

# Low Input Lawn Management

## *Reducing Fertilizer and Water Use in the Home Lawn*

*By Sarah Browning, Nebraska Extension Educator*

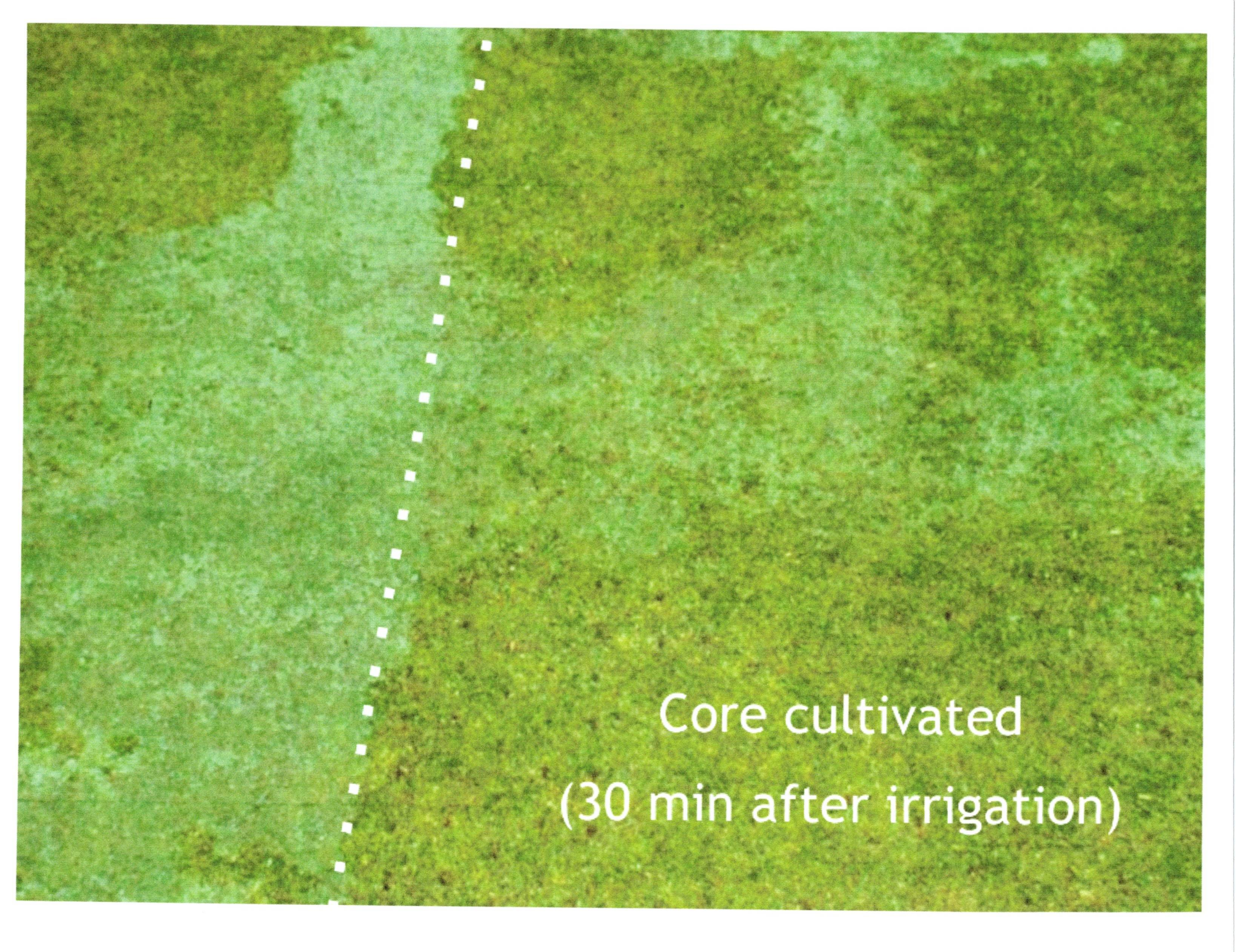


- Grow the roots
- Mow it tall
- Water-wise irrigation
- Frugal fertilization

# Aeration & Compacted Soils

- ❑ Reduced Thatch
- ❑ Better Rooting
- ❑ Less Compaction
- ❑ Reduced Runoff
- ❑ Better Water Uptake
- ❑ Improved Fertilizer Use



An aerial photograph of a green field, likely a golf course, showing a distinct area of darker green grass. A dashed white line follows the boundary of this darker area, which is identified as a cultivated core. The surrounding grass is a lighter shade of green.

Core cultivated  
(30 min after irrigation)

# Aeration Timing

Aeration

Aeration



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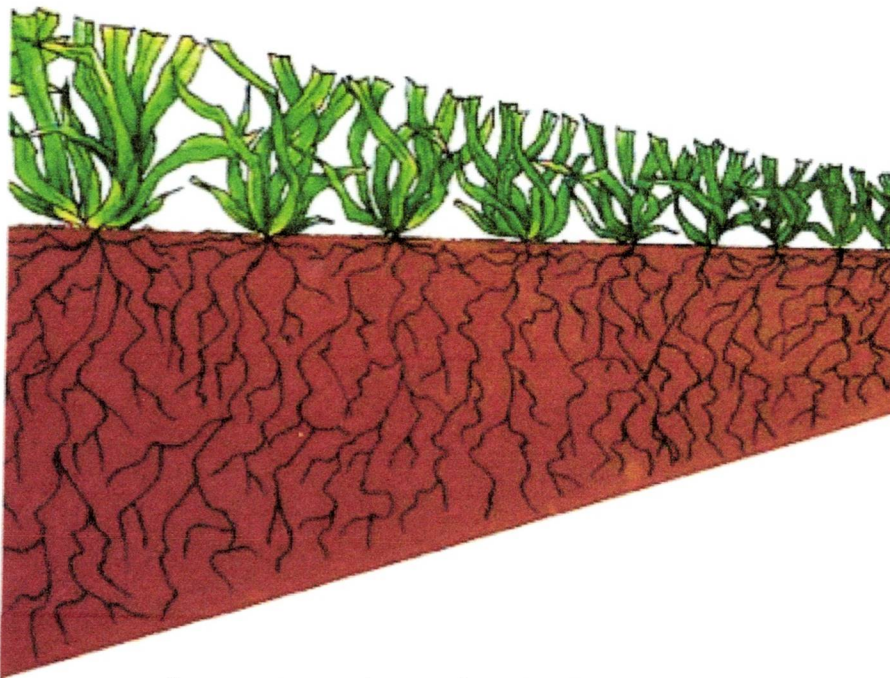
SEP OCT

NOV

Graphic from A. Turgeon

**N** EXTENSION

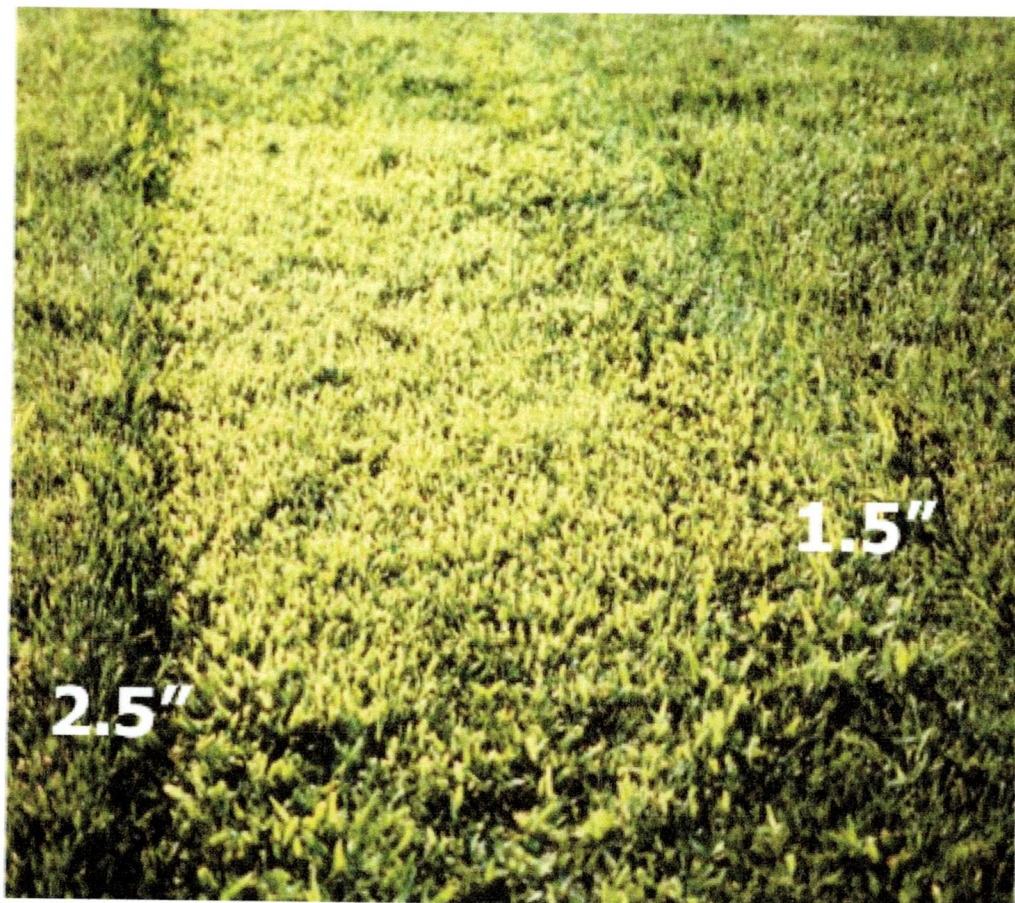
# Mow it Tall



As mowing height decreases, rooting depth also decreases and maintenance increases.

Species	Mowing Height <i>All Season</i>
Kentucky bluegrass	3-3.5"
Tall fescue	3-3.5"
Buffalograss	3-4"
Zoysiagrass	2.5-3"


# Mowing Height Effects on Weed Pressure



Mowing Height	1.5"	2.5"	4'
Species	Weed Infestation %		
Kentucky bluegrass	55	25	7
Tall fescue	45	23	2

# Water Use vs. Drought Tolerance

## Drought Tolerance

Buffalograss	Best
Zoysiagrass	
Tall Fescue	
Kentucky bluegrass	
Perennial ryegrass	
Least	

## Water Use

	Mm/day	Inches/week
Kentucky bluegrass	4-6	1.0-2.0
Buffalograss	5-8	1.3-2.0
Zoysiagrass	5-8	1.3-2.0
Perennial rye	6-11	1.5-3.0
Tall fescue	7-13	2.0-4.0

# Watering Tips



- Look for wilting symptoms
  - Color change
  - Leaf blades don't spring back after foot traffic
- Measure soil moisture level to determine need to water
  - Screwdriver
- Water deeply and infrequently



# Water to the Bottom of the Roots

- Spring & Fall 1" water / week
- Summer
  - Heavy soils- 1.5" water / week
  - Sandy soils- 2" water / week
- For water conservation allow Kentucky bluegrass to go dormant
  - Greater susceptibility to wear damage
  - Disease & insect injury may go undetected



# Turfgrass Nitrogen Rates

Species	N required each year (lb./1000 sq.ft.)
Improved Kentucky bluegrass	3-6
Common Kentucky bluegrass	2-4
Perennial ryegrass	3-6
Tall fescue	1-4
Zoysiagrass	1-3
Buffalograss	0-2

## Nutrient Value of Clippings

- 6-7% N
- 0.25 – 1% P
- 1 – 4% K

Returning clippings can provide 1 lb.N/1000 sq.ft. over the course of a summer.

# Pre 2020 | *Fertilizer Application Timing and Rate*

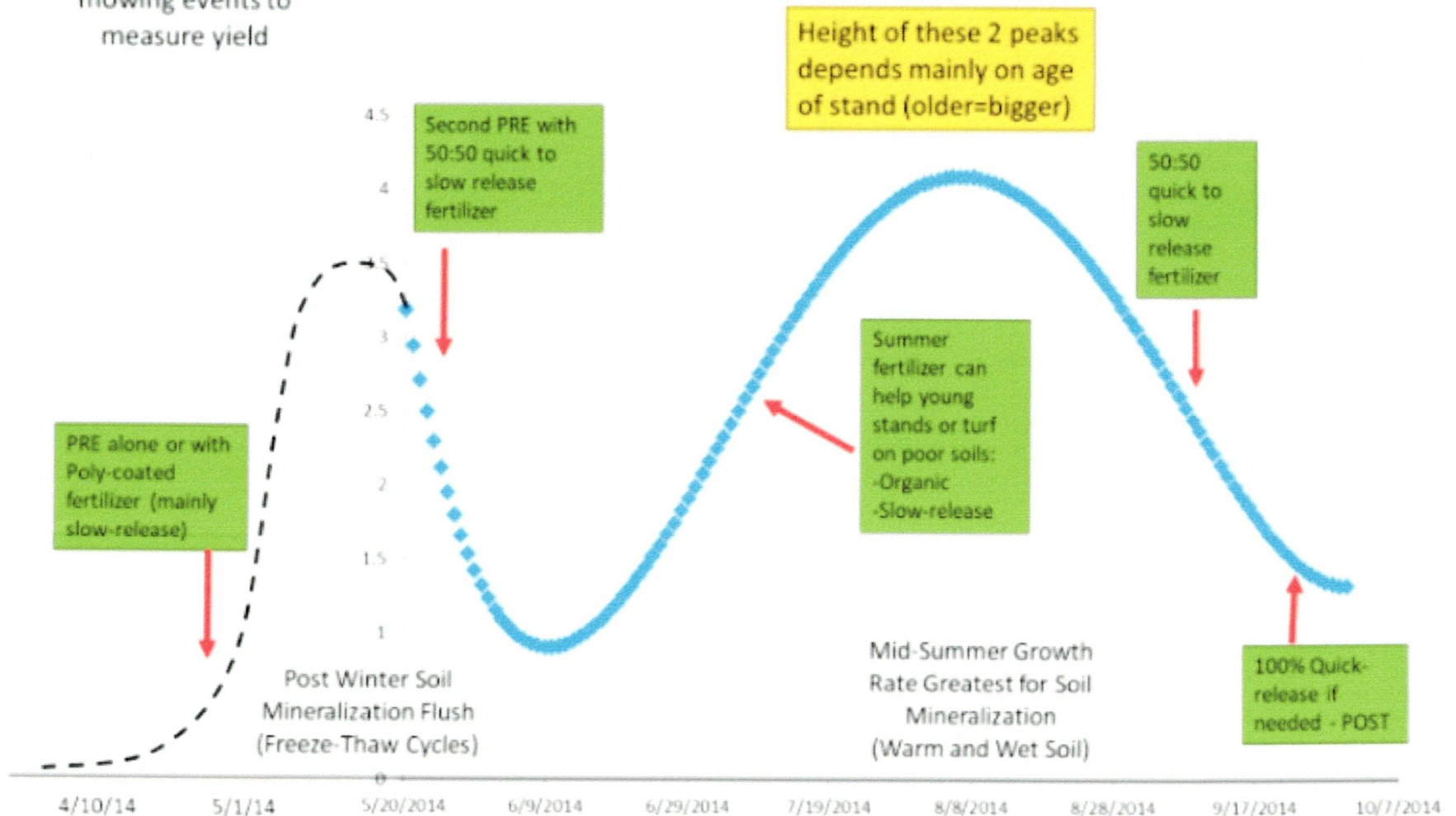
Application	Timing	N / 1000 ft <sup>2</sup>	Total N Applied
1	April 20-May 10 Tax Day, April 15	0.5 – 1.0 lb	1/3
2	June 5 – June 15 Memorial Day, May 30	0.75 – 1.0 lb	
3	September 1 – 15 Labor Day, Sept 1	0.75 – 1.0 lb	2/3
4	Oct 15 – Nov 15 Halloween, Oct 30	1.0 – 1.5 lbs	

# Tall Fescue Clipping Yield – No Fertilizer

Turf growing but few mowing events to measure yield

Clipping yield measured during all the mowing events

Measured Turf Clipping Yield  
Tall Fescue in Nebraska



# Kentucky Bluegrass Recommendations – **Current** Fertilizer Application Timing and Rate

Timing	Turf Age	N / 1000 ft <sup>2</sup>	Young Turf Total N	Established Turf Total N
April 15-25	Young	0.5 – 0.75 lb	<ul style="list-style-type: none"> <li>• 2.5 – 3.75 lbs.</li> <li>• Plus clipping return = 4.75 lbs.</li> </ul>	
Late May – mid June	Young & established	0.75 – 1.0 lb		
Late August – early September	Young	0.75 – 1.0 lbs 50% soluble & 50% slow-release		
Mid-September	Established	0.75 – 1.0 lbs 30-50% soluble & 50% slow-release		<ul style="list-style-type: none"> <li>• 1.50-2.0 lbs.</li> <li>• Plus clipping return = 3.0 lbs</li> </ul>
Mid-October	Young	0.5-1.0 lbs. Quick release		

# Tips to Fertilization Success

- Base applications on lawn color, vigor, density and growth rate
- Use slow-release Nitrogen fertilizers
  - Methylene urea
  - Urea formaldehyde
  - IBDU (isobutylidene diurea)
  - Sulfur-coated urea
  - Polymer-coated fertilizers
    - Osmocote
    - Nutricote
  - Milorganite
- Avoid nitrogen applications during summer heat/stress
  - Improves plant health
  - Avoids encouragement of weed problems
- Absorption greatest with high soil moisture
  - Water thoroughly after application

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## Questions?

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