



# Imagine That You're a Lowly Turfgrass Plant

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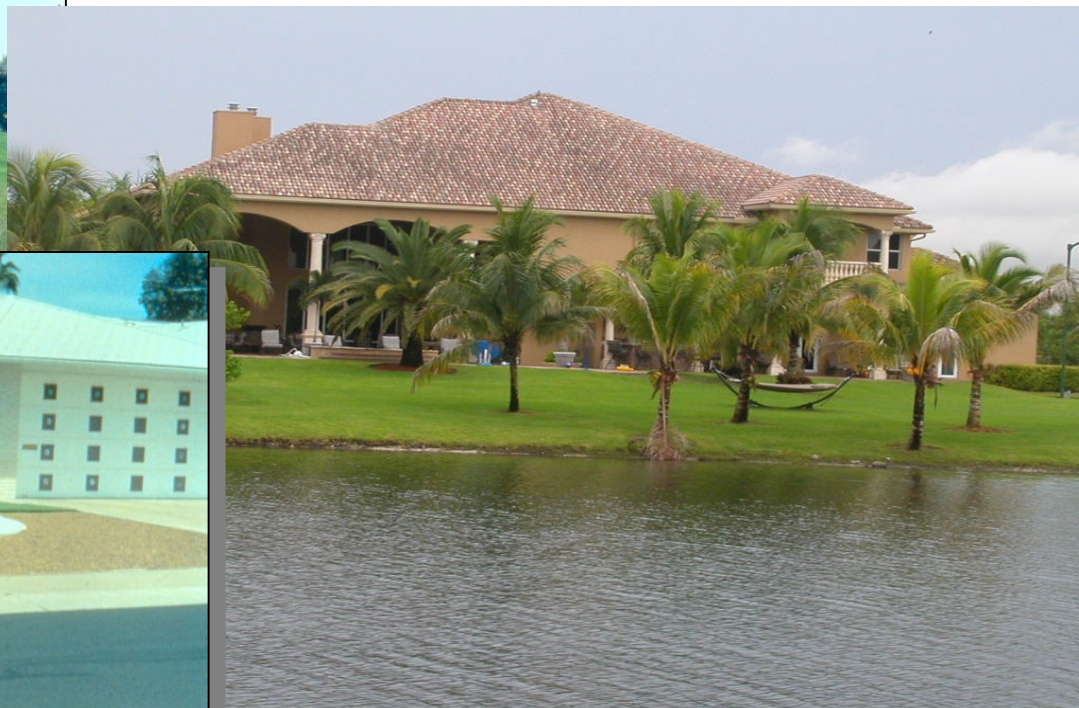




**grass Science**



# Is Turfgrass Florida Friendly?





### Fertilizer Ordinances

Use this chart to find your city's fertilizer ordinance

Municipality	No ph without
Unincorporated Brevard	Yes
Cape Canaveral	Yes
Cocoa	Yes
Cocoa Beach	Yes
Grant-Valkaria	Yes
Indialantic	Yes
Indian Ha	
Malabar	
Melbourne	
Melbourne	
Palm Bay	
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Rockledge	
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Titusville	
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# What Role Does Turfgrass Play in Our Landscapes?

## Functional:

- Filters stormwater runoff
- Traps and filters potential pollutants
- Holds soil in place
- Reduces heat, noise, glare
- Reduces dirt brought into home
- Takes up air pollutants
- Serves as fire break
- Safe play area (pets and humans)

## Aesthetic:

- Safe play area
- Extends outdoor living space
- Increased property values
- Compliments and ties together the rest of the landscape

# How Is Turf Florida Friendly?

## Florida Friendly Landscaping Principles

1. Right Plant, Right Place ✓
2. Water Efficiently ✓
3. Fertilize Appropriately ✓
4. Mulch
5. Attract Wildlife
6. Manage Yard Pests Responsibly ✓
7. Recycle ✓
8. Prevent Stormwater Runoff ✓
9. Protect the Waterfront ✓



# What Would Happen If We Removed All Turf?













Low cut grass burn conditions, however, additional fuel, call brush and trees with branches, the fire spread quickly or conditions would create more conditions.

This area was a planned fuel break that was consistently maintained. It helped save the entire complex during the Diamond Bar fire.







# Do Lawns Increase or Reduce Pollution?

- Absorb and filter pollutants in stormwater runoff

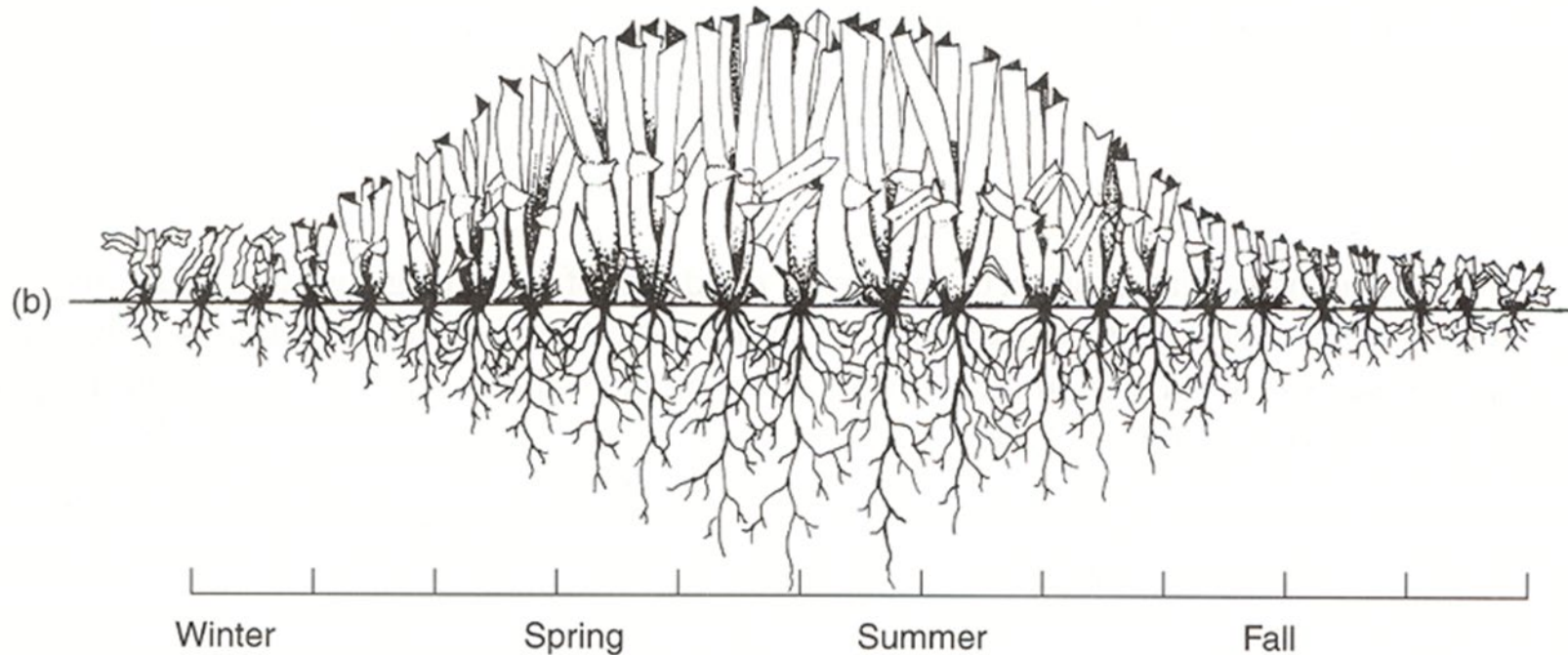
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Seasonal shoot and root growth of warm-season turfgrasses. (Turgeon, 2002)





# How Cultural Practices Enhance (or not) This Filtering Ability

## Fertilization

- Living Organisms Need Nutrients For Health.....



Including  
Plants.....





# Fertilization Best Management Practices

- Soil test! What is your pH and how much of the needed nutrients do you have in your soil?
- Apply fertilizer at the correct rate for your lawn species
- Apply fertilizer at the correct time – when the grass is growing
- Know how much fertilizer you are applying
- Clean up spilled fertilizer
- Do not fertilize before a heavy rain
- Leave a 10' unfertilized buffer strip by water bodies
- Irrigate fertilizer in with approx. ¼" of water



# Fertilizer BMPs for Turfgrass

- Do not apply nitrogen fertilizer at excessive rates – stick to the UF-IFAS recommendations
- These recommendations based on nutrient loss data and turf health response





# Recommended N Rates (lbs. N 1,000 ft<sup>-2</sup> yr<sup>-1</sup>)

	North	Central	South
Bahiagrass*	1-3	1-3	1-4
Centipedegrass*	0.4-2	0.4-3	0.4-3
St. Augustinegrass	2-4	2-5	4-6
Zoysiagrass*	2-3	2-4	2.5-4.5

\*These are new recommendations based on nitrate leaching and turf health data over 12 years



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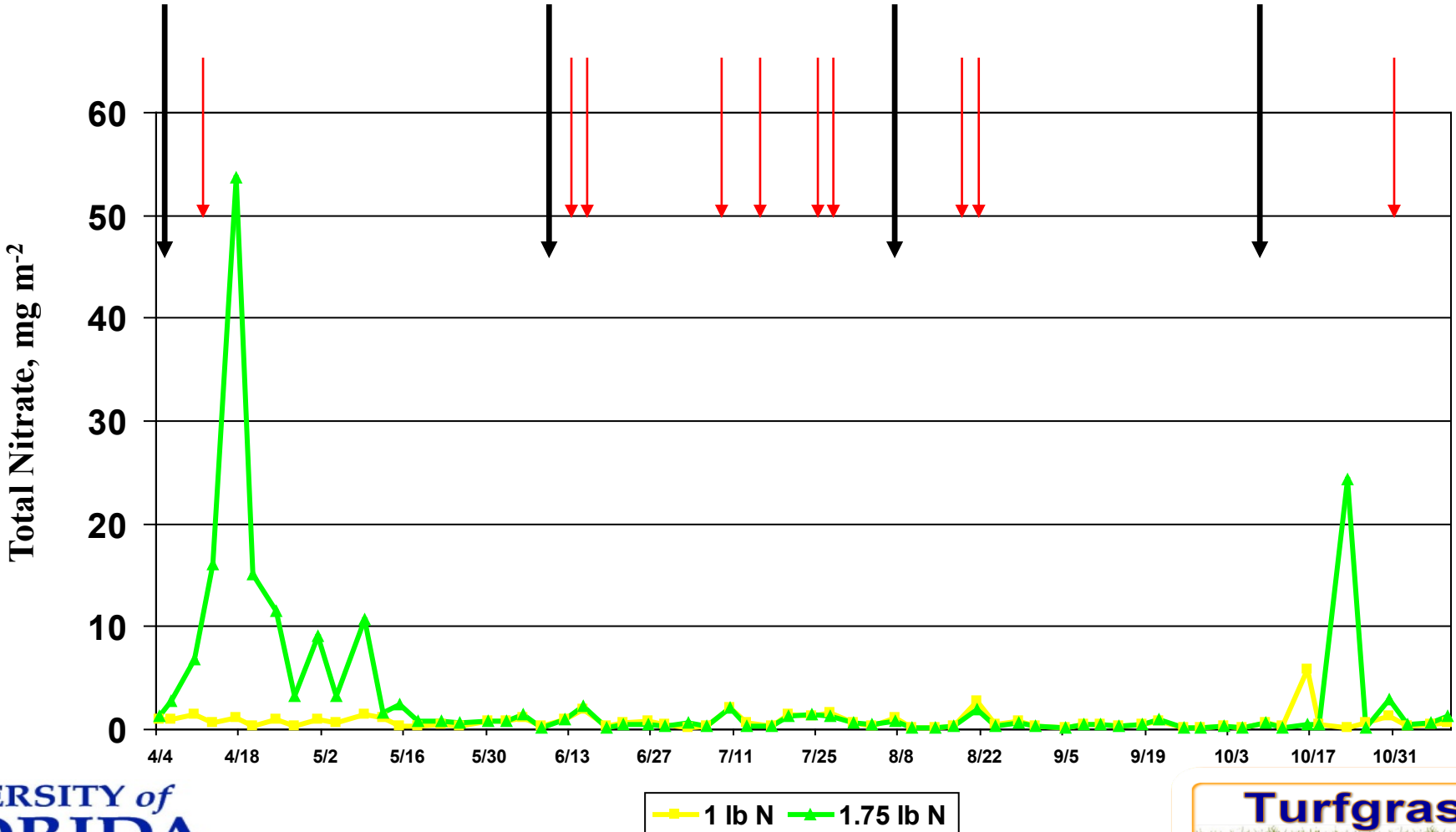
\*These are new recommendations based on Nitrate leaching and turf quality data over 8 years

# Does Every Fertilization Event Cause Pollution?

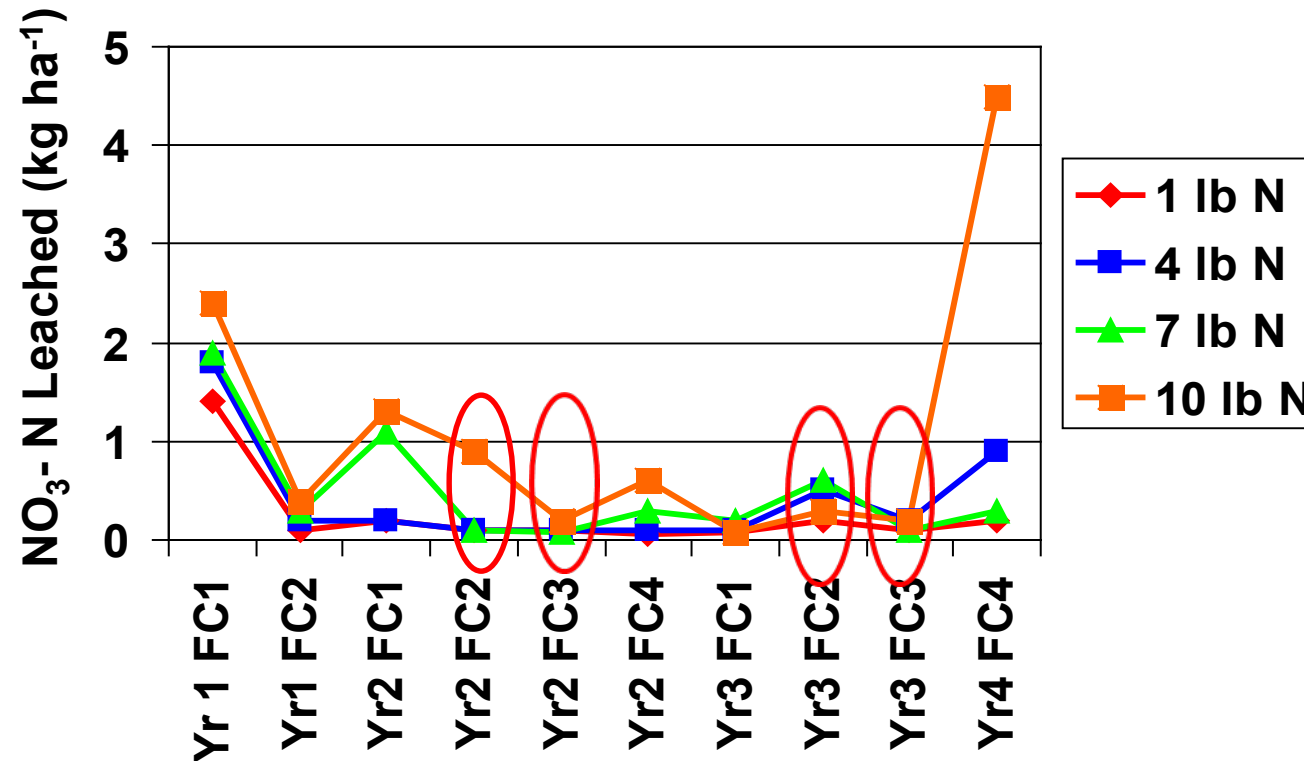




# Total N Leached From Established Floratam St. Augustinegrass 2006



# Nitrogen Rate Study - Nitrate-N Leaching from Floratam

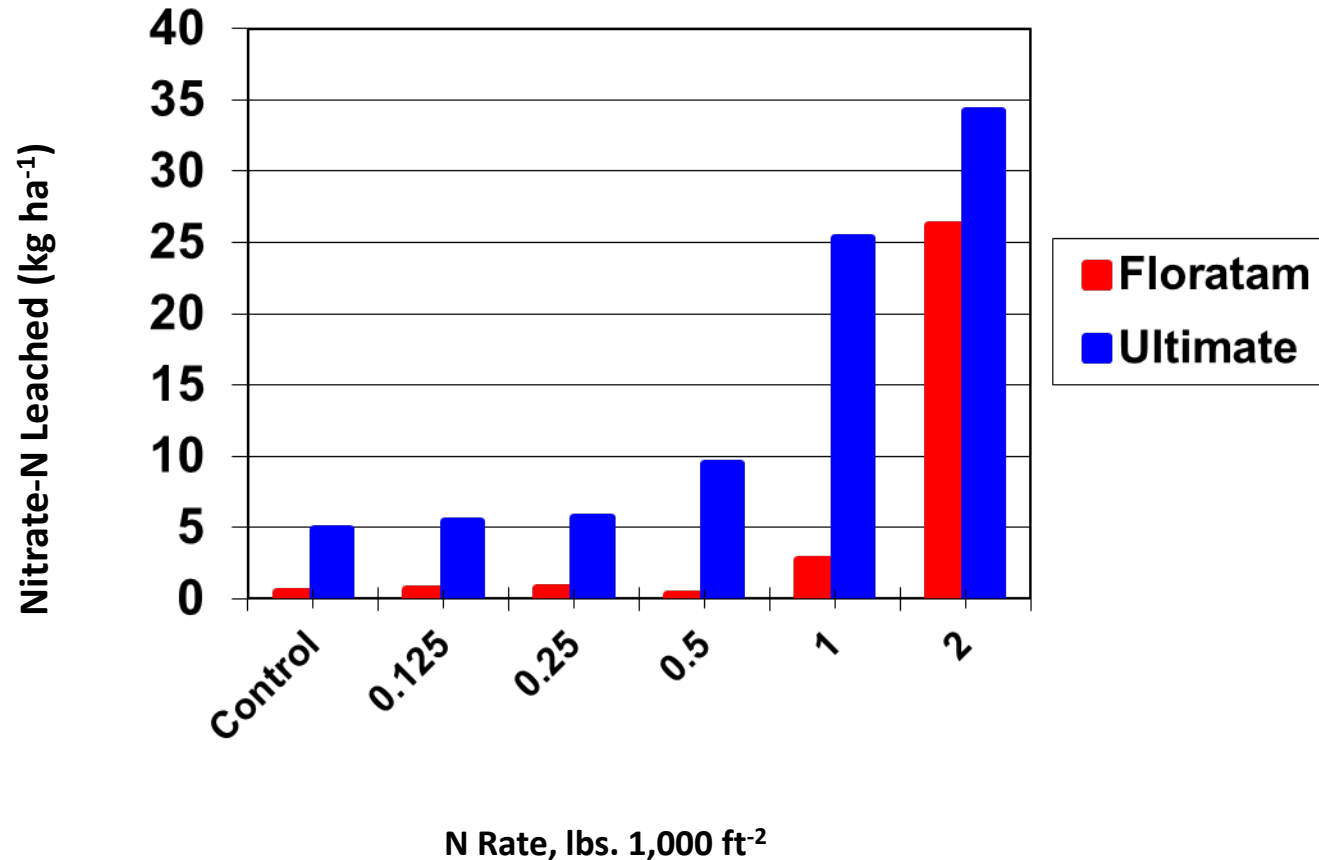


Nitrogen applied as 100% soluble urea

Trenholm et al. 2009



# Nitrate Leaching in Winter Months Yr 2 (Dec-Mar Cumulative)



N Rate, lbs. 1,000 ft<sup>-2</sup>

2007-08

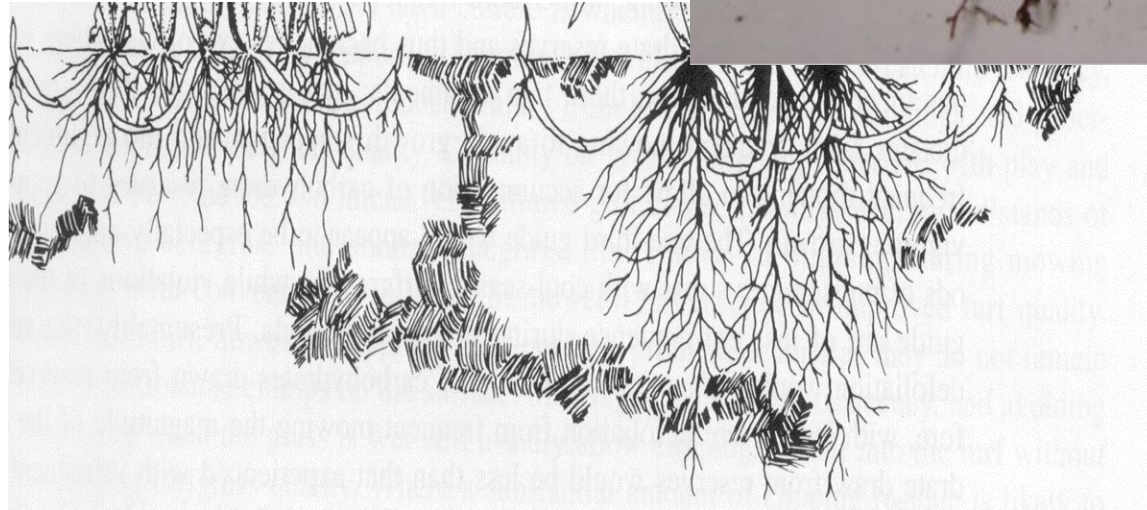
# Irrigation BMPs





# Overwatering

- Increased disease issues
- Root rot and stunting
- Weak turf stand
- Increased weeds



# How Frequently to Water



**Varies due to:**

- Season**
- Soil type**
- Shade**
- Rooting depth**
- Insect or other pests**
- Other stresses**



# Irrigation Frequency

- Watch grass for signs of stress
- Follow watering restrictions!
- You may water “hot spots” with hose if needed and if not prohibited by local restrictions

# How Much to Water

- **Apply 1/2" to 3/4" when turf shows symptoms of wilt**
- **This should not vary- only frequency varies!**



**Short, frequent  
irrigations**

**Longer, less frequent  
irrigations**



# Irrigation System Efficiency

- Calibrate systems to ensure uniform coverage
- Check for broken heads, etc
- Check for landscape plants that may block sprinkler from reaching grass



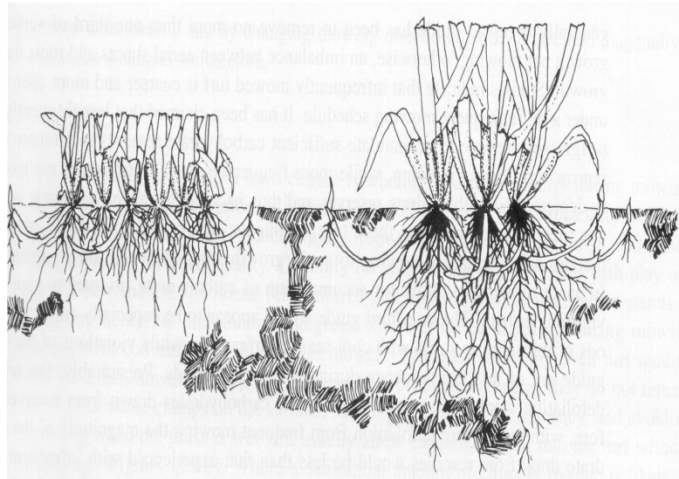


# Mowing



# Mowing BMPs

- **Mow at the correct height for the species**
  - Mowing too low stresses the grass and forces it to use up all saved reserves for shoot growth
  - Mowing high increased root depth





# Mowing Heights

- **St. Augustinegrass Standard Height Cultivars:**
  - Floratam, Bitter Blue, Classic, etc.
  - 3.5 – 4”
- **St. Augustinegrass Dwarf Cultivars:**
  - Captiva, Delmar Seville
  - 2-2.5”
- **Bahiagrass: 3-4”**
- **Centipedegrass:**
- **Zoysiagrass: ~2”**

# Mowing

- Only remove 1/3 of the leaf blade at any one time
  - Grass at 6” should have no more than 2” removed
- Keep mower blades sharpened
- Do not mow wet grass
- Commercial mowers should be washed off between properties (*do you ever see this?*)



# Diagnosing Brown Spots in Turf





# What Are the Brown Spots in My Lawn?

- Is there evidence of a pattern from a spreader, mower, sprayer, irrigation head?
  - Look for mechanical injury or applicator error
- Look at site conditions (shade, compacted soils, wet soils)





# What Are the Brown Spots in My Lawn?

- Is the injury random in shape and size or does it recur in multiple locations?
  - Check for insects
- Look at roots – are they black, rotting (fungal disease) or truncated (soil born insect or nematodes)
- Does shoot system have evidence of chewing on leaves (insects) or rotting (fungal disease)
- Is shoot system dried out and chlorotic or necrotic?

**Thank you for your  
attention!**

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