

**This Is Not Your Father's
Oldsmobile, I Mean Turfgrass**

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**67th Annual Southeastern
Turfgrass Conference**
April 30th, 2013

Outline

- **Practical Research**
- “Mad” Science
- Preparing for the Future

TIF GRAND™

CERTIFIED BERMUDA



TIF GRAND™

CERTIFIED BERMUDA



TIF GRAND™

CERTIFIED BERMUDA



TIF GRAND™

CERTIFIED BERMUDA



Drought



Photo courtesy of Dr. Gerald Henry

Drought

- **LGIS (Linear Gradient Irrigation System)**



Photo courtesy of Dr. Milt Engelke

Drought

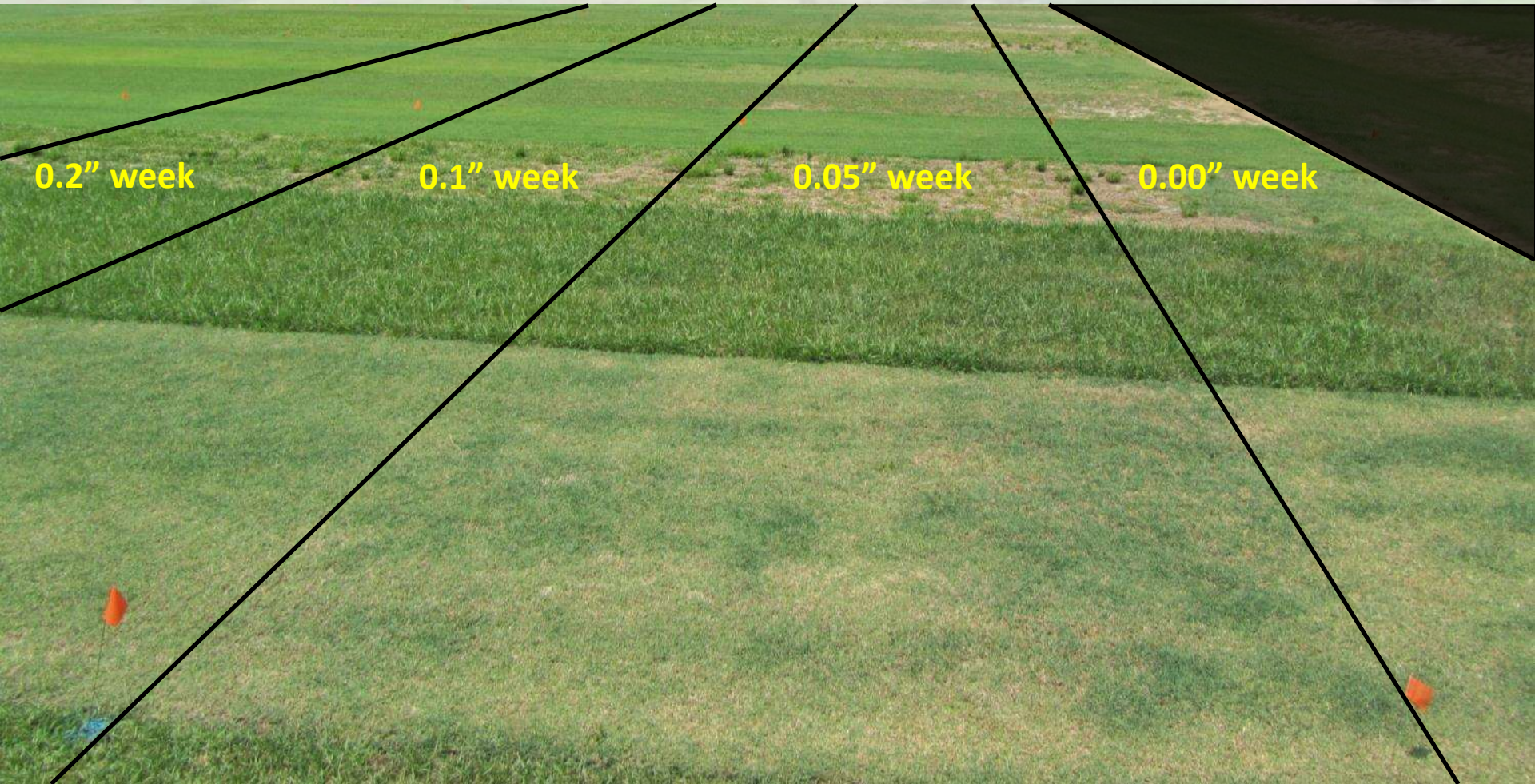
- Drought Trial in 2011 @ UF in Jay, FL
 - DT-1 for Tees, Fairways, and Roughs

0.2" week

0.1" week

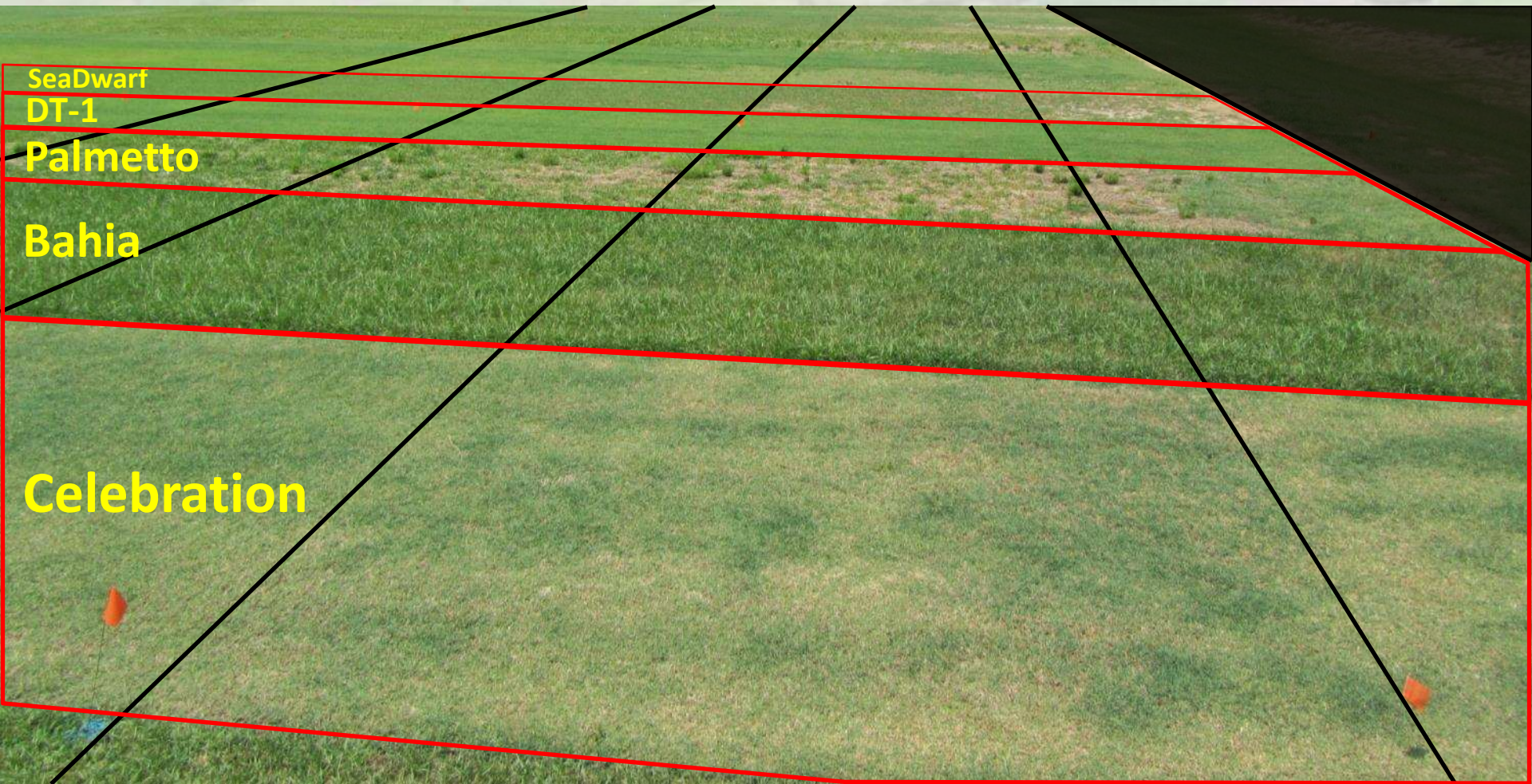
0.05" week

0.00" week



Drought

- Drought Trial in 2011 @ UF in Jay, FL
 - DT-1 for Tees, Fairways, and Roughs



SeaDwarf
DT-1

Palmetto

Bahia

Celebration

Drought

- Drought Trial in 2011 @ UF in Jay, FL
 - DT-1 for Tees, Fairways, and Roughs



SeaDwarf

DT-1

Palmetto

Drought Trials



Drought Trials



Drought/Shade Trials



Drought/Shade Trials



Drought/Shade Trials



Drought/Shade Trials



Drought/Shade Trials

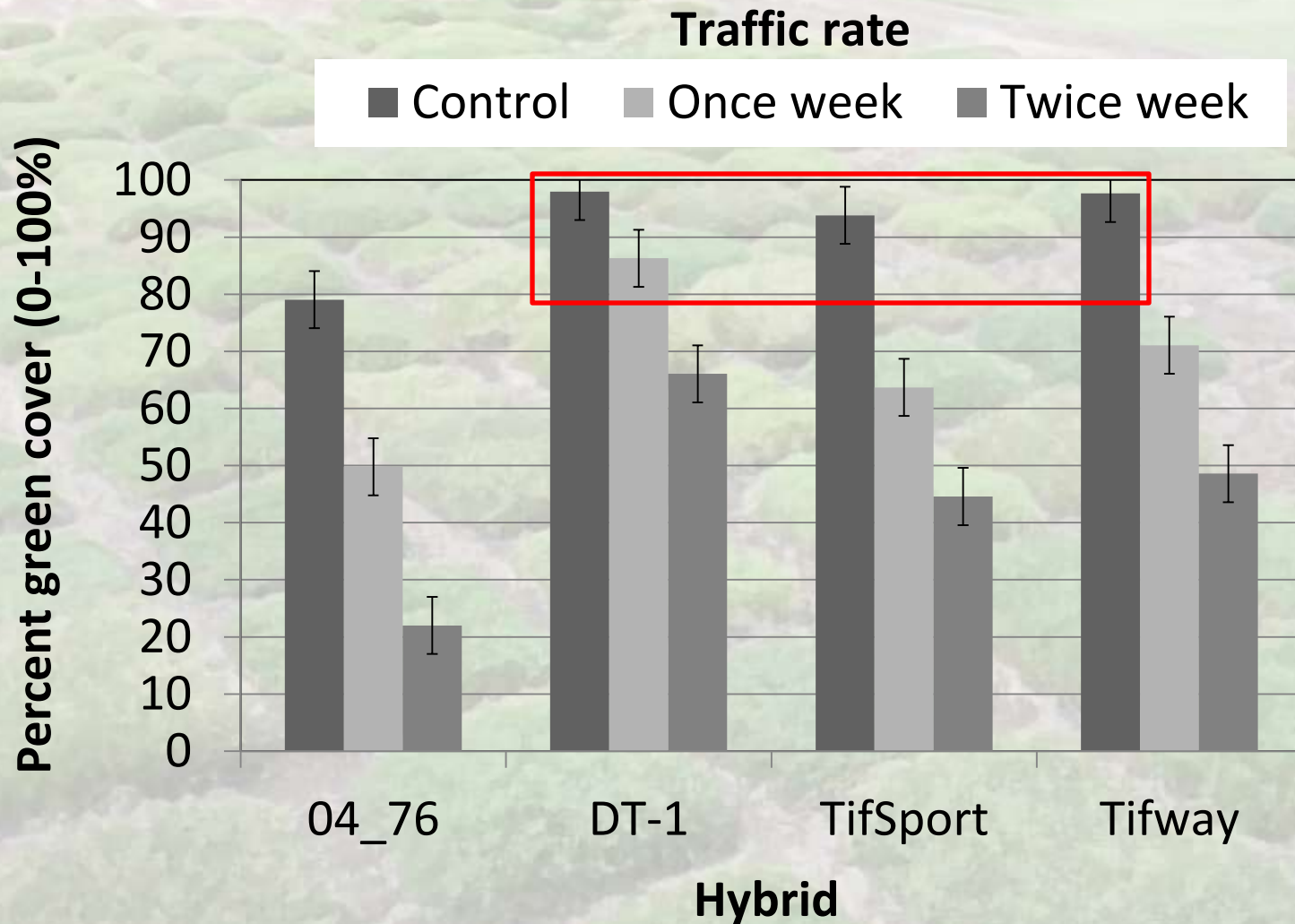


Wear Trials



Wear Trials





Effects of bermudagrass hybrid by traffic rate on percent green cover observed after 6 weeks of traffic in Tifton, GA, 2012. Columns with overlapping error bars are not significantly different according to LSD (0.05).

Sod Farm Trials



Sod Farm Trials



Sod Farm Trials



Sod Farm Trials



Sod Farm Trials








Tifway



A wide-angle photograph of a grassy field, possibly a sports field or park. The grass is green with some yellowish-brown patches, particularly on the right side. In the background, there are trees, a fence, and some buildings. A semi-transparent white rectangular box is overlaid on the upper portion of the image, containing the text "DT-1" in a bold, black, sans-serif font.

DT-1

Putting Green Trials



Putting Green Trials



Putting Green Trials



Putting Green Trials



Putting Green Trials

07-4



Champion



Champion Bermuda



07-4 Bermuda



Putting Green Trials



L1F

BA433

Putting Green Trials

L1F

BA433



L1F Zoysia



BA433 Zoysia



Putting Green Trials



Putting Green Trials

07-4

Champion





Champion Bermuda

07-4 Bermuda

Putting Green Trials



Putting Green Trials



Putting Green Trials



Putting Green Trials



Cold Tolerance Trials



Cold Tolerance Trials



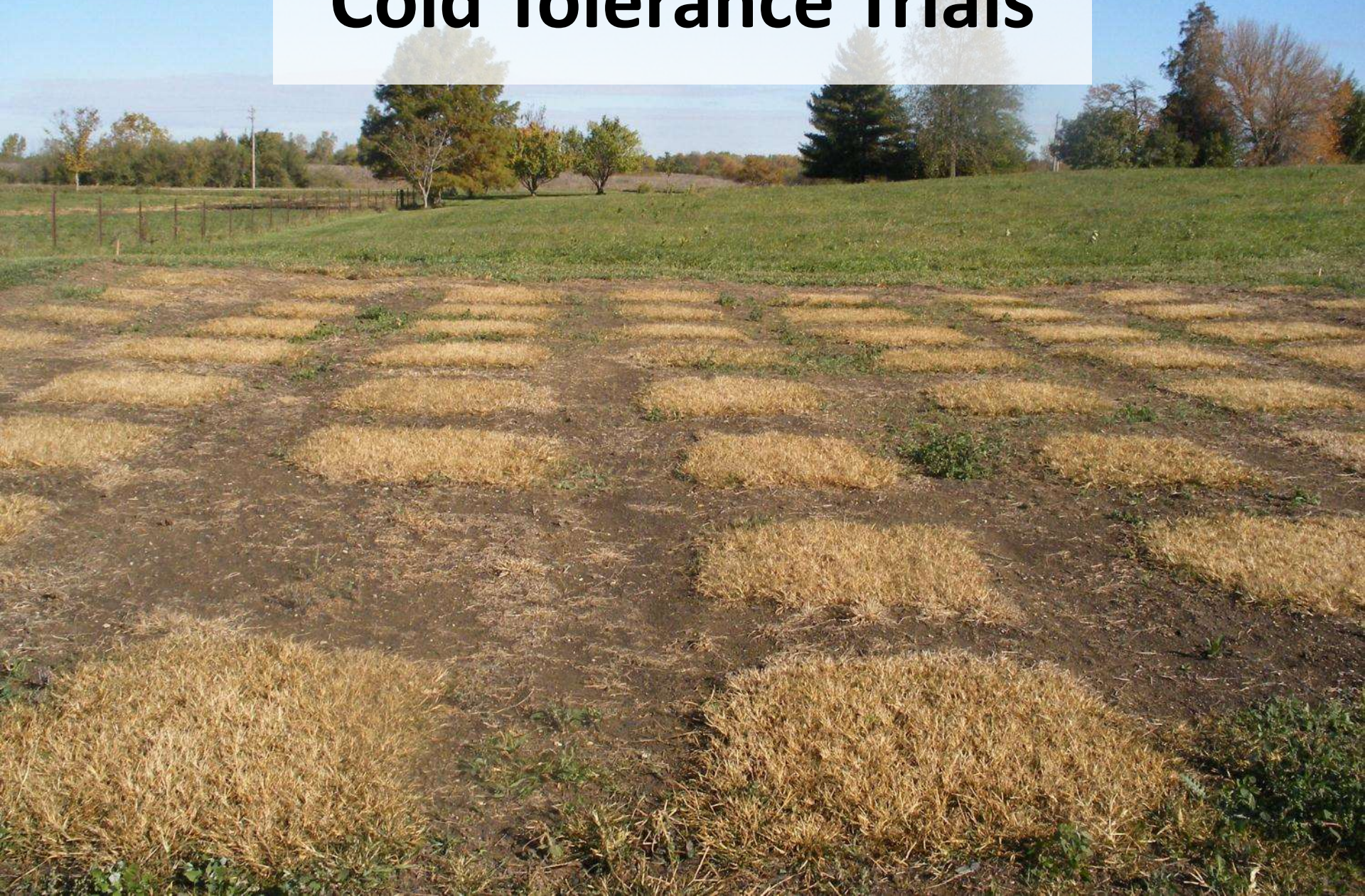
Cold Tolerance Trials



Cold Tolerance Trials



Cold Tolerance Trials





Zoysiagrass





Zoysiagrass





Zoysiagrass





Zoysiagrass





Zoysiagrass



Crossing Blocks







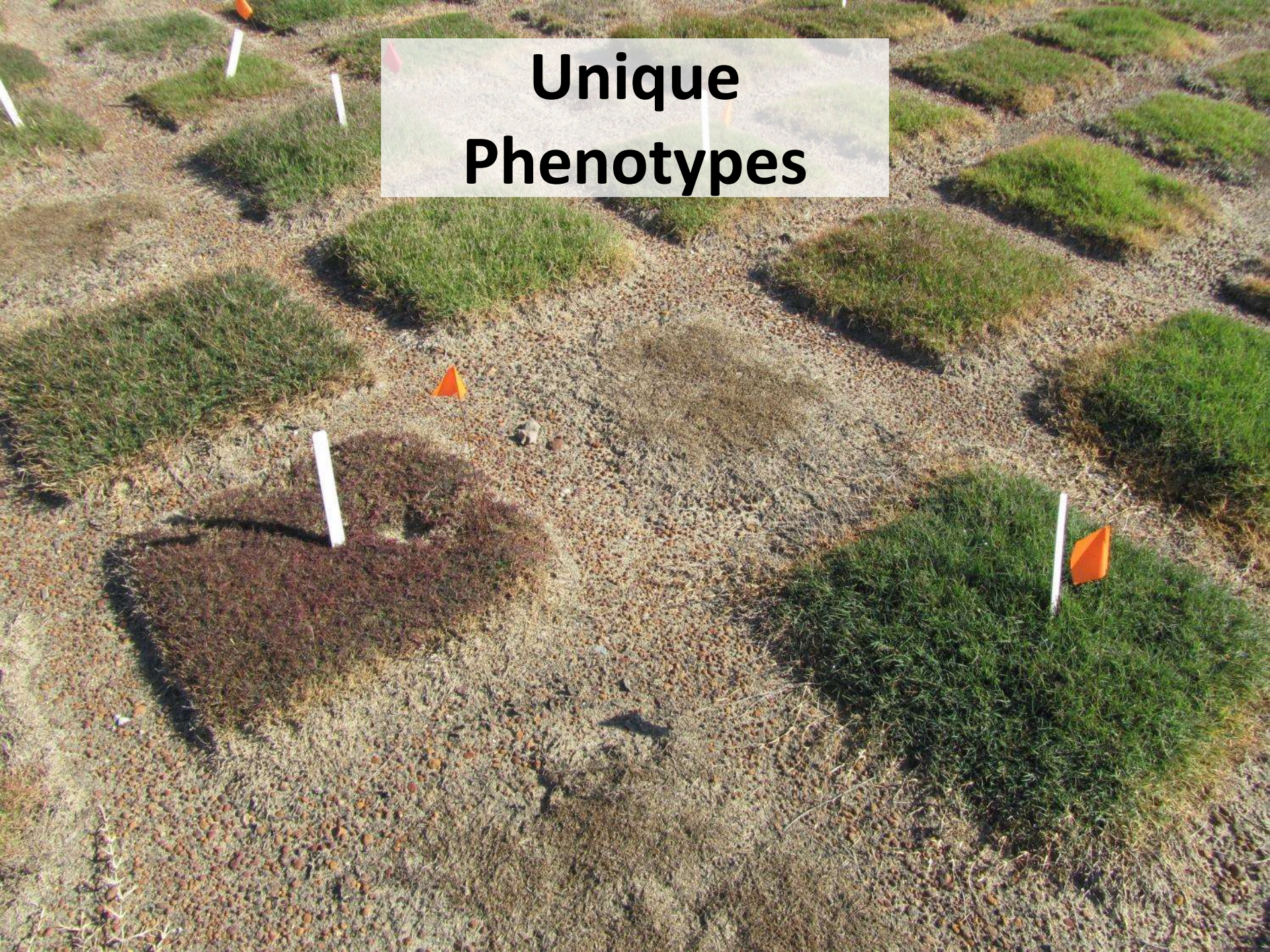
Bermudagrass



Population Development



Unique Phenotypes



Hybrid Selection



Hybrid Screening



Hybrid Screening



Hybrid Selection



Hybrid Selection



Shade



Shade





Shade



Shade

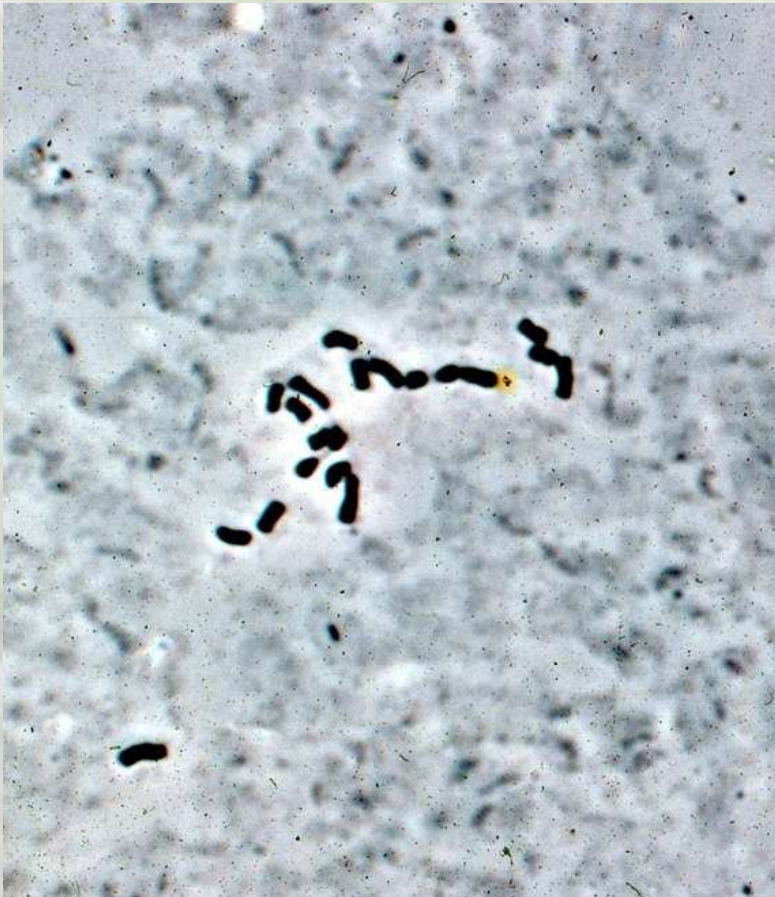
Outline

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Ploidy Manipulation in Warm Season Turfgrass Species

- Increase Genetic Variation
- Improve Vigor
- Array of Phenotypic Variation in Crosses
- Sterility
 - Uniformity
 - Genetic Purity for Sod Producers
 - Energy NOT Used for Seed Development

“Hybrid” Triploid Bermuda

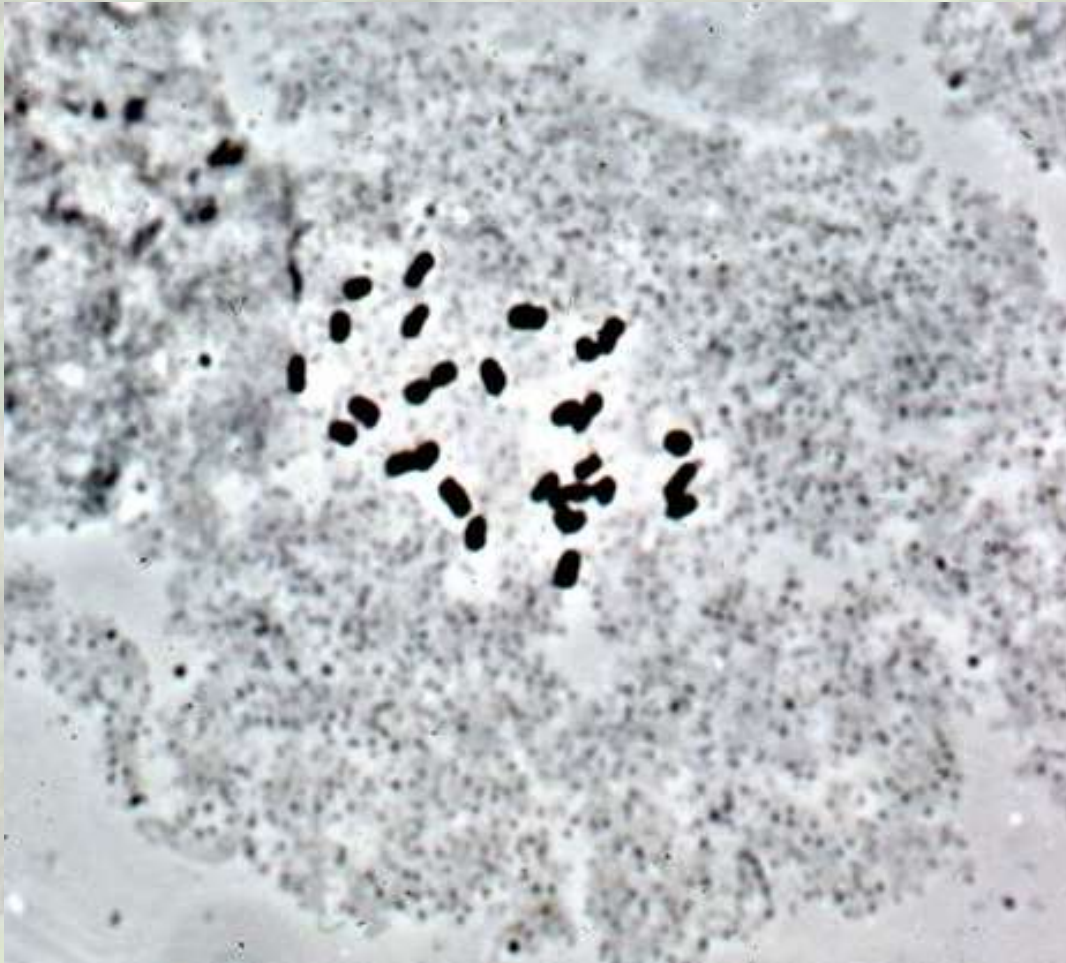


2x



4x

“Hybrid” Triploid Bermuda



3x

Tetraploid (4x) Zoysia

BA433



'Diamond'

'Emerald'

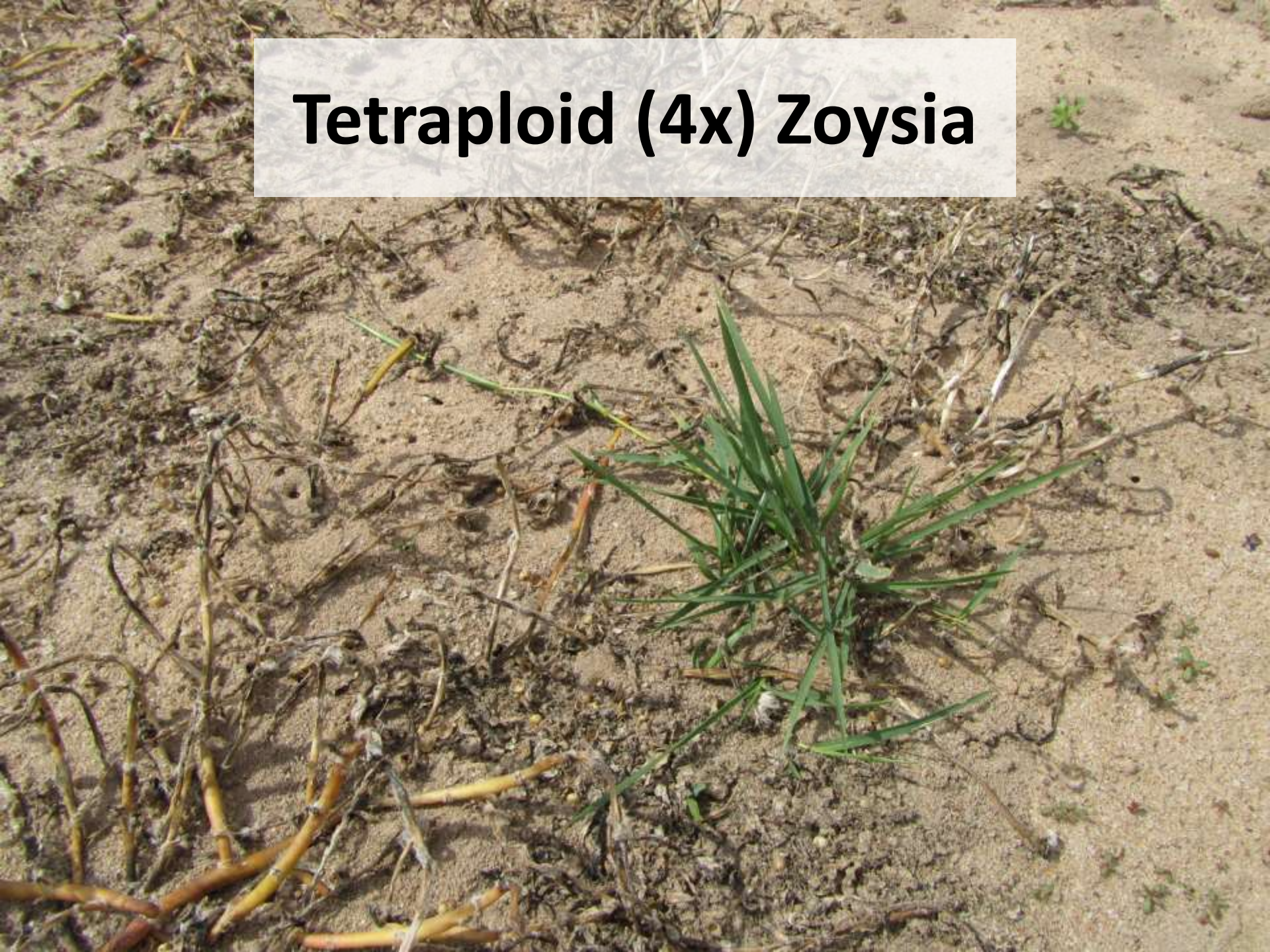


'Meyer'

Tetraploid (4x) Zoysia

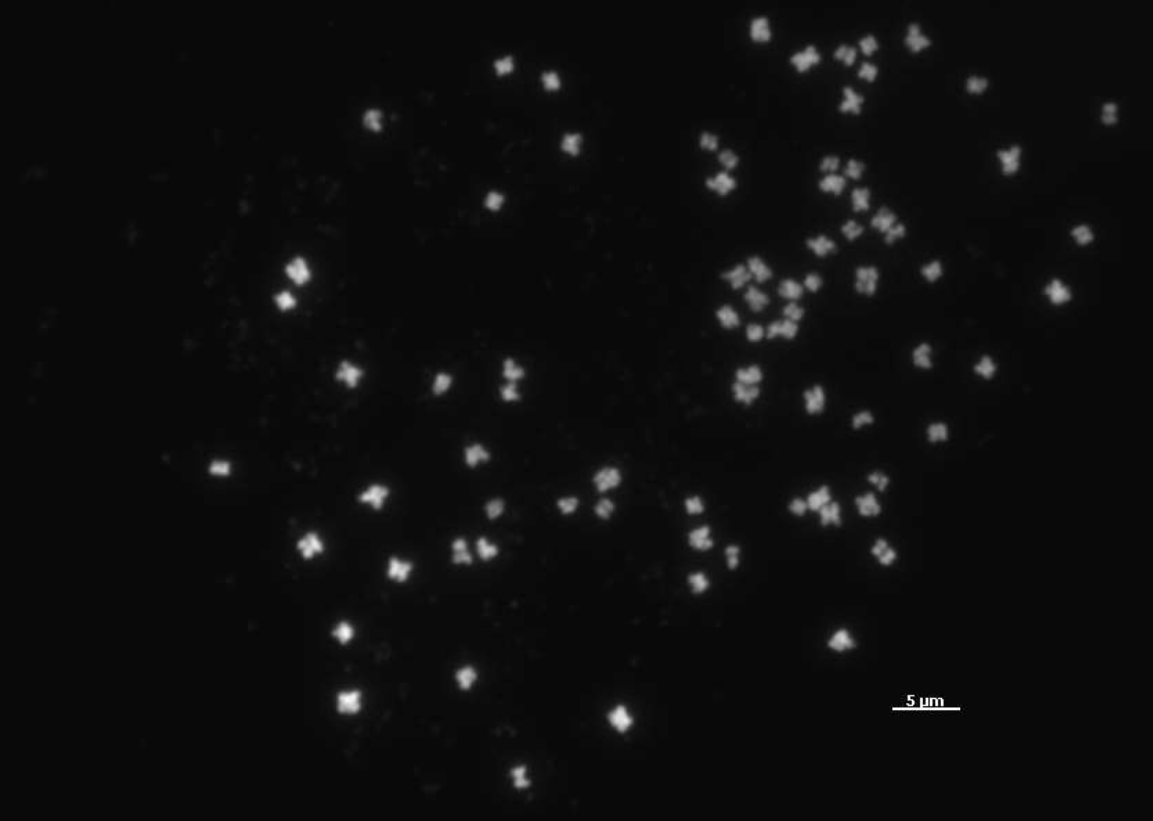


Tetraploid (4x) Zoysia



Tetraploid (4x) Zoysia

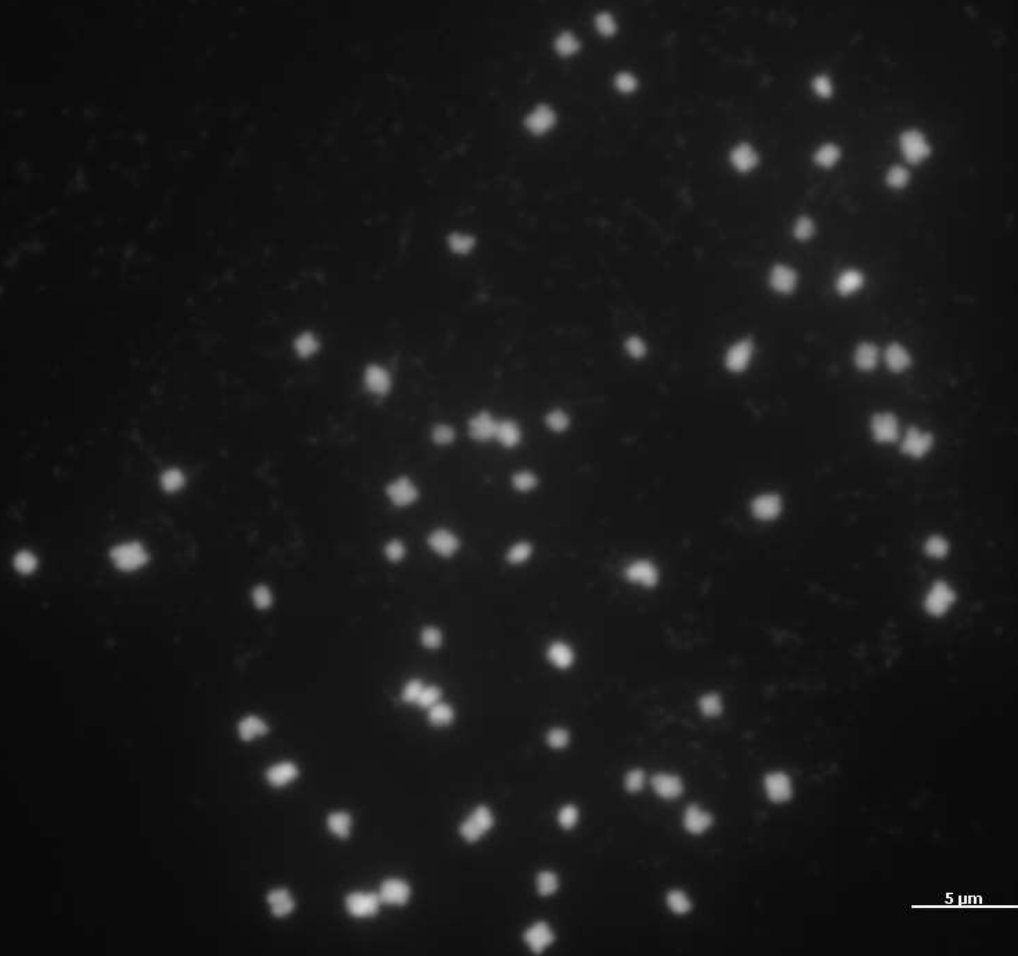




Octaploid (8x) Zoysia

Hand Crosses

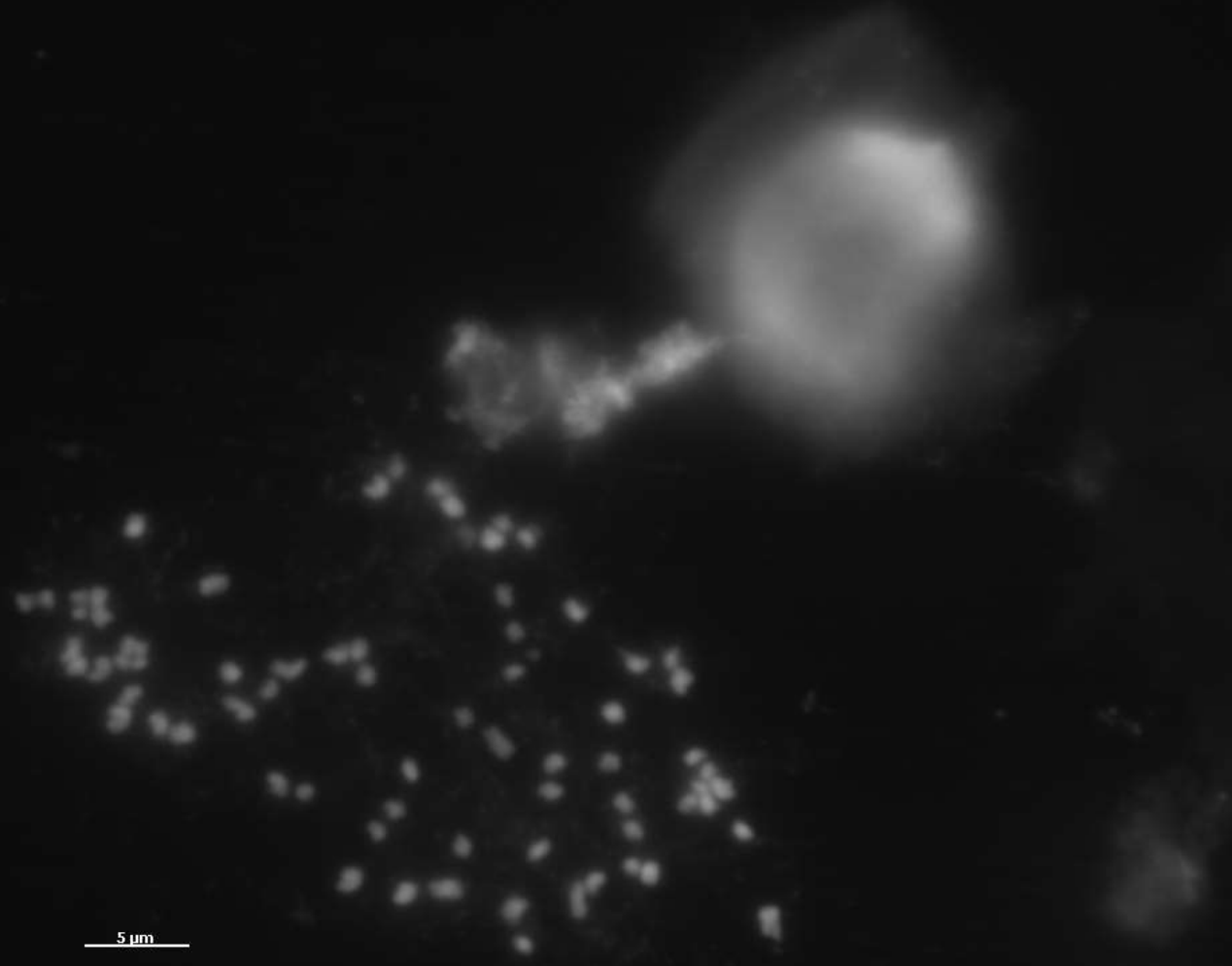




Hexaploid (6x) Zoysia

Hand Crosses





5 μ m

Septaploid (7x) Zoysia

Ploidy Manipulation in Zoysiagrass Species

- (4x) – A lot
- **(5x) -284**
- (6x) - 210
- **(7x) - 55**
- (8x) - 136

Are They Sterile?



Unique Phenotypes



5265

Unique Phenotypes



Super-Sod Tour



Turf Conference





Questions???

Brian Schwartz

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