

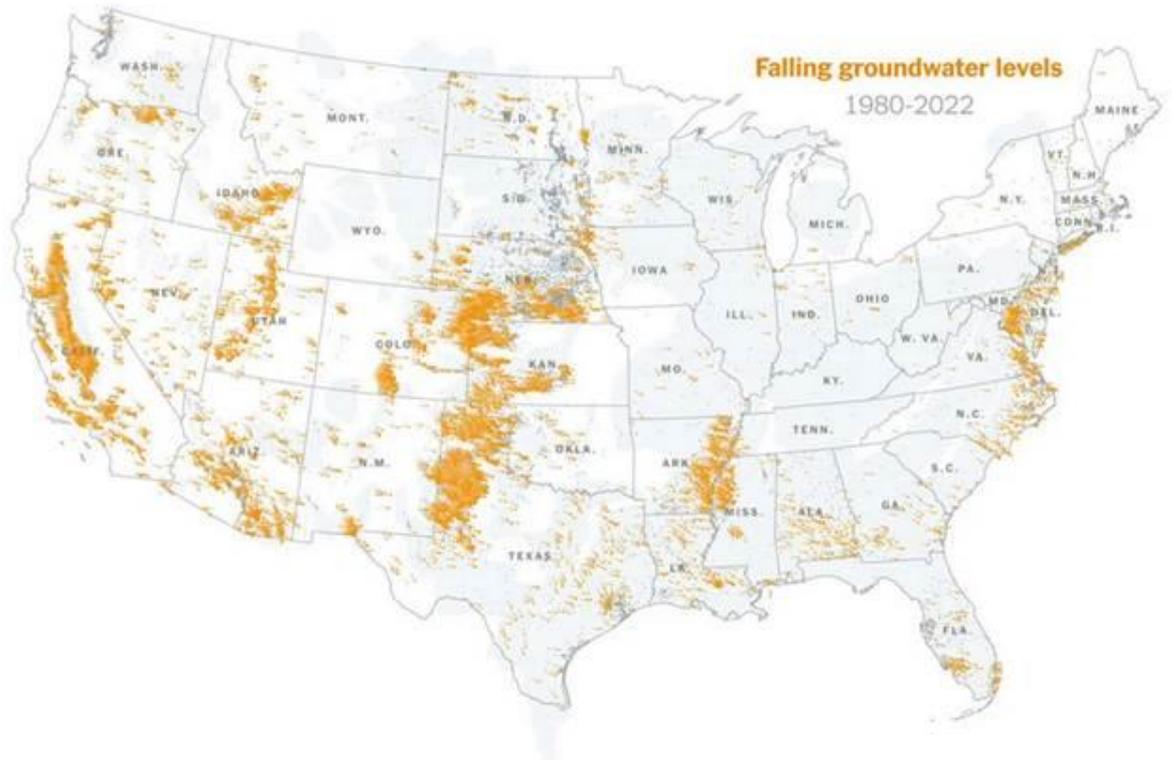
Uncharted Waters

A series on the causes and consequences of disappearing water.

America Is Using Up Its Groundwater Like There's No Tomorrow

Unchecked overuse is draining and damaging aquifers nationwide, a data investigation by the New York Times revealed, threatening millions of people and America's status as a food superpower.

December 29, 2023 . By MIRA ROJANASAKUL, CHRISTOPHER FLAVELLE, BLACKI MIGLIOZZI and ELI MURRAY



THE NEW YORK TIMES

Water-wise Lawn Management

A Beautiful Lawn with Fewer Inputs

By Sarah Browning, Nebraska Extension Educator

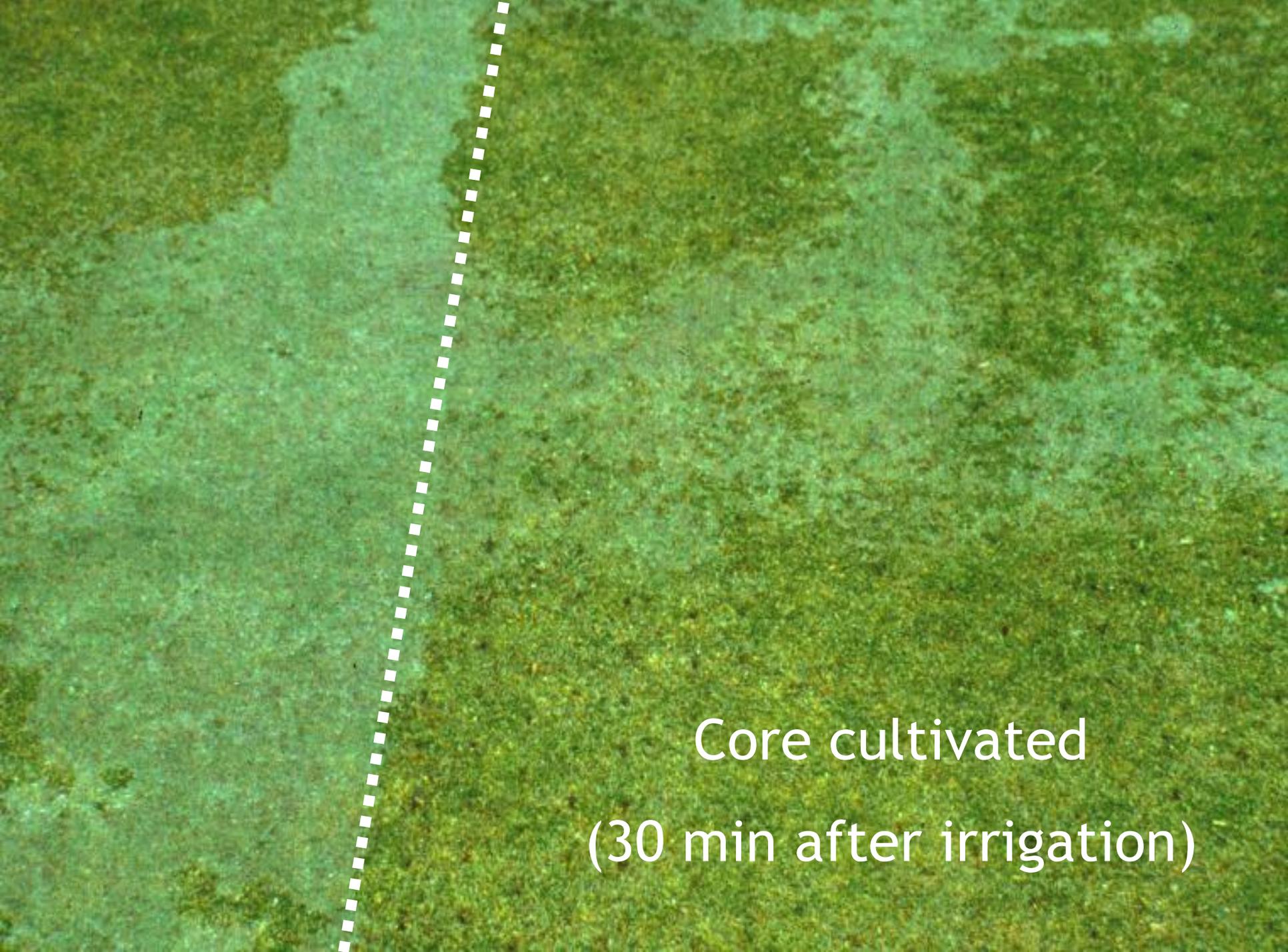


- Grow the roots
- Mow it tall
- Water-wise irrigation
- Frugal fertilization

Aeration & Compacted Soils

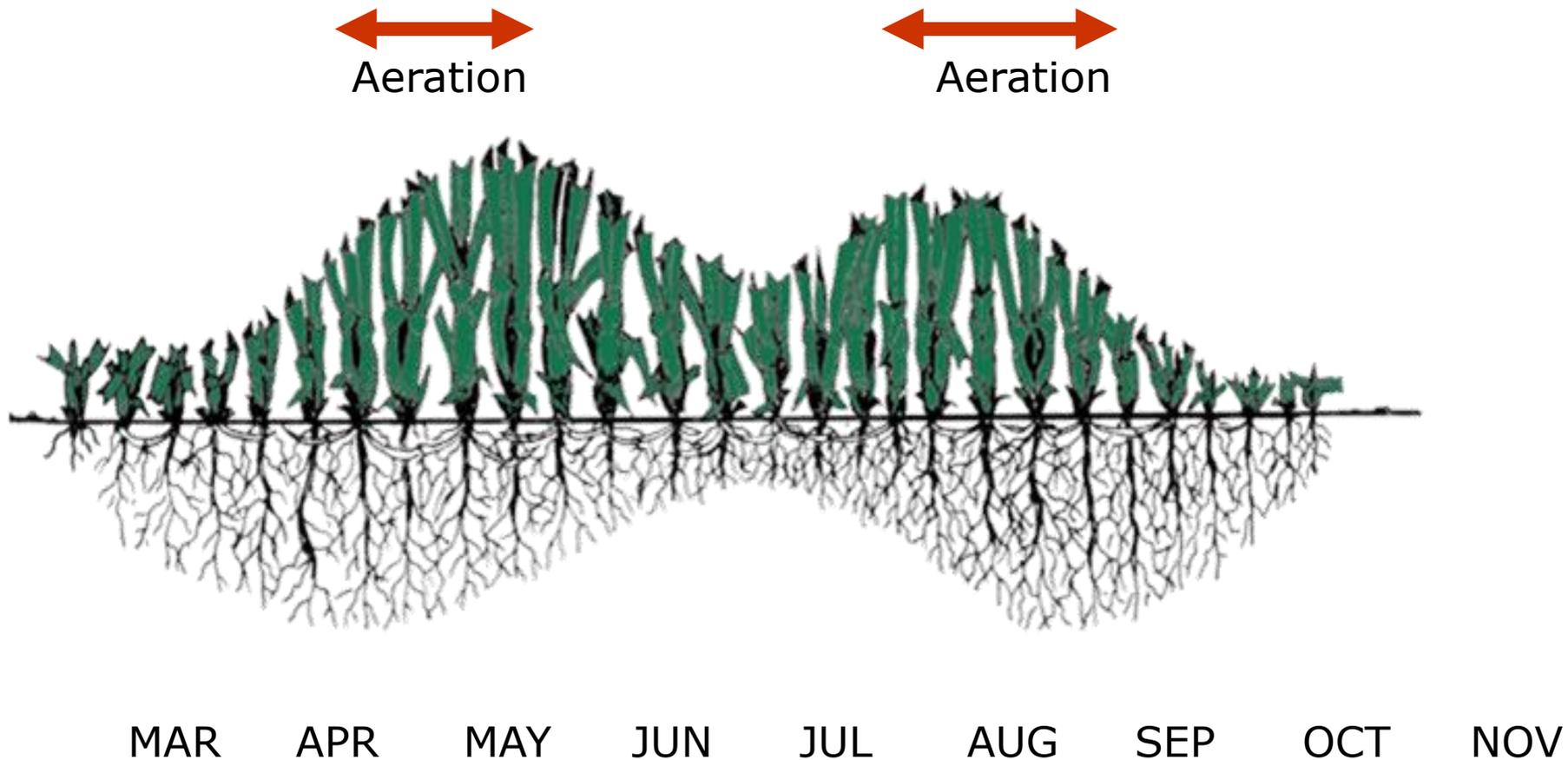
- Reduced Thatch
- Better Rooting
- Less Compaction
- Reduced Runoff
- Better Water Uptake
- Improved Fertilizer Use



An aerial photograph of a green field, likely a golf course, showing a distinct area of darker green grass. A white dashed line curves through the field, separating the darker area from the lighter green areas. The text 'Core cultivated (30 min after irrigation)' is overlaid in white on the darker area.

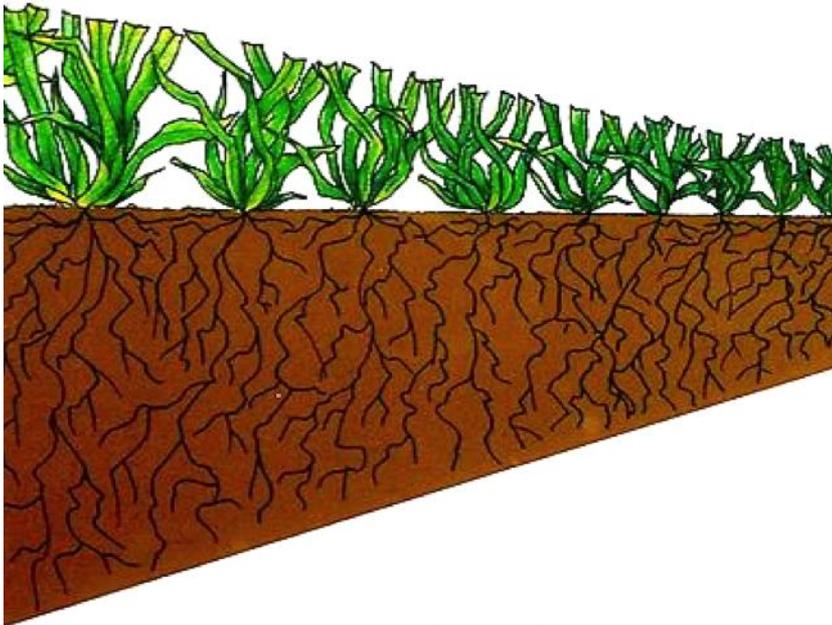
Core cultivated
(30 min after irrigation)

Aeration Timing



Graphic from A. Turgeon

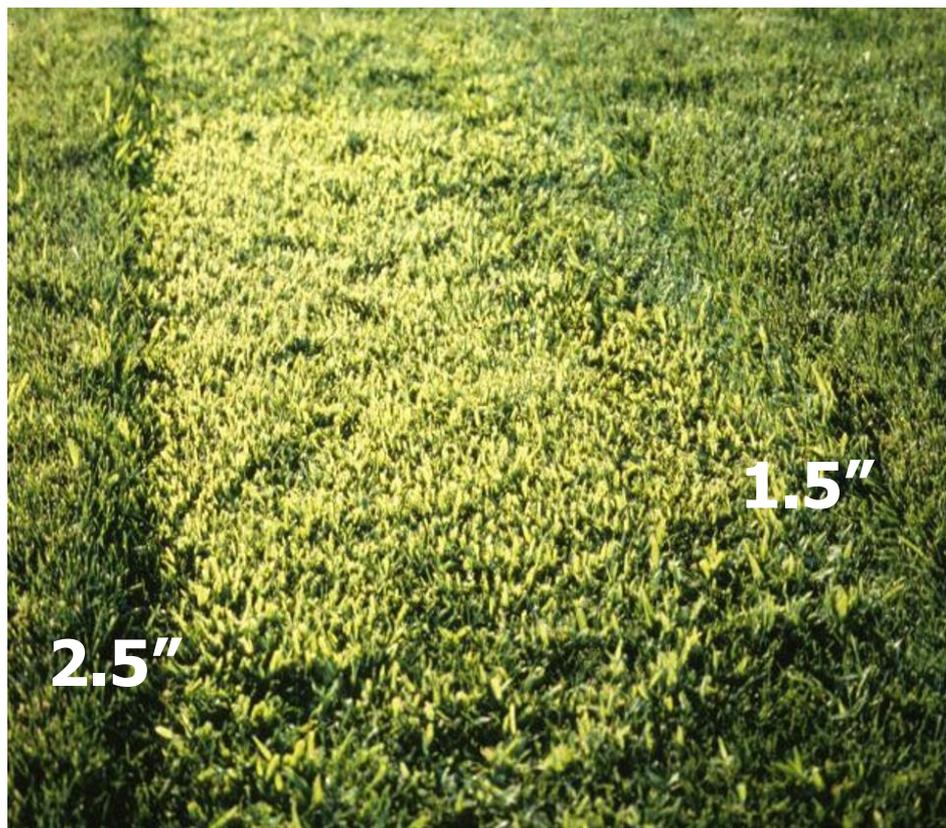
Mow it Tall



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

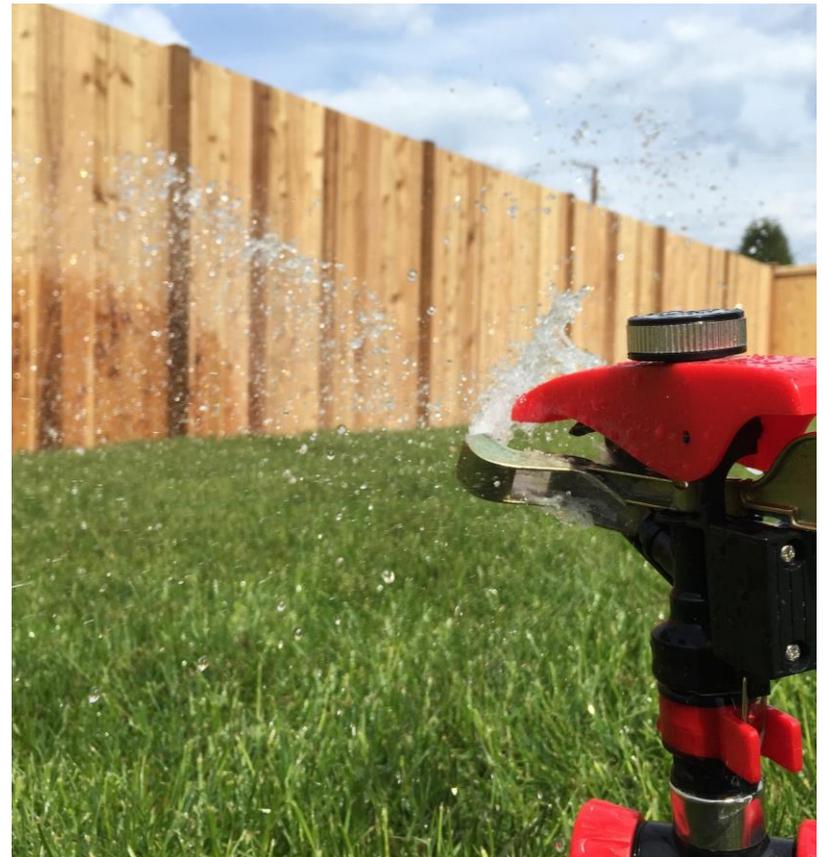
Watering Tips



- Water deeply and infrequently
- “Soak & cycle”
- 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 to the Bottom of the Roots

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



Sod Establishment



- Days 7 to 14 – daily watering
- Days 10 to 14 – check root establishment
 - Decrease irrigation frequency
 - Increase irrigation length
- Provide supplemental irrigation for first year

Image from Rakesh Chandran, *WVU Extension Weed Science Specialist*.

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.

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

Timing	Turf Age	N / 1000 ft ²	Young Turf Total N	Established Turf Total N
April 15-25	Young	0.5 – 0.75 lb	<ul style="list-style-type: none"> • 2.5 – 3.75 lbs. • Plus clipping return = 4.75 lbs. 	
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"> • 1.50-2.0 lbs. • Plus clipping return = 3.0 lbs
Mid-October	Young	0.5-1.0 lbs. Quick release		

Grass Alternatives



Water-wise Lawn Management

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Questions?

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