

## Practical Considerations for Minimizing Environmental Impact of Turf Nutrition

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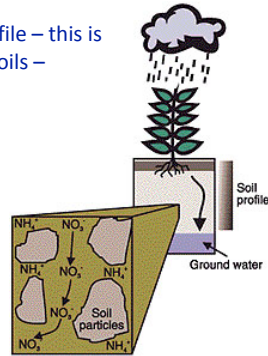


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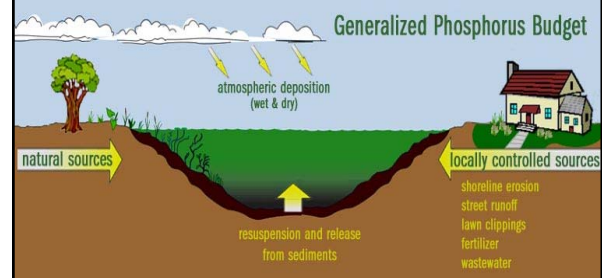
## Two Ways That Fertilizers Can Pollute

- Leaching through soil profile – this is what nitrogen will do in soils – especially sandy soils.



## Two Ways That Fertilizers Can Pollute

- Surface water run-off – this is what nitrogen and phosphorus can do.





### Clean Up Properly

- Be careful not to apply fertilizer particles onto sidewalks, roadways, or other impervious surfaces where they might wind up in the storm drain.

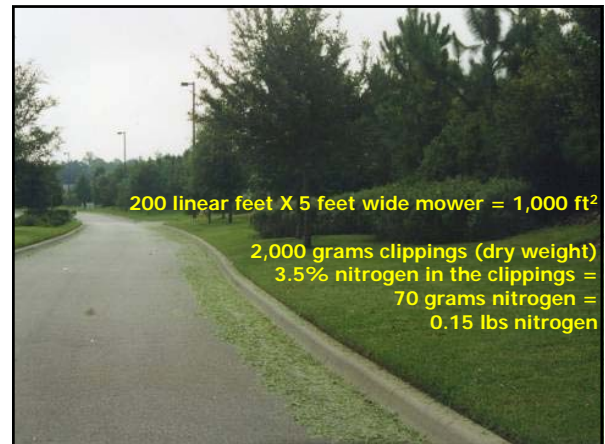












### How To Properly Apply Fertilizer

- Use a deflector shield when fertilizing near water bodies or impervious surfaces.




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### Nutrient Import from Sod

- Properly harvested sod comes with ~ 1/2" of soil.
  - Nutrients applied at the farm are likely transported with the sod.
- Irrigation during sod establishment can be excessive if guidelines are not followed properly.



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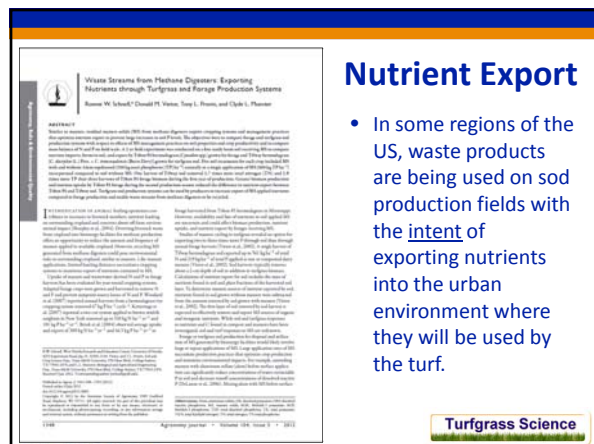
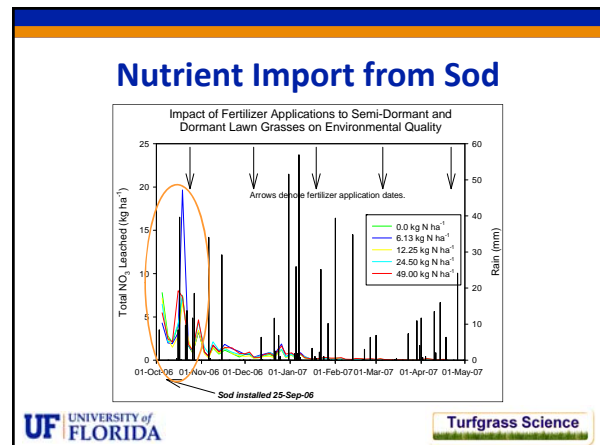
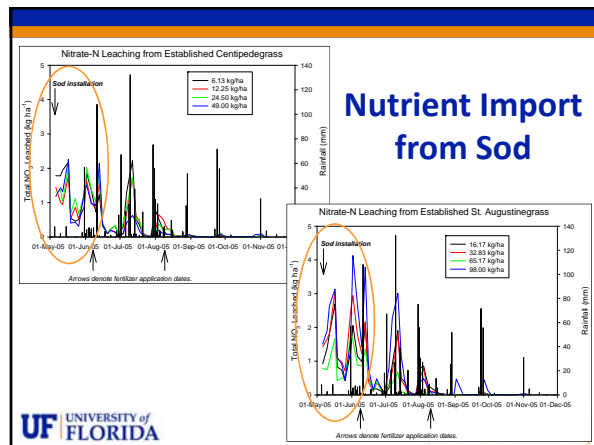
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At the onset of each trial, recently cut sod was installed in each of the lysimeters. Sod produced on muck soil for trials 1 and 2 was received from King Ranch (Belle Glade, FL). Soil analysis from the site showed 81.2% organic matter, 0.6% total N, and 0.06% total P. Sod from muck soil and for trial 3 was received from TJ Turf Farm (Delray Beach, FL), and was lower in organic matter, 58.5%, total N, 0.2%, and total P, 0.02%. Sod produced on sandy mineral soil was received from A. Duda and Sons (La Belle, FL). Soil analysis from the site showed 2.6% organic matter, 0.2% total N, and 0.01% total P. All soil analyses were conducted by A and L Southern Agricultural Laboratories, Inc. (Pompano Beach, FL).

- How much does a pallet of sod weigh?
- How much total N and P is contained in a pallet of sod?

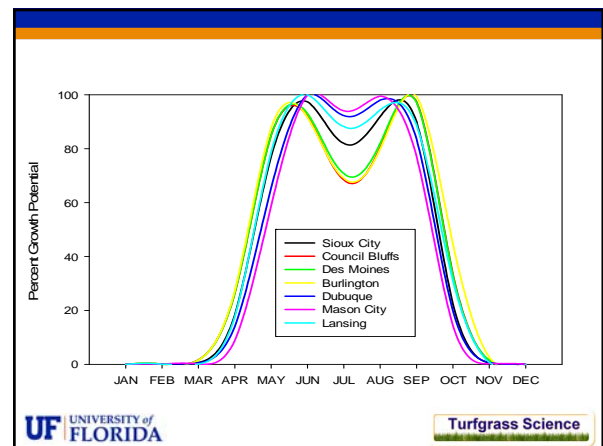
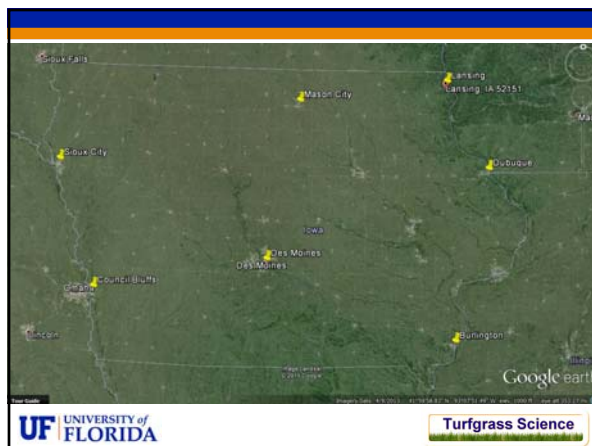
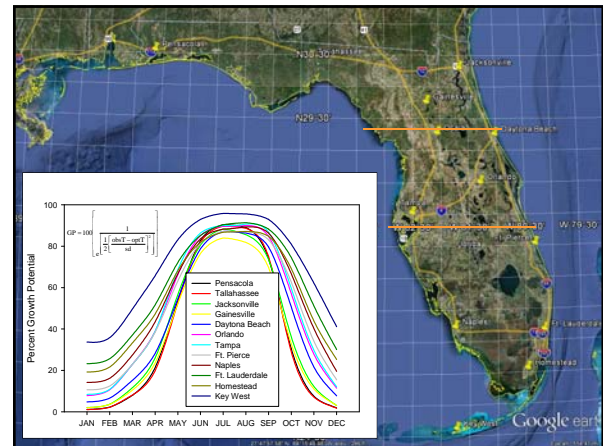
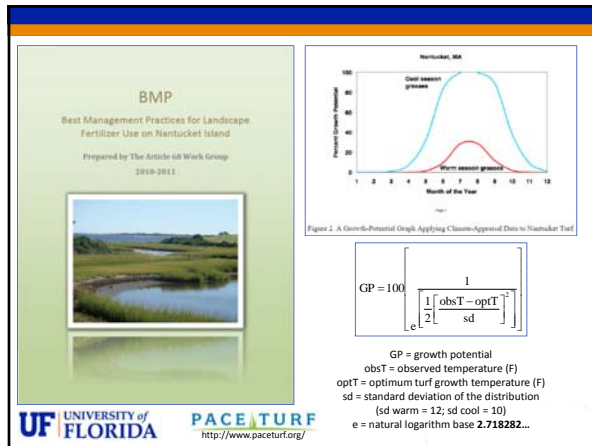
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	Pallet Weight	% Nutrient	Lbs/Nutrient/Pallet	Ft <sup>2</sup> /Pallet	Lbs/Nutrient/1,000 ft <sup>2</sup>
Mineral	2800	0.2 %N	5.6	450	12.4
	2800	0.02 %P	0.56	450	1.24
Muck	2000	0.6 %N	12	450	26.7
	2000	0.06 %P	1.2	450	2.67

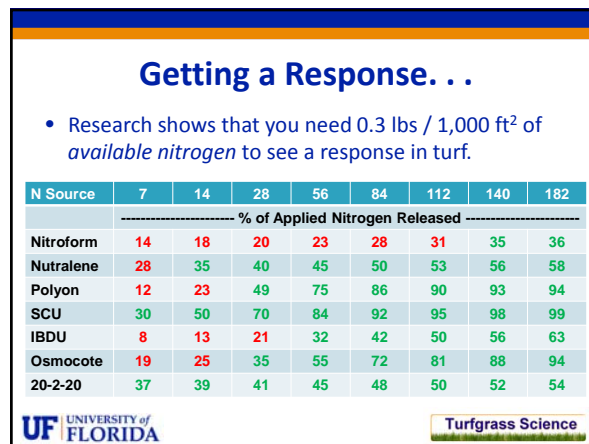
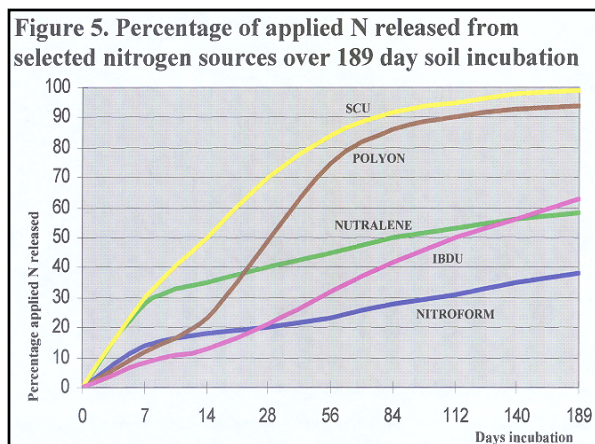
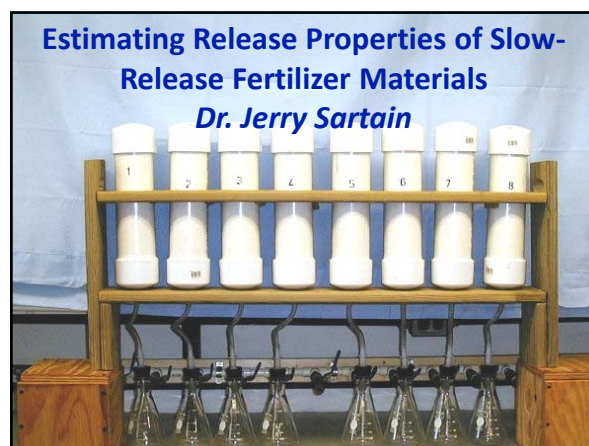
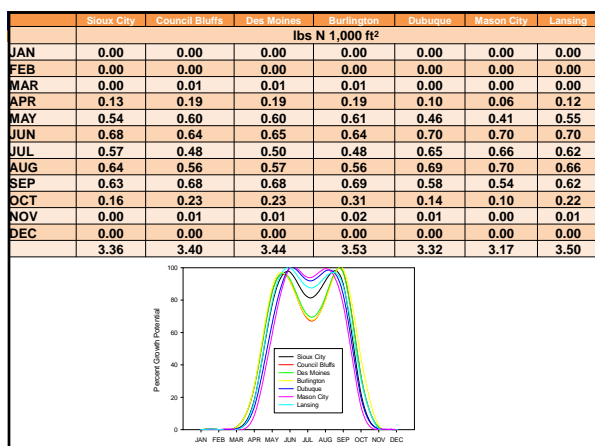


## Practical Considerations

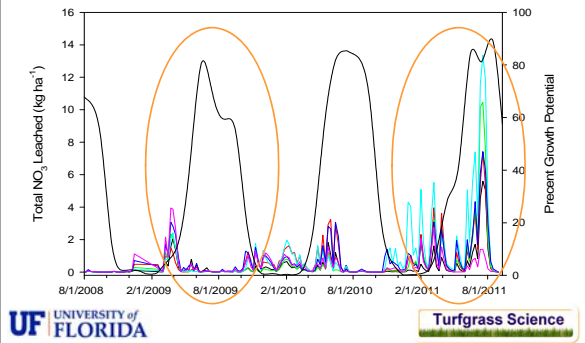
- Avoid fertilization of newly laid sod for 30 – 60 days.
  - Sufficient nutrients likely exist.
- Encourage sod installers/landscapers to inquire about the timing of the last farm-applied nutrients.
  - Use ranges rather than specific dates
    - < 2 weeks = no fertilizer for 60 days
    - 2 – 4 weeks = no fertilizer for 30 – 60 days
    - > 4 weeks = no fertilizer for 30 days
  - This could prove burdensome for less “tech-savvy” producers.



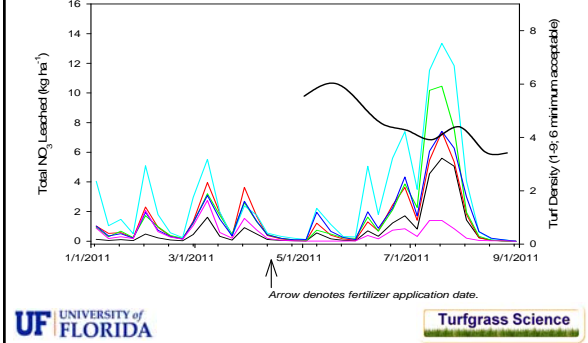




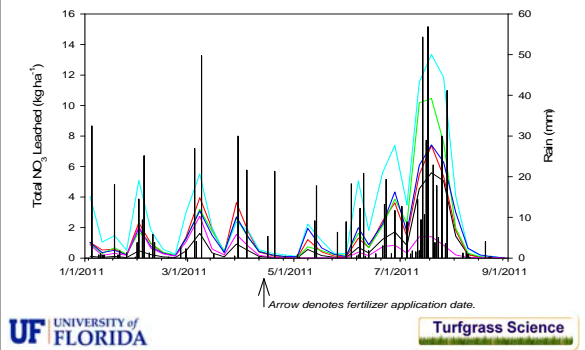
### SR Nitrogen Source Study – Jay, FL



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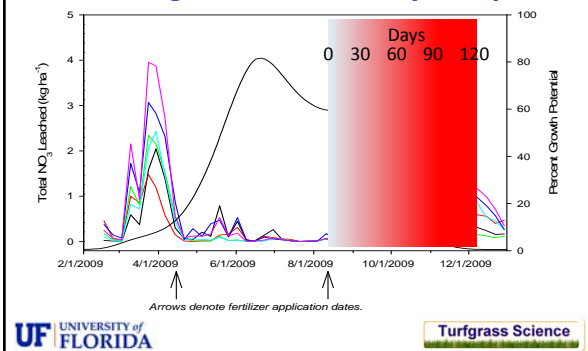
### Practical Considerations

- Nutrients must be applied based on the plant's ability to assimilate them.
  - This should supersede any calendar-based regimen.
- Healthy, dense turf is the key to minimizing environmental impact of applied nutrients.
  - As the health of the plant deteriorates – one can expect problems.

### Practical Considerations

- Timing of application of enhanced efficiency (SR) nutrient sources should coincide with periods of active growth potential.
  - The “release period” should not extend beyond periods of active growth.

### SR Nitrogen Source Study – Jay, FL



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