

75th SE Turfgrass Conference

& Sanford Stadium Tour

10.25.23

UGA CENTER FOR CONTINUING EDUCATION & HOTEL
ATHENS, GA



UNIVERSITY OF
GEORGIA

College of Agricultural &
Environmental Sciences

*Hole #6 at Olde Florida Golf Club
Photo courtesy of Darren J. Davis, CGCS*

GeorgiaTurf.com

75th Southeastern Turfgrass Conference

Wednesday, October 25

7:30 am	Registration & Refreshments
8:00 am	Welcome & Introduction Dean Nick Place & Brian Schwartz, PhD, University of Georgia
8:10 am	Turfgrass Science – Does Innovation and Technology Help Turfgrass Managers? Brian Schwartz, PhD and Jing Zhang, PhD, UGA-Tifton Turfgrass Breeding
8:30 am	Nozzle Density Optimization for AI-based Weed Control Systems for Turfgrass Pawel Petelewicz, PhD, University of Florida
8:50 am	Resilient Greenspaces – Turfgrass Selection and Management to Address Emergent Water Challenges Rebecca Bowling, PhD, University of Tennessee
9:10 am	Where is the Future of Turfgrass Management? Drew Miller, PhD, Brentsville High School
9:30 am	Break Conference Sponsor Booths
10:00 am	Future-Proofing the American Lawn Jay McCurdy, PhD, Mississippi State University
10:20 am	Operation Double Eagle Scott Johnson, The Warrior Alliance
10:40 am	Precision Turfgrass Management: Current Trends and Future Applications Chase Straw, PhD, Texas A&M University
11:00 am	Understanding Mechanisms Underlying Drought Performance in Warm-Season Turfgrasses David Jespersen, PhD, University of Georgia
11:20 am	Benefits of the USGA’s Investment in Turfgrass and Environmental Research Cole Thompson, PhD, United States Golf Association
11:40 am	Breeding Seed-Propagated Turfgrasses Sameer Khanal, PhD and Phillip Vines, PhD, UGA-Tifton Turfgrass Breeding
12:00 pm	Lunch Conference Sponsor Booths Raffle Giveaway
1:00 pm	Rapid-Fire Turfgrass Talks Graduate Students
1:45 pm	Walk to Sanford Stadium
2:30 pm	Sanford Stadium Tour Field Locker Room Recruiting Lounge Matt Hollan & Gerald Henry, PhD, University of Georgia
3:30 pm	Adjourn

Session Descriptions

Turfgrass Science – Does Innovation and Technology Help Turfgrass Managers?

Brian Schwartz, PhD and Jing Zhang, PhD, UGA Tifton Turfgrass Breeding

- This talk will focus on recent efforts to improve bermudagrasses and zoysiagrasses, literally from the ground-up. We will also discuss the evolution of using drones, sensors, and data science in high-throughput phenotyping and precision management in turfgrass over the past decade in Georgia.

Nozzle Density Optimization for AI-based Weed Control Systems for Turfgrass

Pawel Petelewicz, PhD, University of Florida

- This presentation will discuss the potential of employing deep learning convolutional neural network models for weed recognition in turfgrass and simulation-based methods for the optimization of actuator's efficacy to enable maximized accuracy and precision of the machine vision-based system.

Resilient Greenspaces – Turfgrass Selection and Management to Address Emergent Water Challenges

Rebecca Bowling, PhD, University of Tennessee

- This talk will explore trending challenges related to weather extremes ranging from drought to stormwater management and flooding, and the role turfgrass plays in creating greenspaces that thrive in the face of growing uncertainty.

Where is the Future of Turfgrass Management?

Drew Miller, PhD, Brentsville High School

- The turfgrass management industry is in a state where the opportunities are endless, but we are struggling to find young, qualified professionals to pursue them. In this talk, we will discuss new and innovative ways to reach the youth about our incredible industry, from the development of high school turf programs to connecting with your local community to bring this industry into the public eye. Also, we will explore the benefits of social media and the role that it plays in the growth and development of not only our industry but your own professional career.

Future-Proofing the American Lawn

Jay McCurdy, PhD, Mississippi State University

- Delve into the rich history of turfgrass lawns, explore cutting-edge technologies shaping the field, and consider how the industry can adapt to changing market pressures. Join us to learn how lawns can not only thrive, but also play a vital role in modern urban environments by providing ecosystem services and green spaces that foster social interaction.

Operation Double Eagle

Scott Johnson, The Warrior Alliance

- The mission of the Warrior Alliance is to improve the quality of life for all eras of military service members, Veterans, and their families through a total support network of organizations. We will discuss an innovative workforce development program called Operation Double Eagle, with a mission to educate, train, and create new career pathways for Veterans in the golf and turf industry, with details on future plans to scale the program nationally.

Precision Turfgrass Management: Current Trends and Future Applications

Chase Straw, PhD, Texas A&M University

- The turfgrass industry is under increasing pressure to improve environmental impacts by reducing management inputs. The concept of precision turfgrass management is a viable strategy to achieve reductions by making management input applications only where, when, and in the amount needed. This presentation will introduce new concepts, and then provide an overview of current trends and future applications of technologies for its implementation across all sectors of the turfgrass industry.

Understanding Mechanisms Underlying Drought Performance in Warm-Season Turfgrasses

David Jespersen, PhD, University of Georgia

- Drought is a major abiotic stress limiting the growth and performance for turfgrasses across the country. Current research activities are exploring turfgrass responses to drought, from whole plant physiology down to molecular changes in the cells. Understanding the mechanisms which allow plants to maintain quality in water limited conditions is essential for the development of future cultivars with improved stress tolerance and climate resiliency.

Benefits of the USGA's Investment in Turfgrass and Environmental Research

Cole Thompson, PhD, United States Golf Association

- The USGA has invested more than \$50 million in turfgrass research since 1983, which has advanced, among other things, putting green construction, turfgrass breeding, landscape naturalization, and water, fertilizer, and pesticide management. The grasses and management practices developed through this funding have been broadly adopted and provide an estimated \$2 billion annual benefit to the golf industry.

Breeding Seed-Propagated Turfgrasses

Sameer Khanal, PhD and Phillip Vines, PhD, UGA Tifton Turfgrass Breeding

- Recently initiated efforts at the University of Georgia Tifton Campus to develop improved seed-propagated cultivars of zoysiagrass and tall fescue are progressing. The objective of the zoysiagrass breeding project is to identify germplasm with enhanced genetic diversity, high seed yield potential, and improved germination and establishment rates. The objective of the tall fescue breeding project is to identify germplasm with high seed yield potential, disease resistance, improved drought and heat stress response, reduced fertilizer and mowing requirements, and enhanced turf quality characteristics. These breeding efforts will result in cultivars that are locally adapted to perform well within the state of Georgia as well as cultivars that are more broadly adapted to perform well across many regions of the United States and beyond.