Fertilizing Effectively in Florida starts at 2:30PM

Presenter: Tina McIntyre

Fertilizing The Florida Friendly Way

Tina McIntyre, Florida-Friendly Landscaping Agent, Seminole County, K.McIntyre@ufl.edu

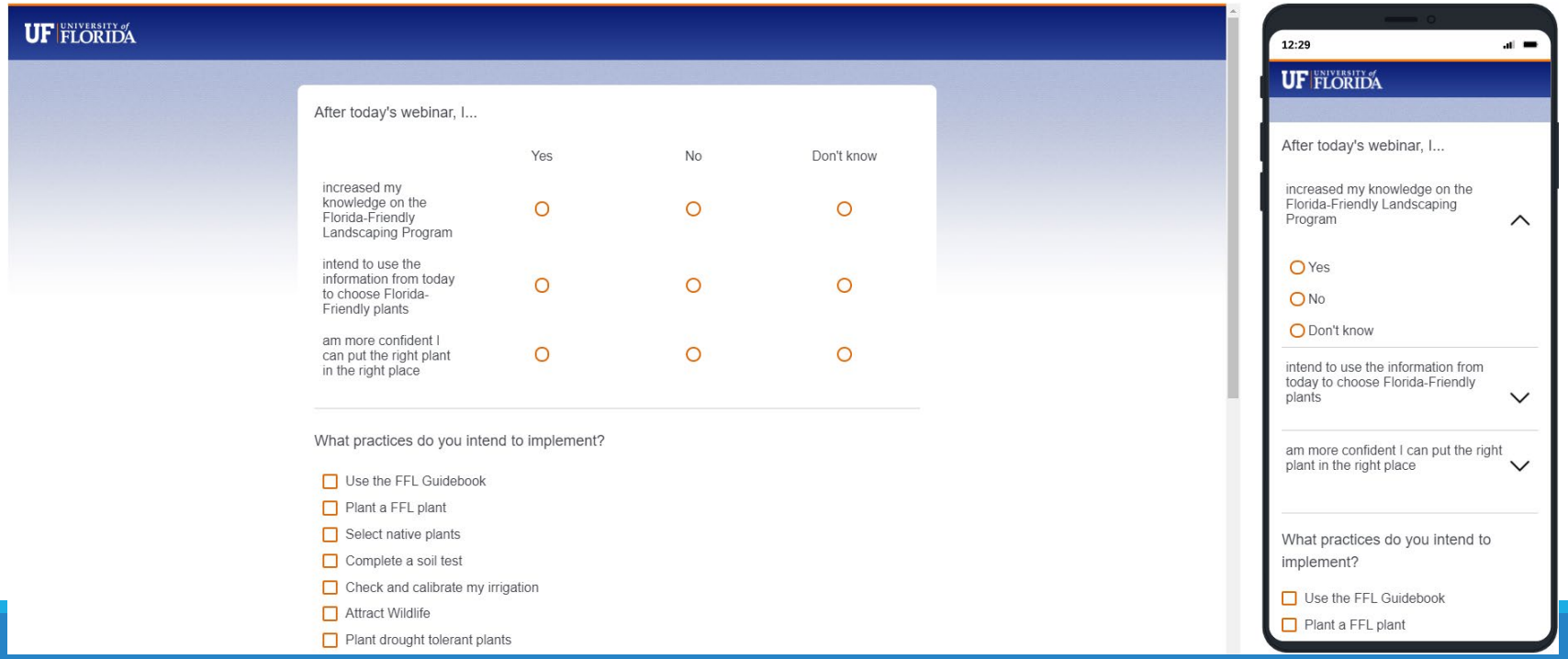
Tom Sacher, Fertilizer Educator, Seminole County, tsacher@seminolecountyfl.gov

CEUs

- The CEUs are applicable only to the following license categories:
  - Limited Urban Fertilizer
  - Limited Lawn & Ornamental
  - Limited Commercial Landscape Maintenance
  - Commercial Lawn and Ornamental]
- 2 CEUs available for FNGLA Certified Professionals
- CEUs are applicable to landscapers in all of Florida, not just Seminole County
- CEUs are given to the registered attendee only, each attendee must have his/her own registration
- You are welcome to attend the program again but CEUs are only issued once
- CEUs and licenses are issued by FDACS and/or FNGLA

CEUs

- Complete the survey TODAY (emailed link)
- Must be logged in for a minimum of 120 minutes
- Will send different follow up survey in 3-6 months to see if you have been able to implement



Free Fertilizer

1. Seminole County resident
2. Stay for entire one hour webinar
3. Complete the polls
4. Complete the survey
5. Be patient!
6. Pick up week of June 3rd at our County Home Rd. office location

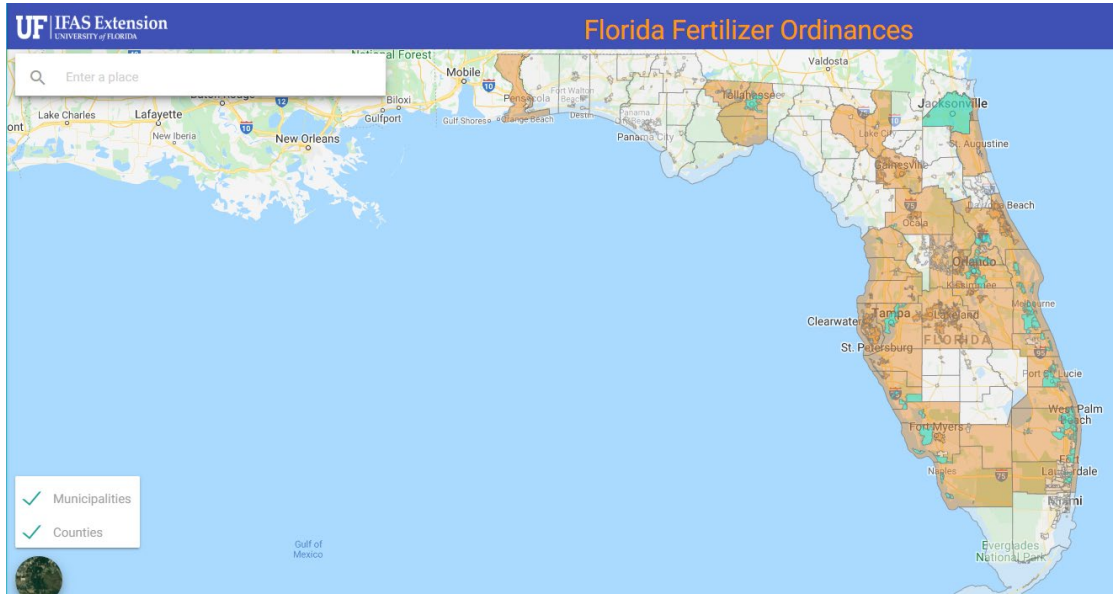
UF | IFAS Extension
UNIVERSITY of FLORIDA

Florida Department of Environmental Protection

Florida-Friendly Landscaping™ PROGRAM

- Protects Florida's unique natural resources
  - ✓ Conserving water
  - ✓ Reducing waste and pollution
  - ✓ Creating wildlife habitat
  - ✓ Preventing erosion

- Learn more about the nine principles at www.ffl.ifas.ufl



Florida-Friendly Landscaping™ PROGRAM

Right Plant, Right Place

Water Efficiently

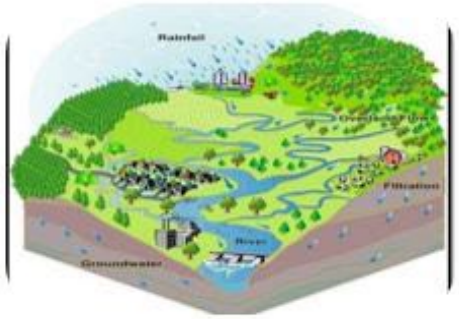
Mulch

Fertilize Appropriately

Recycle

Attract Wildlife

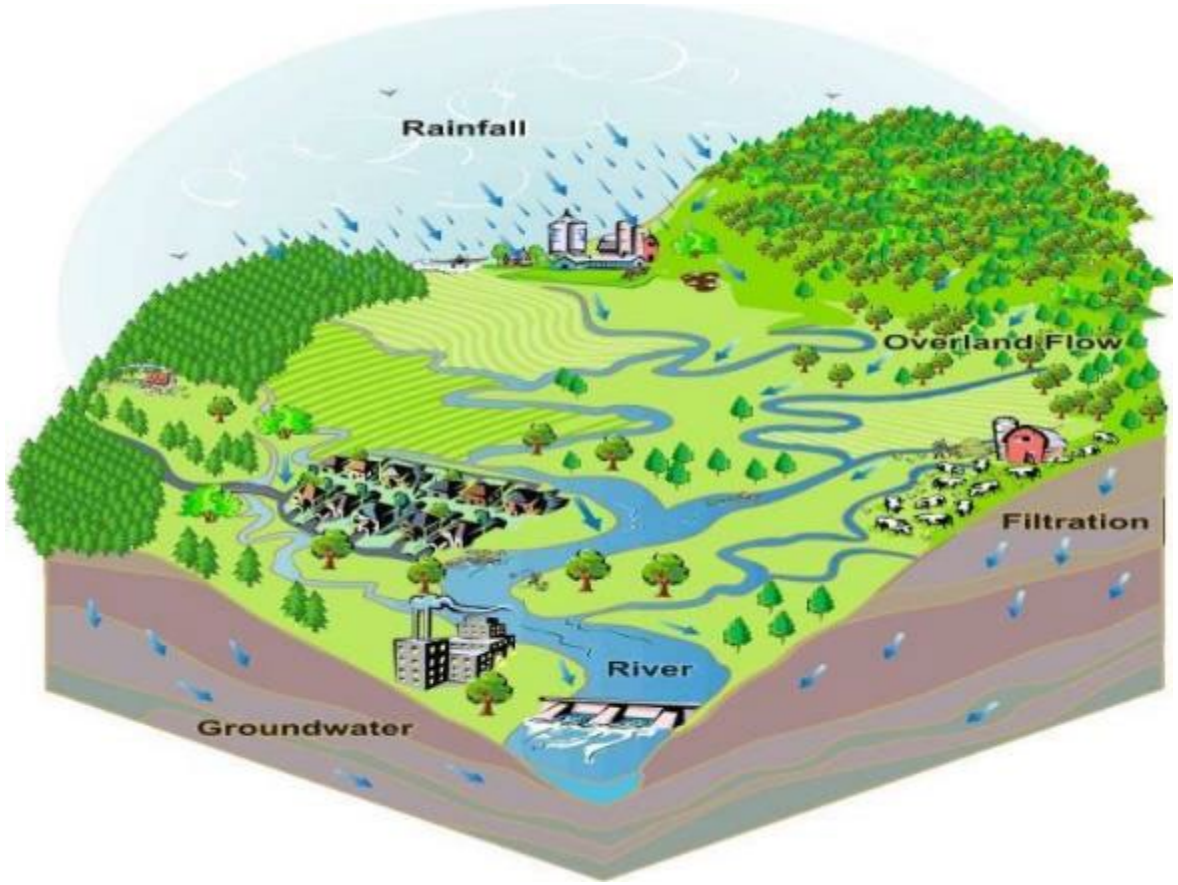
Control yard pests responsibly



Reduce Water Runoff

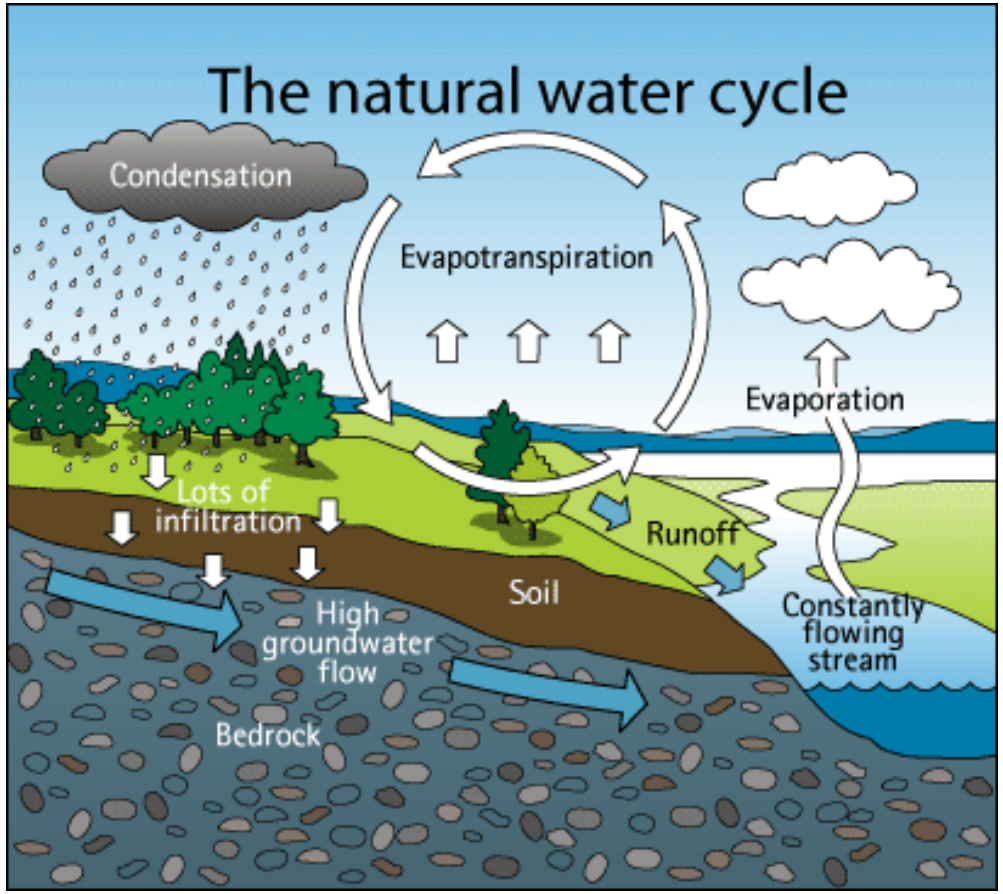
Protect the Waterfront

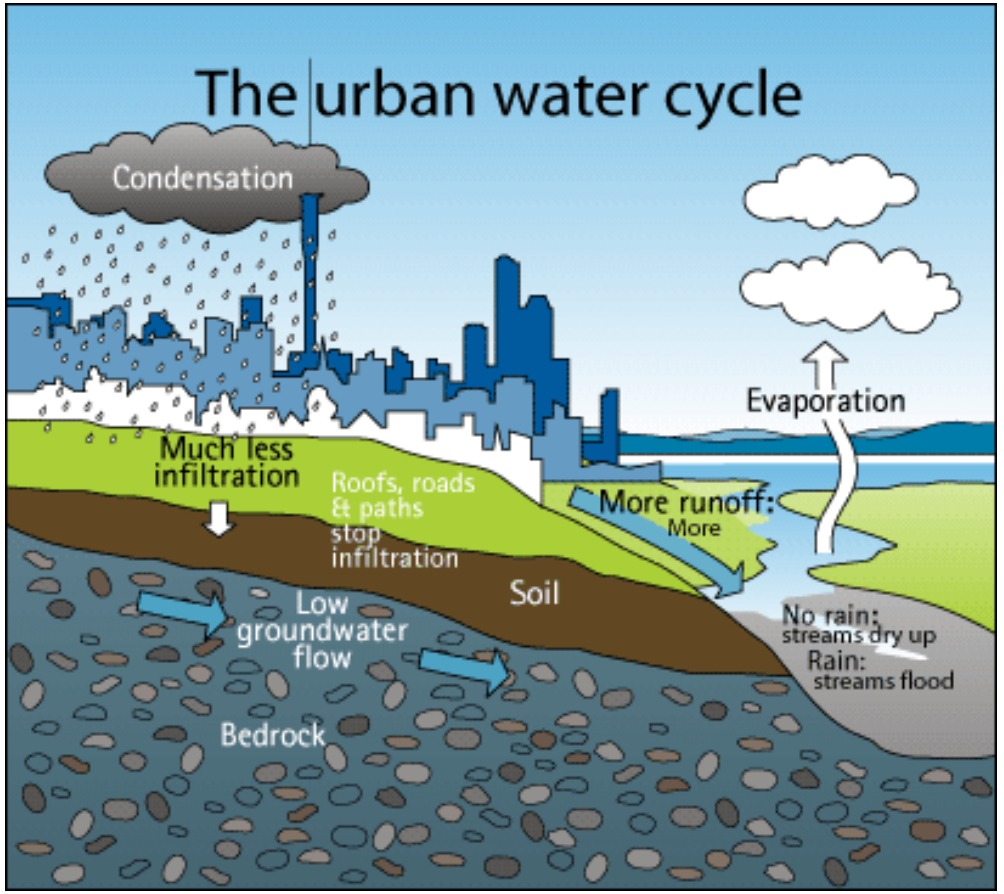
What Happens In A Watershed



Pollution Problems

Stormwater Runoff/ Non-Point Source



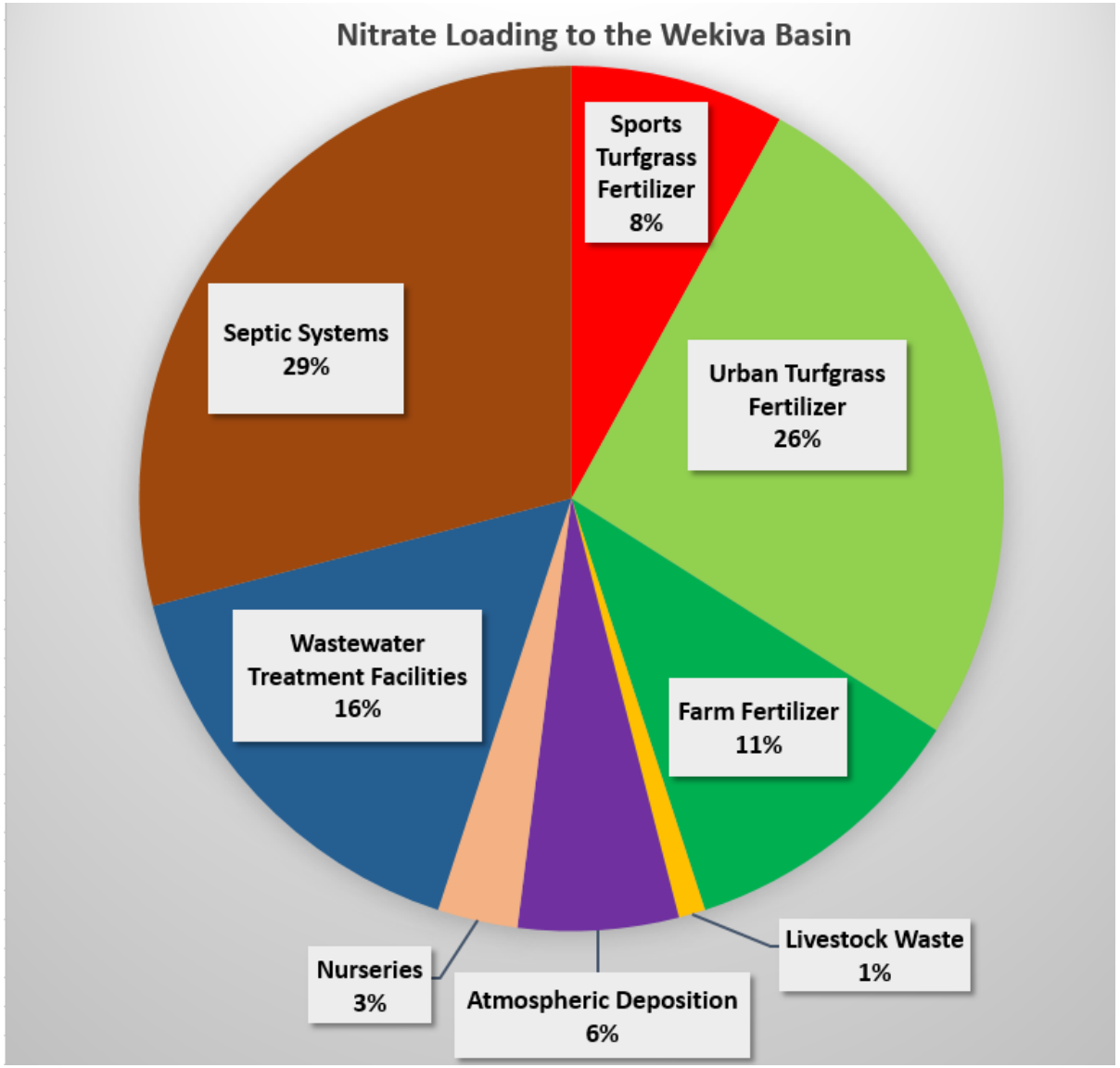


Increased Runoff Washes Pollutants Into Surface Water

Trash, grass clippings, pet wastes, pesticides, household chemicals, oil, fuel, septic tanks, and improperly applied fertilizer

Stormwater can be a significant polluter of our surface water

Nutrient sources



Lawn fertilizer

Reclaimed water

Grass clippings

The atmosphere

Pet waste left on the lawn

Eroded soil particles

Faulty septic systems

Non-Point Source Pollution

Nutrients (nitrogen & phosphorus)

Bacteria

Sediment

Toxic organics

(oil & pesticides, for example)

Water body Impairment

Excess Nutrients → Excessive Aquatic Weed & Algal Growth → Reduces Water Clarity & Quality → Fish Kills → Loss of Recreation

Quick Poll

Improper fertilizer use can lead to local impairment of waterbodies.

A. True

B. False

Principle #9: Protect the Waterfront

Algae and nuisance weeds grow with nutrient-rich water

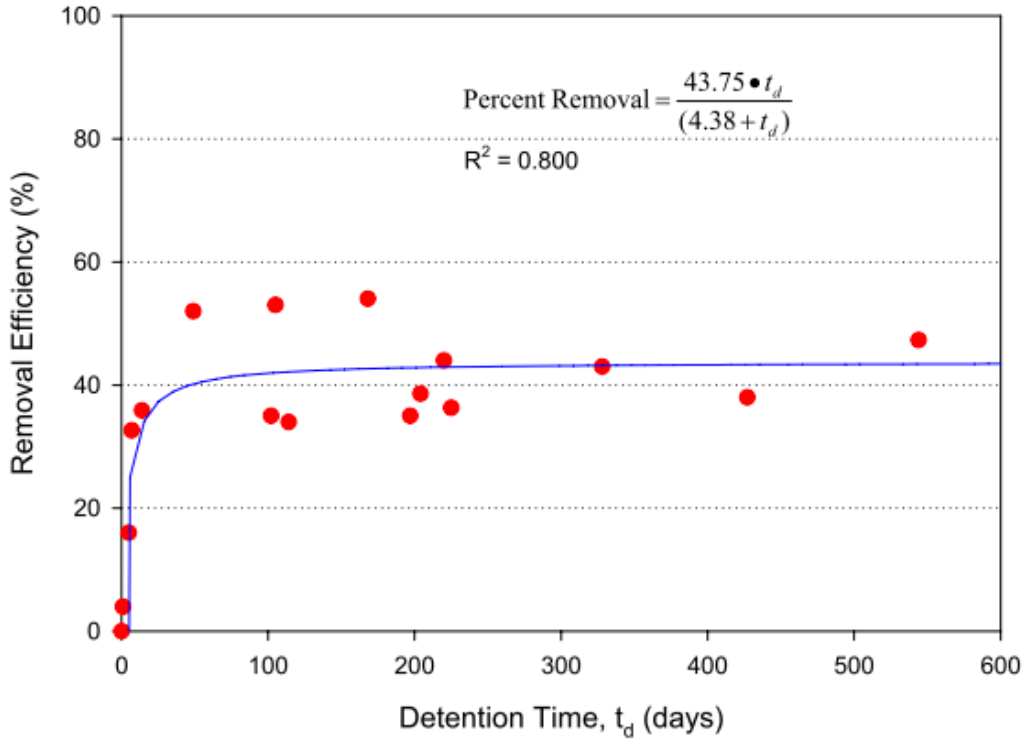
How we Manage it

Wet retention ponds in newer communities

- Capture stormwater runoff
- Suspended materials settle
- Littoral plants can absorb nutrients
- Water is gradually released to water bodies, for example the Wekiva or St. John's River

Wet retention ponds help reduce pollution

Retention Ponds are Not Perfect



Urban stormwater ponds only remove around 50% of incoming nitrogen

What's the solution?

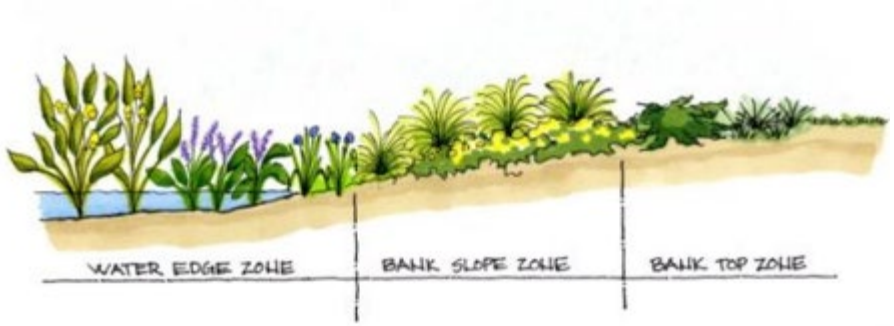
Prevention!

Improve Your Waterfronts

No fertilizer within 15 ft of the water*

10 ft (or more) low maintenance zone
- No mowing
- No pesticides or herbicides
- Plant shoreline and aquatic plants

A vegetated shoreline
- Helps erosion control
- Provides habitat
- Absorbs nutrients
- Reduces temperature



Remember the slope of your shoreline influences runoff, erosion, and plantings

*25 ft in Orange County

Quick Poll

Proper fertilizer use can allow any plant to grow in any environment

A. True

B. False

Lawn & Landscape

BEST MANAGEMENT PRACTICES

Presenter: Tina McIntyre

Principle #2: Water Efficiently

Fertilizer can burn plant roots under dry conditions

Excessive irrigation leaches nutrients out of the soil

Look for signs of drought stress

Water efficiently according to plant needs

Irrigation Systems Must be Serviced Regularly

Consequences of too little/much water

Root systems compromised

Pest problems increase

Thatch increases (spongy turf)

Drought tolerance decreases

Weeds increase

Quick Poll

What non-pesticide practice can reduce plant diseases and pests?

A. Right plant right place

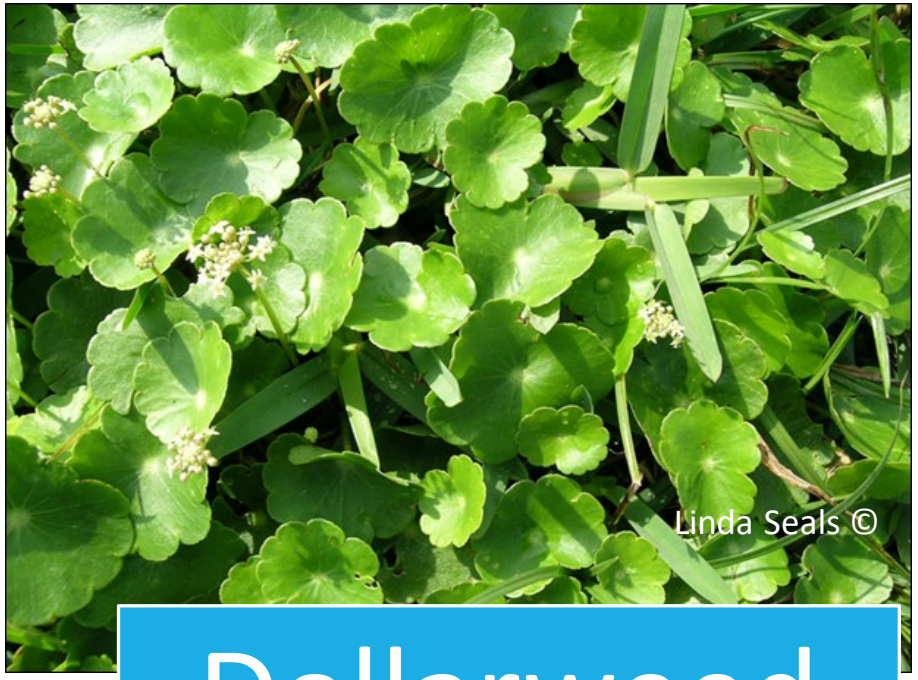
B. Proper irrigation

C. A and B

D. Neither- pesticides are always needed

Weed Indicators of Over-watering

Nutsedge



Dollarweed

How Much Irrigation?

½” to ¾” per application

Address	Nov – Mar	April - Oct
EVEN	Sundays	Thursdays/Sundays
ODD	Saturdays	Wednesdays/Saturdays

During the cooler months, when grass is not actively growing, water every 10 to 14 days

Calibration: Catch-Can Method

Place cans around irrigation zone and turn on system

Measure the amount of water in each can

- Are the amounts in each can similar?
- Is there ½ to ¾ of an inch of water in each can?

Click on image for video

Quick Poll

How long should you run an irrigation system?

A. 30 minutes

B. Time varies with each system, run long enough to deliver ½ to ¾ inches of water

C. Check with your local water management district

D. At least an hour in each zone

Irrigation Systems

Pop-up sprayer

Rotor

Micro


Creativecommons.org

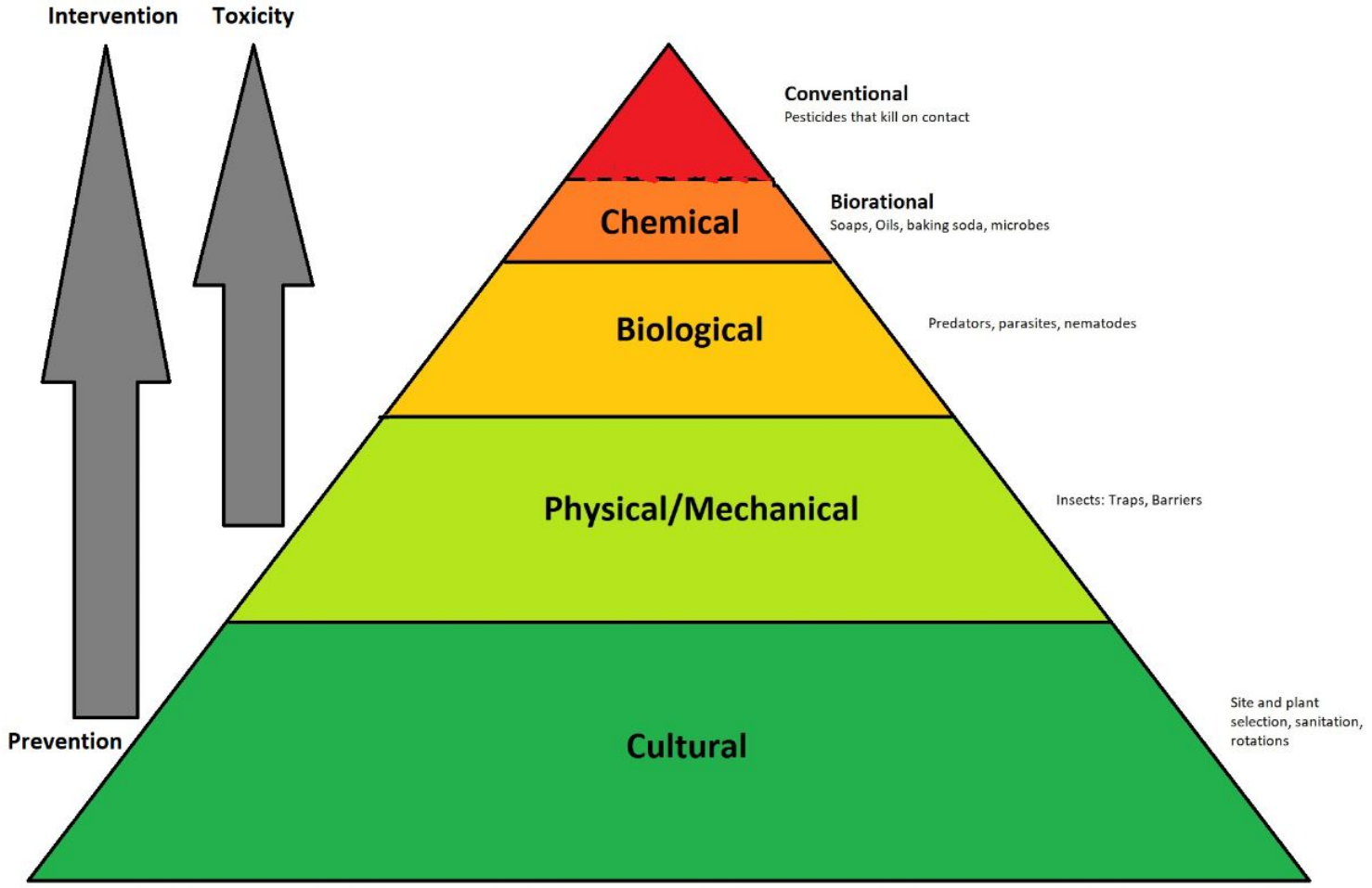
Manage Rainfall

Since 2009, Florida Law requires a ***functioning*** rain shutoff device

Set at ¾ of an inch

Can shut the system off during a rainstorm and/or keep it off if it has rained recently

Principle # 6: Manage Yard Pests Responsibly



Integrated Pest Management for Lawn and Garden

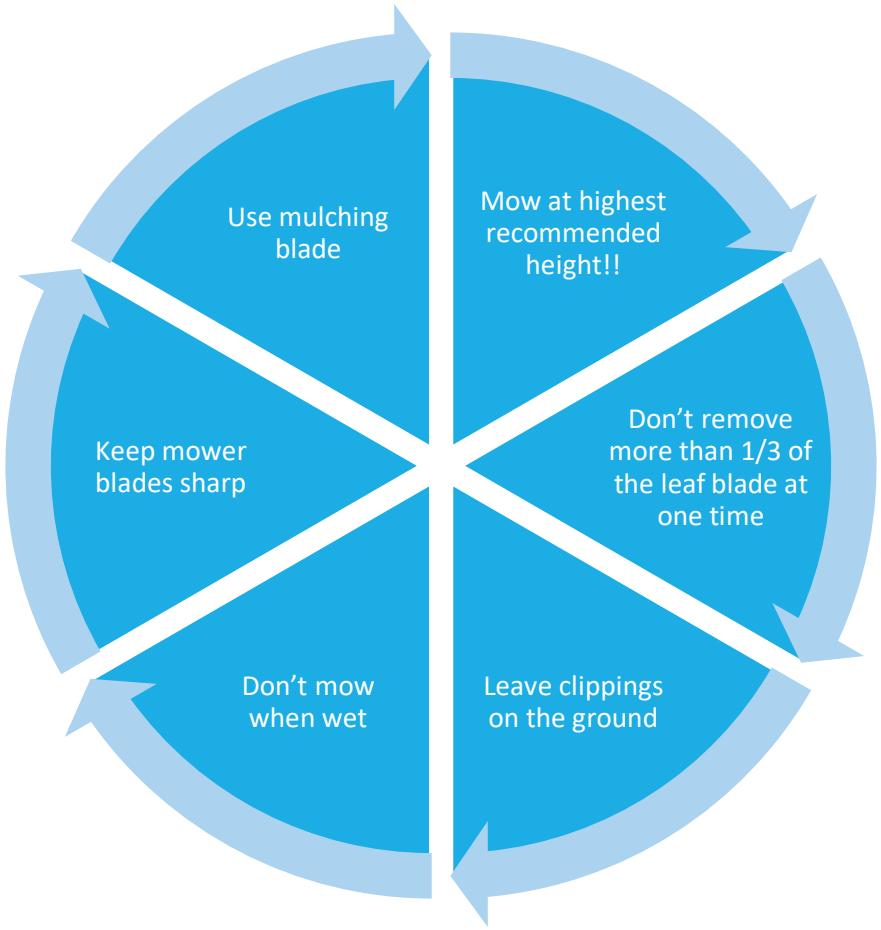
Top Two Turf Stressors

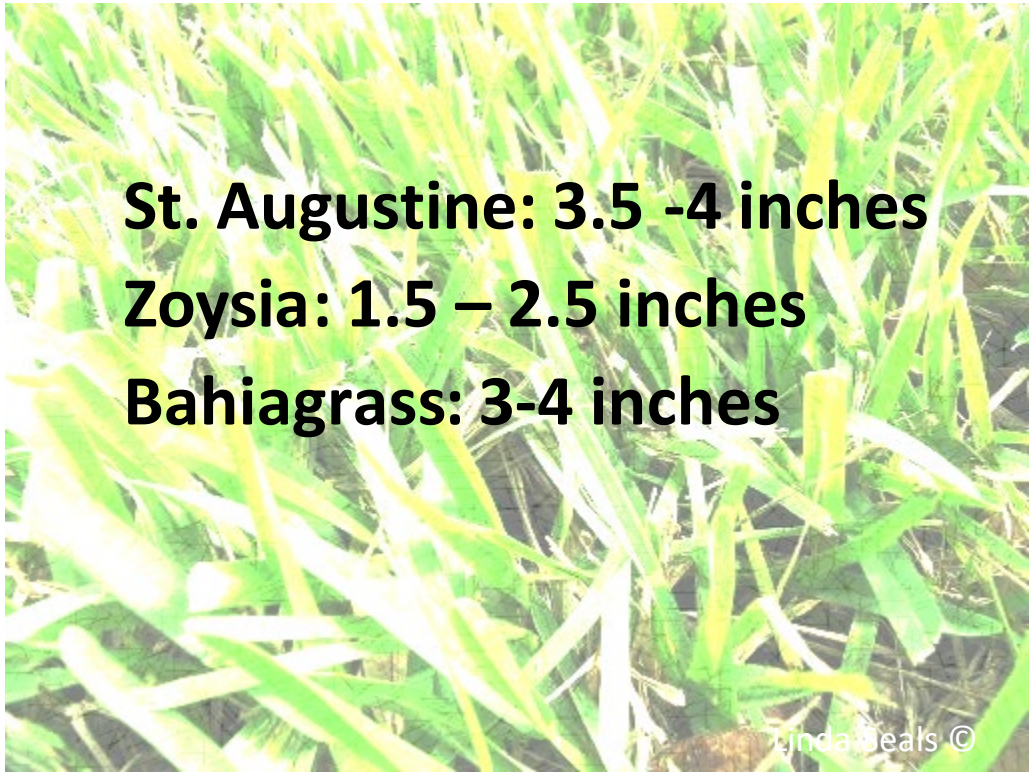
Improper water amounts

- APPLY ½ - ¾ of an inch
- Root systems compromised
- Pest problems increase
- Drought tolerance decreases
- Weeds increase

Mowing too short

Best Mowing Practices





Keep the Clippings

- The average home generates 400 lbs of grass clippings in one year!
- Grass clippings decompose into nitrogen and phosphorus
- Never leave on paved surfaces
- Never let them get into storm drains

Fertilizer Fundamentals

BASIC CONCEPTS

Plant Nutrients

Environment	Macronutrients	Micronutrients
• Carbon • Hydrogen • Oxygen	• Nitrogen • Phosphorus • Potassium • Calcium • Magnesium • Sulfur	• Iron • Manganese • Boron • Copper • Molybdenum • Zinc

Essential Macronutrients

*Nitrogen

- Nitrogen promotes plant growth and makes up part of the chlorophyll

*Phosphorus

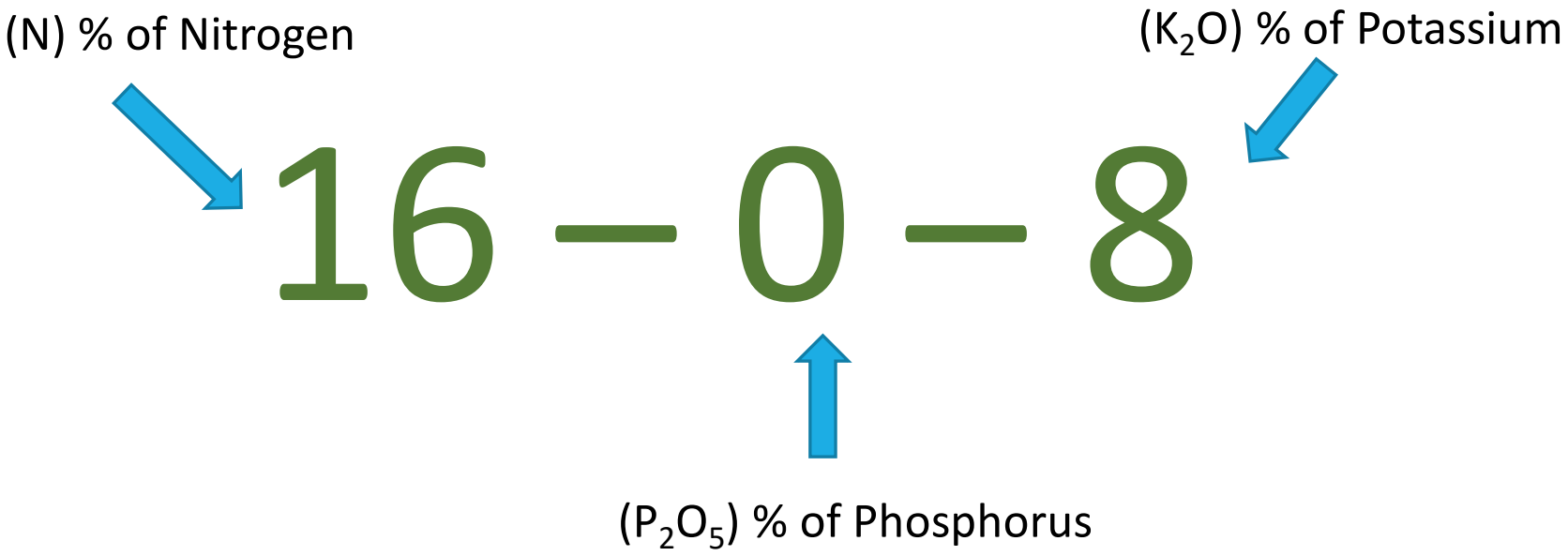
- Should only be applied if a soil test indicates deficiency. Promotes flowering and fruiting

Potassium

- Strengthens roots; increases disease resistance and cold tolerance

*Potential pollutants

Fertilizer Analysis

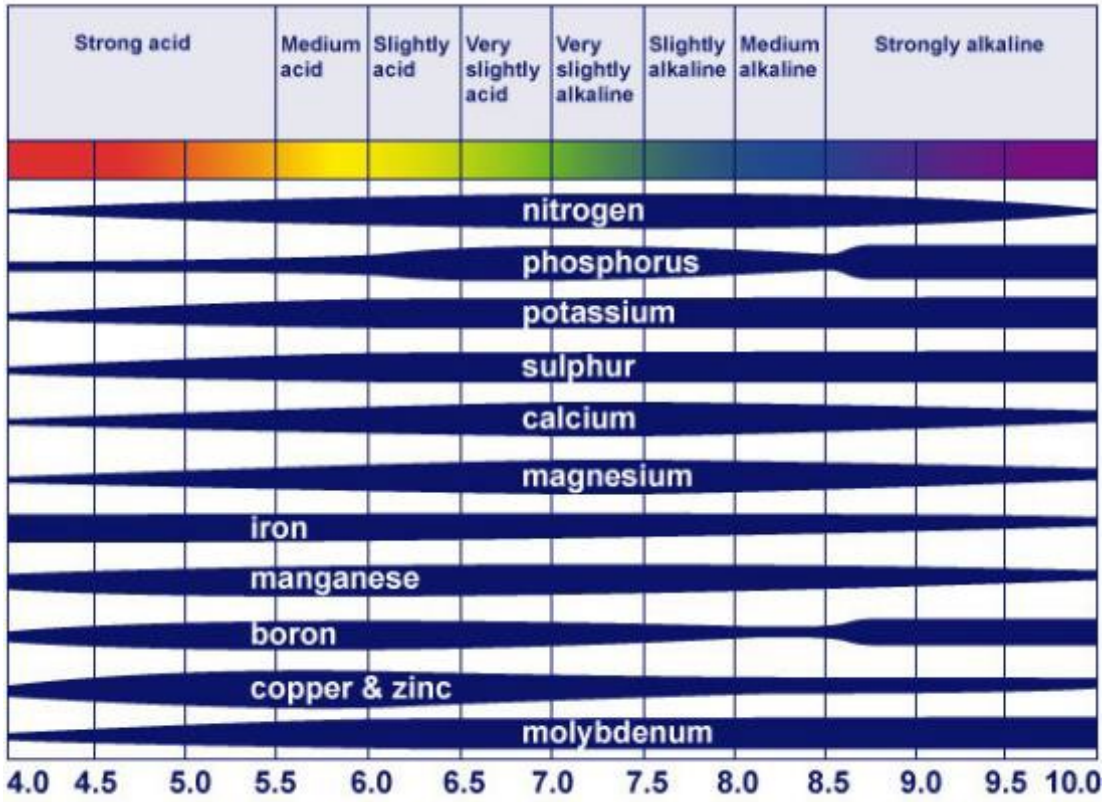


Soil Testing

The first step to creating a beautiful lawn!

- Determine soil pH
- Test macronutrient levels
- Phosphorus testing is particularly important
- Measure levels of manganese and magnesium
- Lab info will be sent after webinar

Soil pH and Nutrient Availability



Plant Nutrition Affects Disease Resistance

Nutrient	Turf Disease
Excess Quick Release Nitrogen	Brown Patch
Potassium Deficiency	Pythium Root Rot
Manganese Deficiency	Take All Root Rot

Florida's Unique Soils

FLORIDA	OTHER AREAS
Sandy with low levels of organic matter	More clay with higher levels of organic matter
Moisture drains out quickly	Hold moisture for longer periods
Many nutrients leach out quickly	Hold 10X more nutrients

Florida's Unique Soils

FLORIDA	OTHER AREAS
Quick Release Nitrogen lasts for a few days	Quick Release Nitrogen can last for months
Phosphorus levels are high	Phosphorus levels are low
Potassium levels are low	Potassium levels are high

Fertilizers designed for other areas are not suitable for Florida

Quick Poll

Which major nutrient is usually adequate in Florida soils?

A. Nitrogen

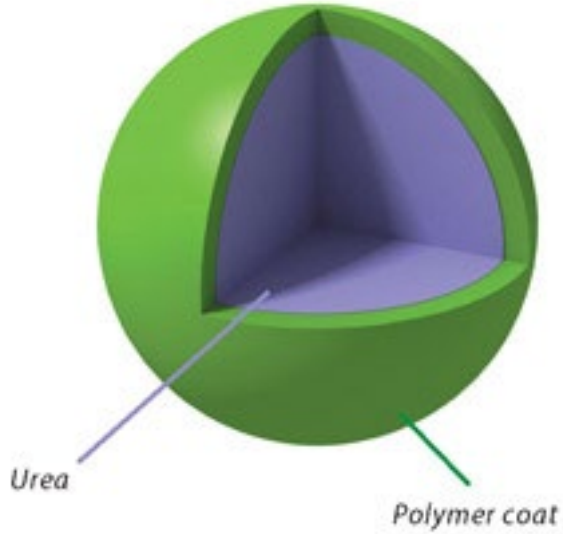
B. Phosphorus

C. Potassium

D. None of the above

Slow Release Nitrogen

Also "controlled release" (CR) or "water insoluble" (WIN)

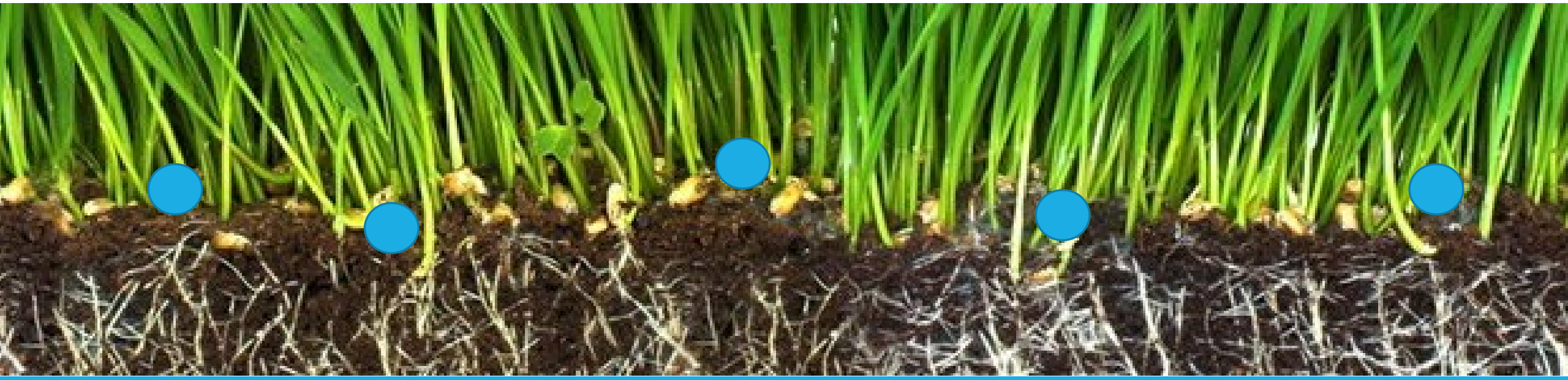


Our county fertilizer ordinances require at least 65% slow release N

Maximum of 1 lb. (N) / 1,000 ft^2 / Application

Slow-Release Nitrogen Benefits

- Properly formulated slow-release products last through the summer
- More efficient use of nitrogen means less needs to be applied
- Slow-release results in less nitrogen entering our lakes



What To Look for On Your Fertilizer Label

% of Total N as Slow-Release Nitrogen (SRN)=

$$\frac{9.1}{14} \times 100 = 65\%$$

(Meets 65% SRN Orange County Requirement)

GUARANTEED ANALYSIS

TOTAL NITROGEN (N).....14.00 %
14.45% Urea Nitrogen (N)*
SOLUBLE POTASH (K_2O).....26.00 %
SULFUR (S) Total.....19.70 %
10.50% Free Sulfur (S)
9.20% Combined Sulfur (S)
IRON (Fe) Total.....0.96 %
0.19% Water Soluble Iron (Fe)
MANGANESE (Mn) Total.....0.48 %
0.1% Water Soluble Manganese (Mn)

DERIVED FROM: Polymer Coated Sulfur, Coated Urea, Sulfate of Potash, Iron Oxide, Manganese Oxide.

CHLORINE (Cl) Max.....2.00 %

*9.10% Slowly Available Urea Nitrogen from Polymer Coated Sulfur Coated Urea.

Does it Contain at Least 65% Slow Release N?

Phosphorus-Free Fertilizer

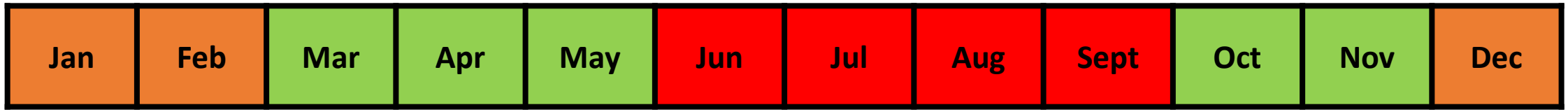
- All plants need phosphorus
- Almost all Florida soils naturally have all the phosphorus plants need and therefore it should not be applied
- Phosphorus can only be applied if a soil test shows your yard has a deficiency

Fertilizer Timing

- Do not apply fertilizer when rain is forecasted!
- Fertilizing is prohibited under flood/tropical storm/hurricane watch or warning
- Prohibited when soils are saturated

Don’t Let Fertilizers Wash Away In Rain

- Never fertilize within 24 hours of a rain event
- Because it rains (and rains hard!) frequently in the summer, there is a restricted season on fertilizers with nitrogen and phosphorus
- June 1 – September 30 is the RESTRICTED SEASON



If You Must Fertilize: Twice is Nice

- If needed, fertilize in **April & October**
- Give it a boost with 65% or more slow-release nitrogen
- This will carry you through the summer rainy season, without posing that extra risk to our water bodies

Are You Choosing The Right Fertilizer?

- Many of the common “Turf” fertilizers are not suitable for Florida
- High Nitrogen with little Potassium 

- Unnecessary levels of Phosphorus 

- Potassium should be at least half the Nitrogen level 

How Much Fertilizer Do You Need?

Which plants are you fertilizing?

Maximum of 1 lb. (N) / 1,000 ft^2 / Application

Turf Species	Pounds of N per year	Plan for this many applications
St. Augustine	2	2
Zoysia	2	2
Bahia	1	1

Quick Poll

When choosing the right turf fertilizer, the Nitrogen to Potassium ratio should be:

A. 2:1 ratio

B. 1:10 ratio

C. 5:1 ratio

Keep Fertilizer Where It Belongs!

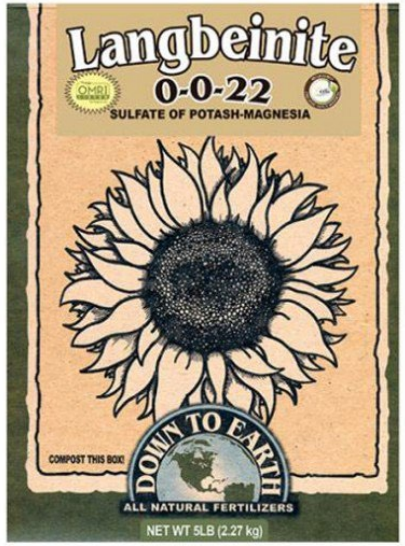
Use a **deflector shield** near water, sidewalks, etc.

Leave at least a 15’ fertilizer-free **maintenance zone next to waterfront** in Seminole County, 25' in Orange County

Image Courtesy UF / IFAS Extension FYN Program

Summer Fertilizer Blends

- Must be nitrogen and phosphorus free
- Can be applied anytime
- Should be based on soil test
- Iron enhances color
- Manganese enhances disease resistance
- **Potassium** improves overall plant health
- Lime corrects acidic soil
- **<u>Compost can be used at any time</u>**



Quick Poll

Prior to this webinar, were you aware of the fertilizer ordinance in your county?

A. Yes

B. No

Institutional Applicators

"Institutional Fertilizer Applicator: Any Person that Applies Fertilizer for the purpose of maintaining Turf, Landscape Plants, or both includes but are not limited to: **owners, managers or employees of public lands, schools, parks, religious institutions, utilities, industrial, or business sites and any residential properties maintained in condominium or other form of common ownership."**

"All commercial and Institutional Fertilizer Applicators shall abide by and successfully complete the training program in the Florida-Friendly Best Management Practices for Protection of Water Resources by the Green Industries offered by the Florida Department of Environmental Protection through the University of Florida/IFAS"

Commercial Applicators

- Orange County limits nitrogen application to no more than three (3) pounds N per year per 1,000 sq. ft.

- Seminole County follows UF/IFAS Best Management recommendations in the chart on the right

Nitrogen Recommendations (lbs N/1000 ft²/yr)

Species	North	Central	South
Bahia	1-3	1-3	1-4
St. Augustine	2-4	2-5	4-6
Zoysia	2-3	2-4	2.5-4.5

These recommendations are based on Rule 5E-1.003, Florida Administrative Code, "Fertilizer Label Requirements for Urban Turf, Sports Turf or Lawns".

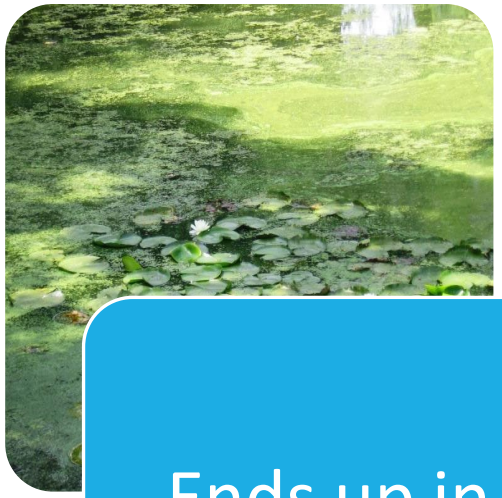
Ordinance Applies to Turf and Landscape Plants

Does not apply to:

- Farms
- Vegetable Gardens
- Fruit Trees unless within 25 (Orange County) or 15 feet (Seminole County) feet of a waterbody
- Recreational/Athletic Turf

Do your Part to Protect our Waterways

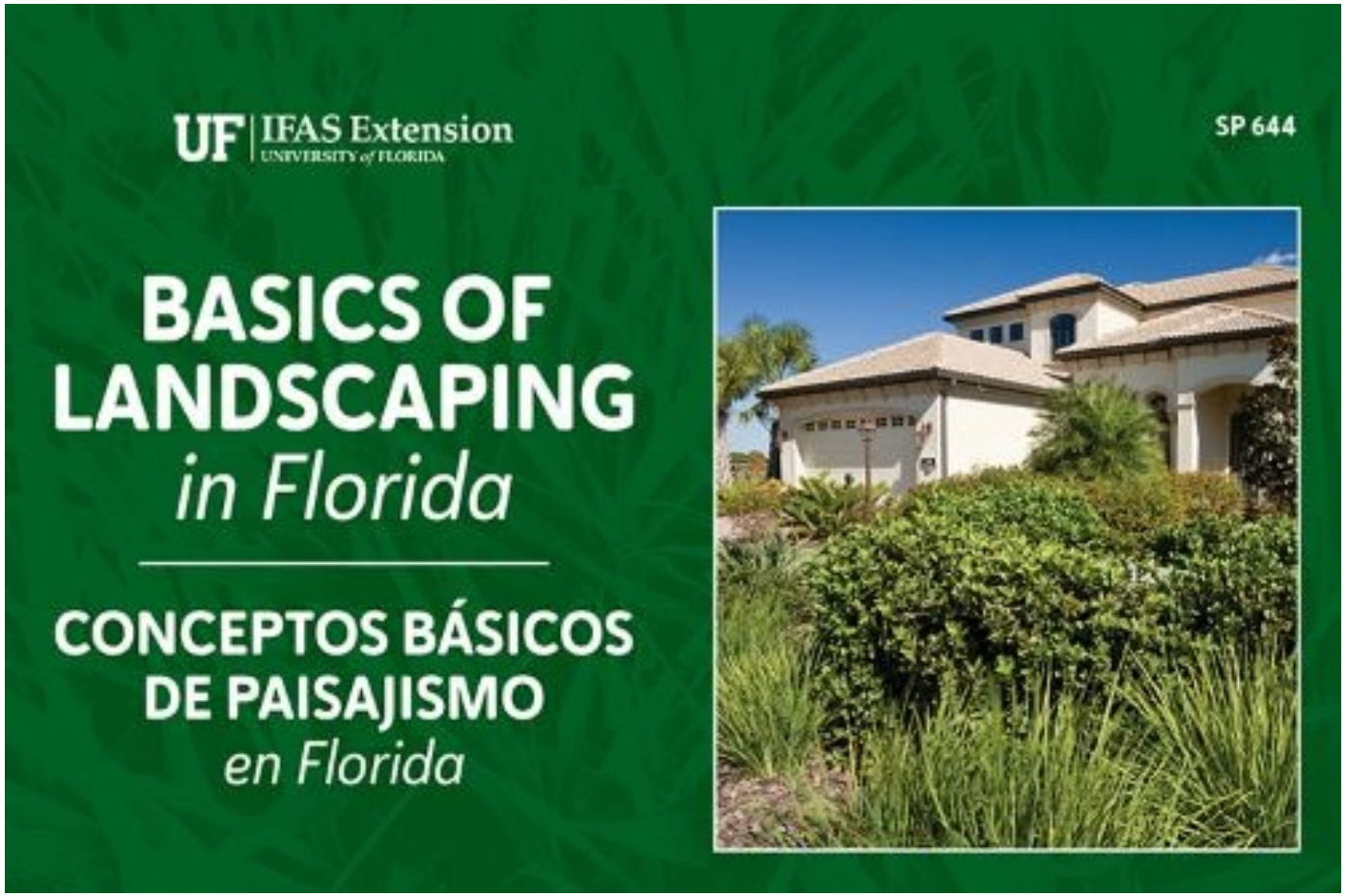
What happens in our yards…



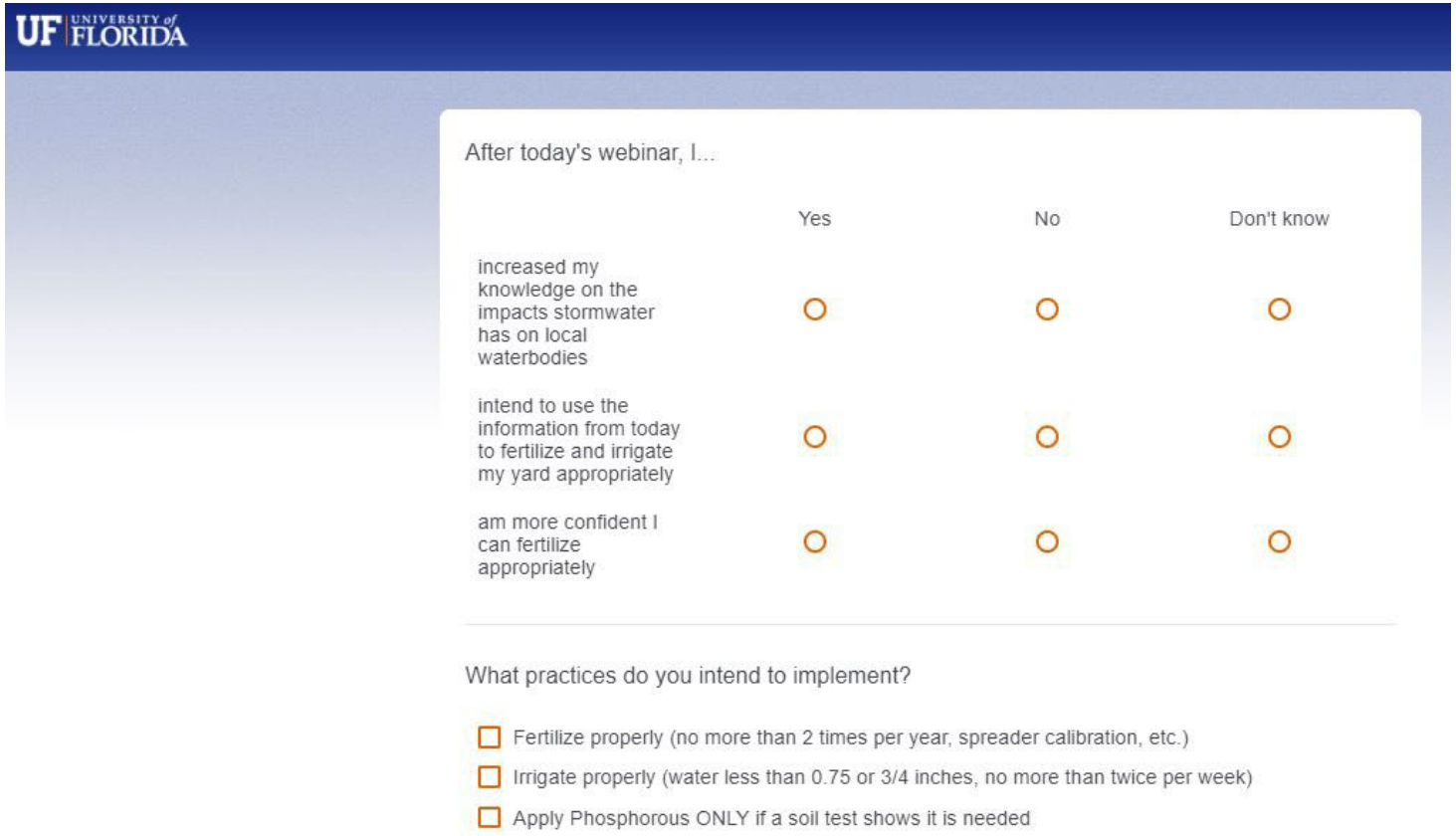
Ends up in our water

Fertilize wise for healthy grass and clean water

Now Available!



SURVEY!


UF UNIVERSITY of FLORIDA
After today's webinar, I...
Yes
No
Don't know
increased my knowledge on the impacts stormwater has on local waterbodies
intend to use the information from today to fertilize and irrigate my yard appropriately
am more confident I can fertilize appropriately
What practices do you intend to implement?
Fertilize properly (no more than 2 times per year, spreader calibration, etc.)
Irrigate properly (water less than 0.75 or 3/4 inches, no more than twice per week)
Apply Phosphorous ONLY if a soil test shows it is needed

SEMINOLE COUNTY
FLORIDA'S NATURAL CHOICE

Thank you! Any questions?

Tina McIntyre, Florida-Friendly Landscaping Agent, Seminole County, K.McIntyre@ufl.edu

Tom Sacher, Fertilizer Educator, Seminole County, tsacher@seminolecountyfl.gov

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