shade sources (trimming trees)
- Reduce traffic in shaded areas
- Increase mowing height if possible – more shoot tissue for photosynthesis will help turf perform better
- Reduce irrigation in shaded areas
- Reduce fertilization – trying to promote shoot growth with high fertility will further stress the grass

St. Augustinegrass Cultivars

- **Bitterblue** - fine textured, blue-green color
- **Floratom** - 1973 release. Coarser than Floratine. 75% sod in Florida. Resistant to SAD but no longer to chinch bugs in Florida.
- **Seville** - Dwarf with salt and shade tolerance, SAD resistance, BUT very susceptible to chinch bugs.
- **Raleigh** - Cold tolerant from NCSU. Turns yellow in hot summer, susceptible to chinch bugs and GLS.

St. Augustinegrass Cultivars

- **Palmetto** - cold tolerant.
- **AmeriShade** – Very dwarf release from Turfgrass America and The Scotts Co.
- **Sapphire** - newest release from Sod Solutions, Inc.
- **DeltaShade** - newest release from Environmental Turf, Inc.
- **Classic** - proprietary release from Woerner Turf. – Claims of cold tolerance.
- **Captiva** – newest release from the University of Florida.

St. Augustinegrass

Current UF/IFAS Fertility Recommendations
(lbs. N 1000 ft² yr⁻¹)

North Florida: 2-4 lbs. N 1000 ft² yr⁻¹
Central Florida: 2-5 lbs. N 1000 ft² yr⁻¹
South Florida: 4-6 lbs. N 1000 ft² yr⁻¹



Zoysiagrass

- **Advantages**
 - Adapted to a wide variety of soils.
 - Good tolerance to shade and salt spray.
 - Excellent wear resistance.
 - Dense turf which reduces weed invasion.
 - Some insect resistance.
 - Some are drought tolerant.
- **Disadvantages**
 - Old varieties are slow to establish.
 - Seeded varieties available.
 - Many produce heavy thatch.
 - Slow recovery from damage.
 - Insect and disease problems.
 - Fine-textured are best if mowed with a reel mower

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Zenith Zoysiagrass

- A seeded zoysiagrass variety available in retail stores.
- Fast establishment.
- From 1996-2001, Zenith ranked 16 of 19 in NW Florida and 19 of 19 in Gainesville.



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Mowing Zoysiagrass

- Reel and Rotary mowers
- Broad range: 0.25 to 2.5 inches
 - Cultivar and Species Specific
 - *Zoysia matrella* (fine textured)
 - 0.5 to 1.5 inches
 - Exceptions: Diamond, Pristine, Cashmere
 - 0.25 inch
 - *Zoysia japonica* (coarse textured)
 - 1 to 2.5 inches



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Thatch and Zoysiagrass

- Zoysiagrass spreads through the production of lateral stems (rhizomes and stolons).
- Lateral stems are resistant to decay
- Easily result in excess thatch
 - Associated with too much lateral stem production.
 - Influenced by:
 - Nitrogen management
 - Mowing off of more than 1/3 of shoot growth

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Zoysia Patch – Major Issue (*Rhizoctonia*)



Pest Moths



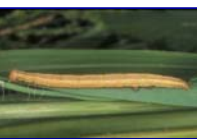
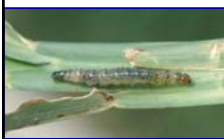
Tropical sod webworm
Wingspan: ½ to 1"



Fall armyworm
Wingspan: ~ 1½"



Striped grass looper
Wingspan: 1½"



Billbugs (*Sphenophorus* spp.)



- Gray to black weevils
- Larvae are legless
- Hunting billbug has a Y-shaped area on pronotum with a parenthesis-like marking on each side
- Possibly 2+ generations each year in Florida

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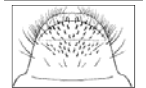
Scarab Beetles

(Coleoptera: Scarabaeidae)

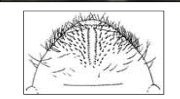
- Dung beetles and plant-feeders (1400 N. American species)
- Scarabs vary in size, color, and habits, but adults can be recognized by their 3-segmented, clubbed antennae
- Larvae molt 3 times (have 3 instars)



Masked Chafers
Cyclocephala spp.



May/June Beetles
Phyllophaga spp.)



Green June Beetle
Cotinis nitida)



Zoysiagrass



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Zoysiagrass

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South Florida: 2.5-4.5 lbs. N 1000 ft² yr⁻¹



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Table 1: 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
Area Adapted To	Statewide	Statewide	N. Florida and Panhandle (one cultivar adapted to South Florida)	Statewide	Statewide	Statewide
Mowing Height	3"-4"	Cultivar Dependent 0.5"-1.5"	1.5"-2.0"	0.5"-2"	Cultivar Dependent 1.5"-4"	Cultivar Dependent 0.5"-2"
Soil	Acid, sandy	Wide range	Acid, infertile	Wide range	Wide range	Wide range
Leaf Texture	Coarse-medium	Cultivar Dependent Fine-medium	Medium	Fine-medium	Cultivar Dependent Coarse-medium	Cultivar Dependent Fine-medium
Salt Tolerance	Poor	Good	Poor	Excellent	Good	Good
Shade Tolerance	Poor	Poor	Fair	Poor	Good	Good
Wear Tolerance	Poor	Good-excellent	Poor	Good-excellent	Poor	Good-excellent
Nematode Tolerance	Very good	Poor	Poor	Good	Good	Good
Maintenance Level	Low	Cultivar Dependent Medium-High	Low	High	Medium	Medium-High
Establishment Methods	Seed, sod	Sod, sprigs, plugs, seed	Seed, sod, sprigs, plugs	Sod, plugs, sprigs, seed	Sod, plugs, sprigs	Sod, plugs, sprigs, seed

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J. Bryan Unruh, Ph.D.
 West Florida Research and Education Center
 University of Florida/IFAS
jbu@ufl.edu

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