

An aerial photograph of a football field. The field is green with white yard lines and numbers (10, 20, 30, 40) visible. To the right, there are white stadium bleachers. In the background, there is a parking lot with several cars and a building. A sign for "BILL MILLER BAR-B-Q" is visible on a tall pole. The sky is blue with some clouds.

Mowing Management for Turfgrasses

by

James McAfee, Ph.D.
Extension Turfgrass Specialist
Dallas, Texas

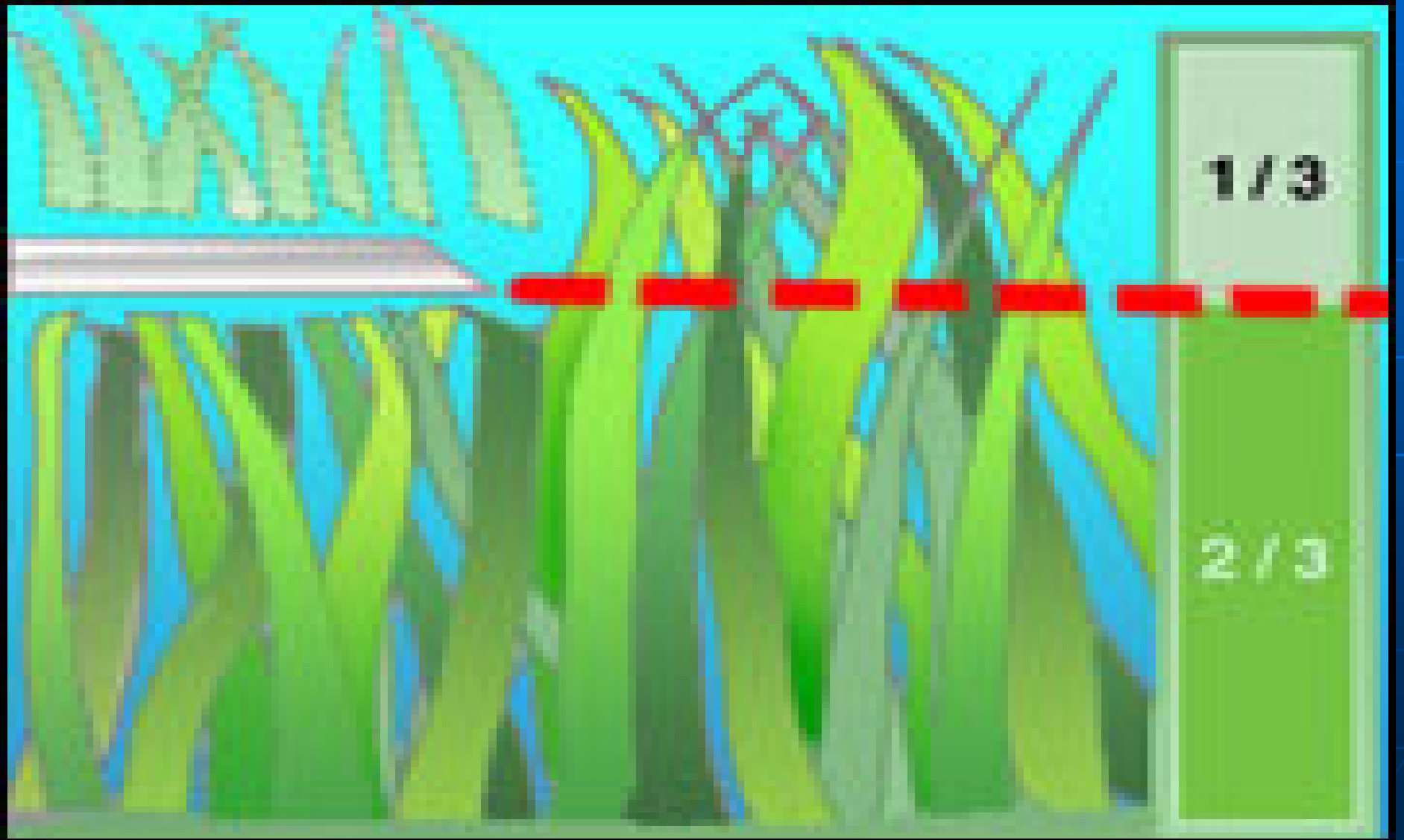
Mowing Affects on Turfgrass

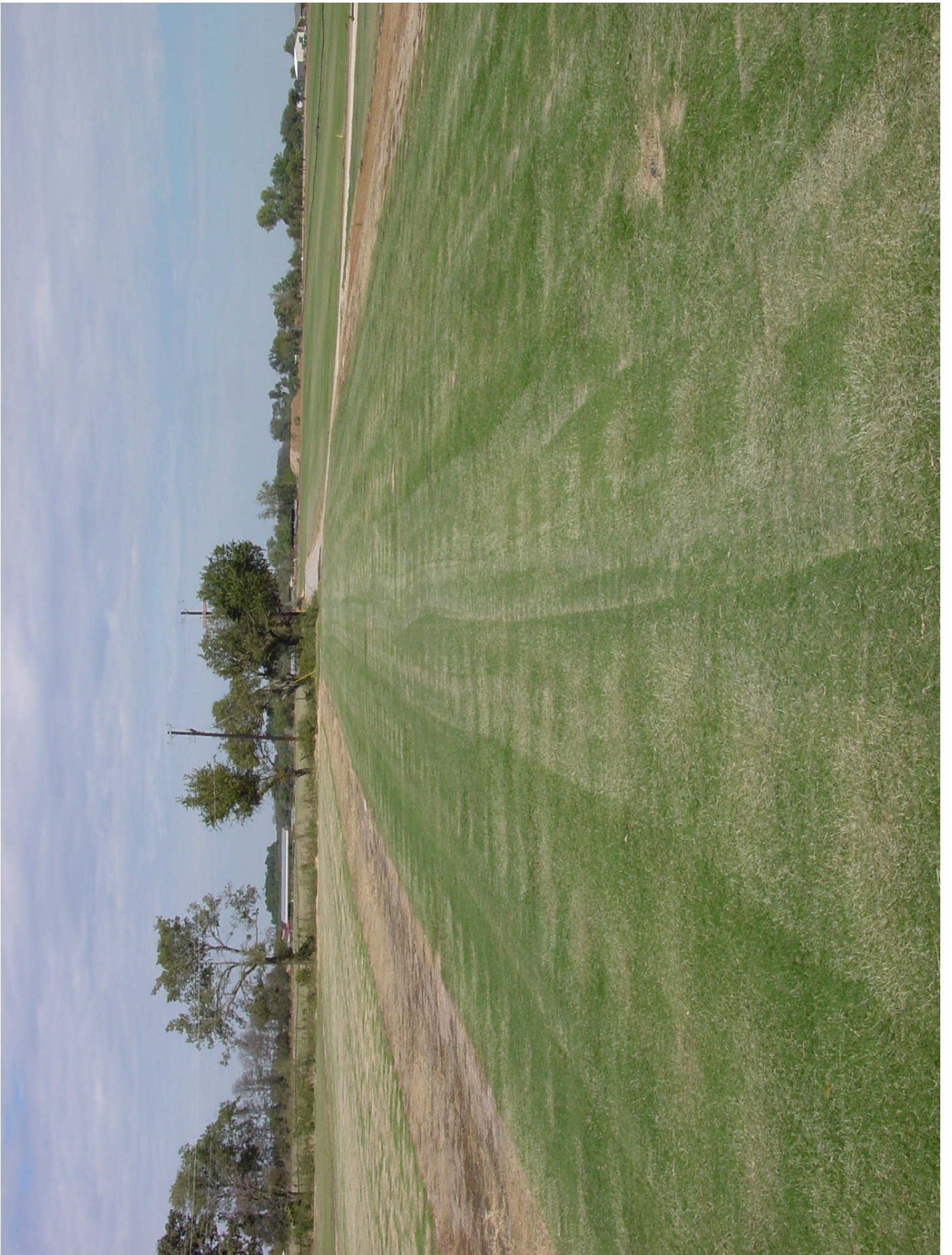
- Temporary cessation of root growth
- Reduction in carbohydrate production and storage
- Port of entry for turfgrass disease pathogens
- Temporary increase in loss of water from leaf blades
- Reduced water absorption by roots

Why Mow ?

- Esthetics
- Use
 - sports fields
 - golf courses

1/3 Rule for Mowing







Mowing Frequency Influences

- photosynthesis
- turfgrass density
- root growth
- carbohydrate reserves

Mowing Frequency

Influenced by:

- height of cut
- growth rate
- time of year
- climatic conditions

Mowing within the tolerance range for different turfgrass species is the key

- mowing below tolerance range:
 - thinned turf
 - increased weed invasion
- mowing above tolerance range:
 - turf becomes puffy
 - prone to lay over
 - increased thatch accumulation

Mowing

How often should I mow?

- Minimum of once each week during the growing season.
- Use the 1/3 rule, never remove anymore than 1/3 of the leaf blade at any single mowing.

Recommended Tolerance Ranges

Turfgrass species Tolerance range

Common bermudagrass 1.0 – 2.0

Hybrid bermudagrass .125 – 1.0

St. Augustinegrass 2.0 – 3.5

Zoysiagrass (japonica) .75 – 1.5

Zoysiagrass (matrella) .25 – 1.0

Buffalograss 1.0 – ?

Centipedegrass 1.0 – 2.0

Mowing Height vs. Frequency

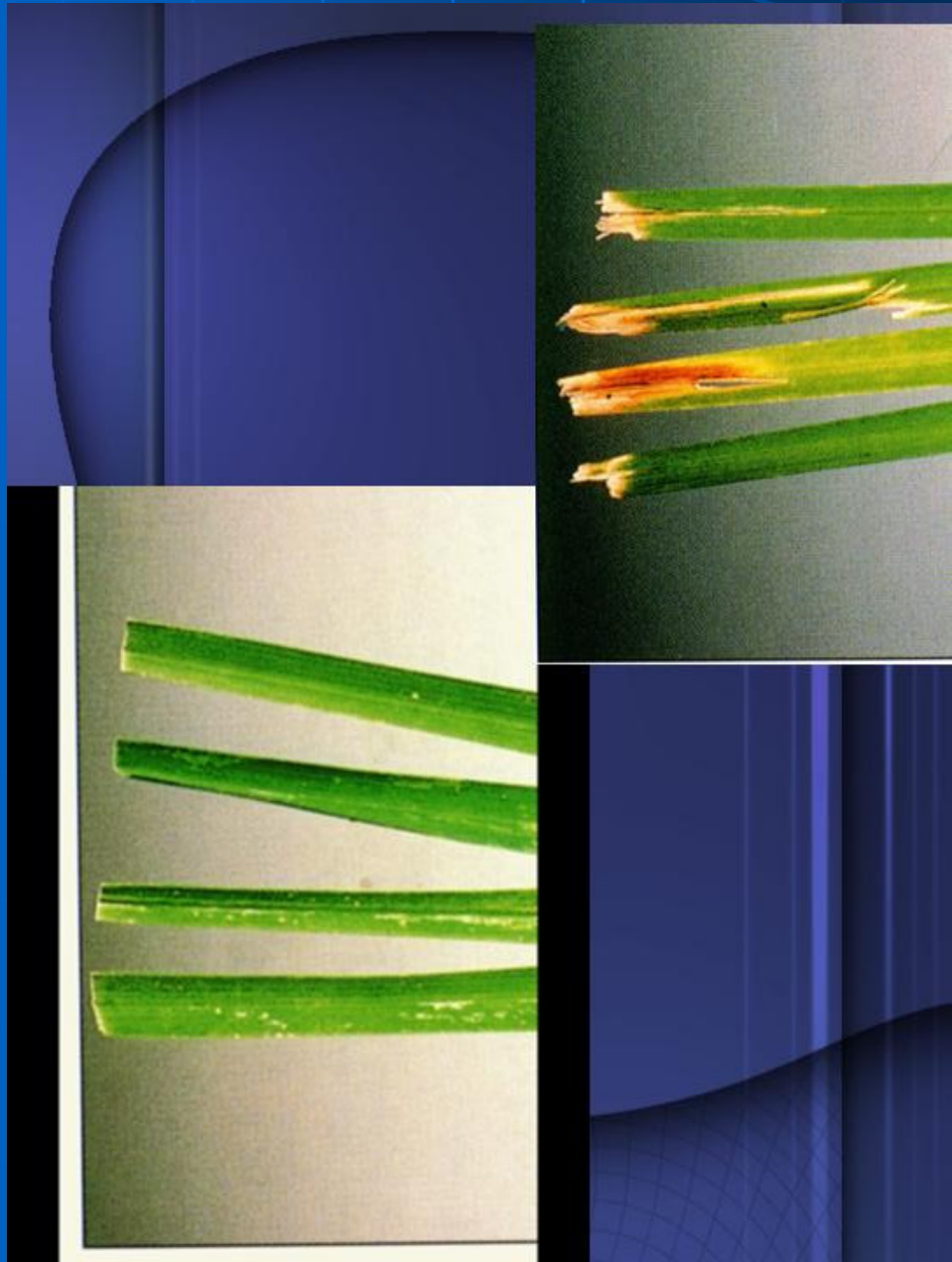
Turfgrass	Mowing Ht. (inches)	Frequency (days)
Bermudagrass C.	1 – 1.5	3-4
Bermudagrass H.	0.5 – 0.75	1-2
St. Augustine (sun)	2 – 3	4-6
St. Augustine (shade)	3 – 4	6-7
Centipedegrass	1 – 2	3-4
Buffalograss	2	4-5
Zoysiagrasses	1 – 2	3-4

Mowing

How high should I cut the grass?

- St. Augustinegrass 2.5" (sun)
 3.5" (shade)
- Bermudagrass 1-1.5"
- Zoysiagrass (japonica) 1.5"
 (matrella) .5 -1"
- Buffalograss 2.5 -3"
- Centipedegrass 1-1.5"
- Tall Fescue 2.5"





Scalping Lawns

Benefits From Scalping Lawns:

- Earlier spring green up
- Control annual winter weeds
- Help reduce thatch build up?

Scalping Turfgrasses

Turfgrasses benefiting:

- bermudagrasses
- St. Augustinegrass
- Zoysiagrasses
- Centipedegrass

Turfgrasses not benefiting:

- buffalograss
- tall fescuegrass
- Kentucky bluegrasses

Best Time to Scalp

- Spring, right before green up
- Prior to overseeding

Mowing

What should I do if the grass does not get mowed over a vacation?

- Mow it as high as possible at first, then begin to gradually lower the mower to the correct height over several mowings.
- Don't scalp it down in one cutting!



Mowers

- Rotary
 - Reel
 - Flail
 - Mulching

Rotary Mower

Turfgrasses:

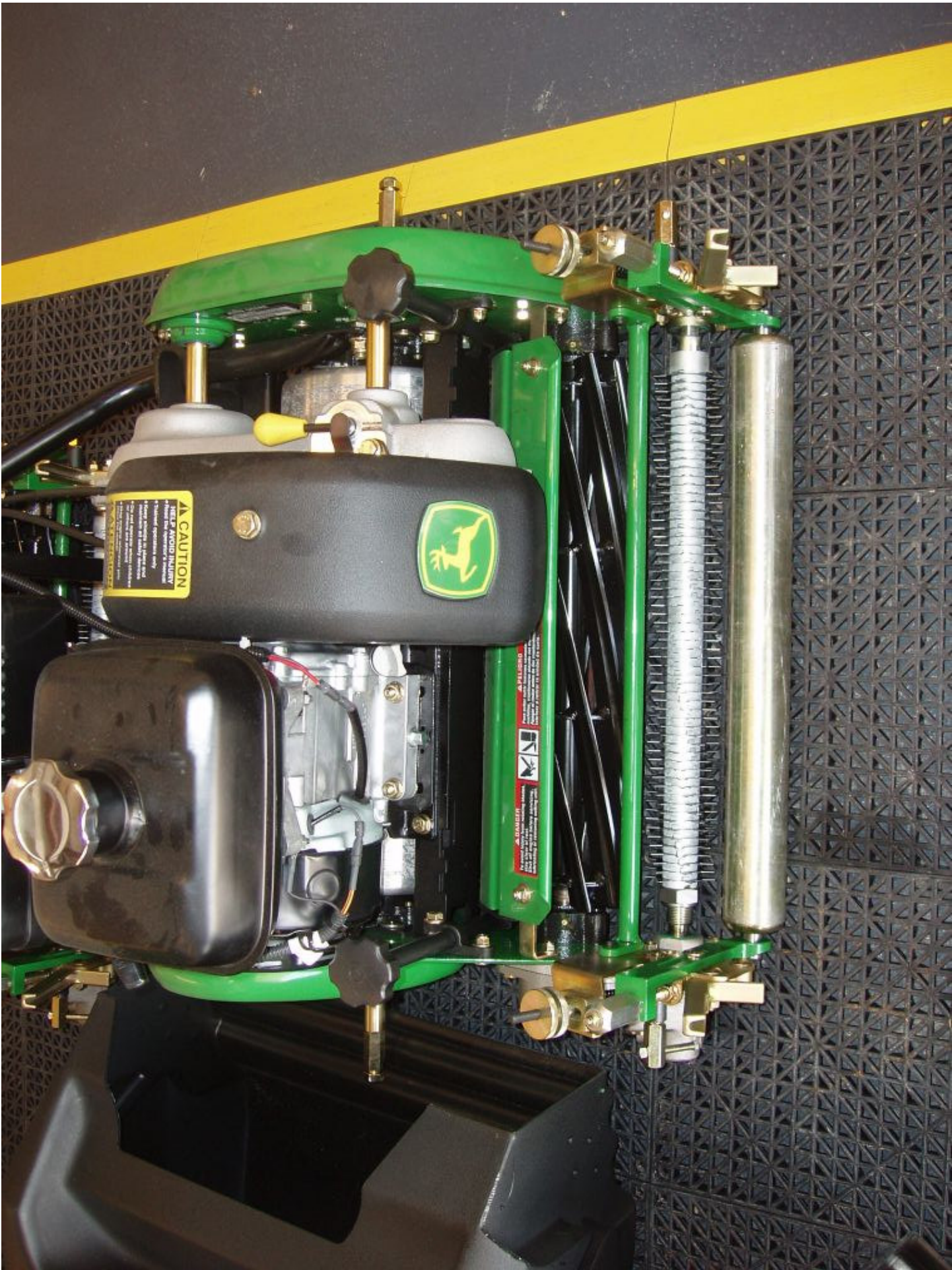
- Common bermudagrass
- St. Augustinegrass
- Zoysia japonica
- Centipedegrass
- Buffalograss
- SeaShore paspalum
- Tall fescue
- Kentucky bluegrass
- Ryegrasses



Reel Mower

Turfgrasses:

- Hybrid bermudagrasses
- Zoysia matrella sp.
- Bentgrasses





Flail Mower

- low maintenance areas
- sod farms
- sports fields?

Mulching Mower

- can't mow when wet
- need to mow slower



Clipping Removal

- Return grass clippings when possible:
 - return plant nutrients
 - return organic matter to soils
- Catch grass clippings:
 - affect play of ball (golf, sports)
 - active diseases present



Drought Conditions

Mowing Practices Influence on Water Use

- mow at proper frequency and height to prevent stress on turfgrass plants.
- during summer heat, mow at higher end of recommended mowing height for different turfgrasses.
- mowing higher does not reduce water use rates!!!
- mowing higher may decrease frequency of irrigation needed, due to deeper root system.