



# IFTBC

International Forage &  
Turf Breeding Conference

*A Global Vision for Innovation*

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**March 24-27, 2019**

Lake Buena Vista, FL, USA



[facebook.com/foragebreedingandgenomicslab](https://facebook.com/foragebreedingandgenomicslab)



[www.conference.ifas.ufl.edu/iftbc2019](http://www.conference.ifas.ufl.edu/iftbc2019)



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## **Name Badge**

Your name badge serves as your admission to all networking functions while attending IFTBC 2019, so be sure to wear it throughout the conference. Attendees must present the applicable meal ticket for all banquet functions. Tickets are handed out at registration, and are in your name badge holder.

Guests must also wear their name badges for entry into functions that are included with the guest fee. The guest fee allows guests 18 years of age and older to attend the Welcome Social Sunday evening, the Poster Session Networking Receptions on Monday and Tuesday, and the Closing Dinner Banquet Social on Wednesday.

Please be sure to register all guests and pay the applicable registration fees.

# Welcome Letter

## ***Welcome to the International Forage and Turf Breeding Conference!***

The Organizing Committee of the International Forage and Turf Breeding Conference (IFTBC) is delighted to welcome you to the first joint meeting of the Molecular Breeding of Forages and Turf conference (MBFT) and the International Symposium of Forage Breeding (ISFB). In today's climate of rapidly evolving molecular and traditional technologies for crop improvement, it's important to recognize, that regardless of methods employed, "breeding is breeding!" Virtually all programs worldwide employ a combination of molecular genetics and traditional plant breeding tools to reach their goals of crop improvement. The MBFT previously met in several countries including Australia, UK, Japan, Turkey, China and the USA; and the ISFB has met in Brazil, Australia, and Argentina. The Agronomy Department at the University of Florida has a history of over 120 years focused on introduction and improvement of forage and turfgrass species, and we look forward to hosting this meeting of diverse international scientists.

Forage and turfgrass breeding and genetics presents unique challenges and opportunities for crop improvement. Unlike other research groups that focus on one or two major cereal or legume food crops, participants in this conference are challenged with conducting research on a multitude of different species – both grasses and legumes, and temperate and tropical species. Most of these species are perennial, creating an added layer of genotype by environment interactions not encountered with annual crops. Reproductive systems in these species cover the range from self- to cross-pollination to apomixis, thus no common breeding strategy will apply to all forage and turfgrass crops. For the forage species, an extra layer of biological complexity is added to evaluations of yield and quality because primary value is ultimately determined through the interactions

of the plant species and consuming livestock. Additionally, symbiotic microorganisms may impact forage nutritive value in both negative and positive manners. Genetic improvement of turfgrass species face many of these same biological challenges, but also include a unique interaction where quality and value may be determined by more subjective human perception of desirability for sports, home or amenity uses. Additionally, several of the species considered by this conference do not have the array of molecular tools (e.g. well characterized reference genomes, molecular marker sequences, etc.) as readily available as the more highly researched food crops.

In spite of these challenges, distinct opportunities for progress make these species exciting targets for application of modern crop improvement tools. Many of the species being investigated have been recently domesticated and cover wide ranges of genetic variability, making rapid genetic improvement possible. Modern phenotyping tools such as NIRS, remote sensing, and rapid in vitro quality analyses are being applied. Reference genomes are being published for a number of these species and techniques for genetic transformation and CRISPR-Cas9 genome manipulation are rapidly advancing. For many of these species the opportunity still exists for improved cultivars to make major improvements in production and value of the crop.

Due to our location in a sub-tropical/temperate zone, research in forage and turfgrass improvement at the University of Florida Agronomy Department has spanned the spectrum of cool-season and warm-season species. Our unique environment with a cool-temperate winter and humid tropical summer offers special opportunities for screening for disease and insect and nematode pest resistance, frost-freeze tolerance, water and nutrient stress response, and plant-animal responses. Our integrated teams of multidisciplinary scientists in both the forage and turfgrass programs have enabled us to develop new cultivars with a spectrum of desirable traits for producers. We hope to demonstrate some of these at the field tour on Wednesday of the meeting.

“ Our integrated teams of multidisciplinary scientists in both the forage and turfgrass programs have enabled us to develop new cultivars with a spectrum of desirable traits for producers. ”

This IFTBC features more than 140 papers presented both as oral and poster presentations. Keynote themes of the conference include: Modern Breeding and Genetic Tools, Phenotyping Technology, Breeding and Selection, Genetic Resources and Novel Species, Use of Molecular Tools for Selection, Endophytes and Symbiosis, and Abiotic Stress. The program includes eight sessions presented over two day, and a tour of the UF/IFAS Plant Science Research and Education Unit near Citra, FL. Conference delegates are from 12 countries, including international agencies and organizations, federal and state governments, and students and educators. The organizers attempted to structure the program to include participation from young and emerging scientists and students, and the program offers the opportunity for them to showcase their research during oral and poster presentations, as well as during lightning talks.

In addition to all of the programmatic efforts, it would not be possible to have a conference of this caliber without the support from other organizations. The Organizing Committee is grateful to recognize the following for their financial support: Scotts Miracle-Gro, Florida Foundation Seed Producers, Inc., DLF Pickseed, Wintersteiger, UF/IFAS Dean for Research; UF/IFAS Agronomy Department, Noble Research

Institute, Allied Seed, LLC., Grassland Oregon, Pennington Seed, NexGen Turf Research, LLC., University of Florida Genetics Institute, Barenbrug USA, Johnston Seed Co., Plantation Brand Seed, Ragan & Masey, Inc. and TriCal Superior Forage. We also gratefully acknowledge the support and cooperation of our faculty colleagues in the UF/IFAS Forage Program and the UF/IFAS Turfgrass Science Program. We especially appreciate the assistance of Drs. Ann Blount and Fredy Altpeter with program suggestions and sponsor solicitation, and of Dr. Ali Babar with the field tour at the PSREU.

Last but not least, we would like to thank Beth Miller-Tipton, and the staff of the UF/IFAS Office of Conferences and Institutes (OCI) for their diligence and superb management of conference logistics and details. The quality of their work is a key reason for the success of this and many other conferences.

We trust you will take advantage of every opportunity IFTBC provides throughout the week to view posters, attend keynote talks, interact with colleagues and make new connections at our networking functions. We appreciate your commitment to attend and participate in this conference. If there is anything we can do to make your visit more enjoyable, please contact any one of the three of us.



*Kenneth H. Quesenberry*

**Kenneth. H. Quesenberry**  
Professor Emeritus  
Forage and Turfgrasss Breeding



*Kevin Kenworthy*

**Kevin Kenworthy**  
Professor  
Forage and Turfgrasss Breeding



*Esteban Rios*

**Esteban Rios**  
Assistant Professor  
Forage Breeding

# Scientific Program Committee

## **Dr. Fredy Altpeter**

*Professor*

UF/IFAS Agronomy

Bioenergy and Forage Breeding and Genetics

Gainesville, FL

## **Dr. Ali Babar**

*Assistant Professor*

UF/IFAS Agronomy

Small Grains Breeding and Molecular Genetics

Gainesville, FL

## **Dr. Ann Blount**

*Professor*

UF/IFAS North Florida REC & Agronomy

Forage Breeding and Genetics

Marianna, FL

## **Dr. Jose Dubeux**

*Associate Professor*

UF/IFAS North Florida REC & Agronomy

Forage Management and Extension

Marianna, FL

## **Dr. Kevin Kenworthy**

*Professor*

UF/IFAS Agronomy

Turfgrass and Forage Breeding and Genetics

Gainesville, FL

## **Dr. Kenneth H. Quesenberry**

*Professor Emeritus*

UF/IFAS Agronomy

Forage and Turf Breeding

Gainesville, FL

## **Dr. Esteban Rios**

*Assistant Professor*

UF/IFAS Agronomy

Forage Breeding and Genetics

Gainesville, FL

## **Dr. Lynn Sollenberger**

*Professor*

UF/IFAS Agronomy

Forage Production and Management

Gainesville, FL

## **Dr. Joao Vendramini**

*Associate Professor*

UF/IFAS Range Cattle REC & Agronomy

Forage Management and Extension

Ona, FL

## **Dr. Marcelo Wallau**

*Forage Extension Specialist*

UF/IFAS Agronomy

Forage Management and Extension

Gainesville, FL

# Student Competition

A Student Competition will be held in conjunction with IFTBC 2019. All presentations by bachelors, masters and PhD students are eligible to participate. IFTBC attendees who volunteer to serve as judges will assess student presentations within their field of expertise. Student presentations will be scored based on a standard set of judging criteria.

**Winners will be announced during the closing dinner banquet on Wednesday, March 27**

## Student Competition Categories

### Best Student Poster Presentation

This award will honor the best poster presentation given by a student during the conference.

### Best Lightning Talk

This award will honor the best lightning talk. Students will give a lightning-fast talk using a maximum of 5 slides, which will be set to automatically advance at one minute per slide.

## Presentation Judging Schedule

<b>Poster Evaluations during Two Poster Sessions</b>	Monday and Tuesday, March 25 & 26 (5:00pm – 6:30pm)
<b>Student Lightning Round</b>	Tuesday, March 26 (4:00pm – 5:00pm)
<b>Awards Presentation at Conference</b>	Wednesday, March 27 (during closing dinner banquet from 6:30pm – 8:30pm)

### ! Attention Judges

Completed score sheets must be turned in at the registration desk no later than 6:30pm on Tuesday, March 26.

# Sponsor Recognition

Thank you to our valued sponsors.  
Without their support, this conference would not be possible.

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## **Diamond Sponsor**

The Scott's Miracle-Gro Company

## **Gold Sponsors**

DLF Pickseed USA

Florida Foundation Seed Producers

UF/IFAS Agronomy Department

UF/IFAS Office of Research

University of Florida/IFAS

Wintersteiger

## **Silver Sponsors**

Allied Seed, LLC

Grassland Oregon

Noble Research Institute, LLC

NexGen | Pennington

## **Bronze Sponsors**

Barenbrug USA

Johnston Seed Co

Plantation Seed Conditioners, Inc.

Ragan & Massey, Inc.

TriCal Superior Forage

UF Genetics Institute



# Sponsor Descriptions

## Diamond Sponsor

### **The Scott's Miracle-Gro Company**

[www.scottsmiraclegro.com](http://www.scottsmiraclegro.com)

*Scott's Miracle-Gro*

"Helping people express themselves on their own piece of the Earth" is our company motto. Since 1868, we have earned consumer trust by providing products that help gardeners grow thriving gardens and landscapes. The Scott's Miracle-Gro Company has been a pioneer in the turfgrass industry and we are proud to be a Sponsor of IFTBC.

## Gold Sponsors

### **DLF Pickseed USA**

[www.dlfpickseed.com](http://www.dlfpickseed.com)

DLF is a global seed company dealing in turf, forage, and cover crop seed. DLF is a market leader providing seed domestically and to more than 80 countries globally. DLF Pickseed represents DLF in the US market. DLF operates a global research network to ensure exceptional performance the broad adaptation.

### **Florida Foundation Seed Producers**

[www.ffsp.net](http://www.ffsp.net)

Florida Foundation Seed Producers, Inc., is a non-profit corporation and direct support organization of the University of Florida. FFSP is responsible for the licensing of plant variety inventions developed by faculty plant breeders within the University of Florida's Institute of Food and Agricultural Sciences. FFSP is also responsible for the production of Foundation seed and nursery stocks which it handles at its production facilities in Marianna, FL along with associated producers.

### **UF/IFAS Agronomy Department**

[www.agronomy.ifas.ufl.edu](http://www.agronomy.ifas.ufl.edu)

The mission of the Agronomy Department is to achieve excellence in the science of using plants for food, feed, fuel, fiber and turf, as well as in the management of weed species, through research, teaching, and outreach programs that serve the people of Florida, our nation and the world.

### **UF/IFAS Office of Research**

[www.research.ifas.ufl.edu](http://www.research.ifas.ufl.edu)

The research mission of UF/IFAS, conducted under the auspices of the Florida Agricultural Experiment Station (FAES), is to discover new scientific knowledge, encourage innovative study and create applications based on sound science that address challenges facing agriculture, natural resources, and interrelated human systems in Florida, our country, and the world.

*(Gold Sponsors continued)*

## **University of Florida/IFAS**

[www.ifas.ufl.edu](http://www.ifas.ufl.edu)

University of Florida's Institute of Food and Agricultural Sciences (UF/IFAS) is a federal-state-county partnership dedicated to developing knowledge in agriculture, human and natural resources, life sciences and enhancing and sustaining the quality of human life by making that information accessible. Because of this mission and the diversity of Florida's climate and agricultural commodities, IFAS has facilities located throughout Florida.

## **Wintersteiger**

[www.wintersteiger.com](http://www.wintersteiger.com)

Wintersteiger is the worldwide leading manufacturer for agricultural field research equipment. Our product range includes plot combines, plot seeders, precision spaced planters, forage plot harvesters, stationary seed threshers, seed treaters and seed counters. Our equipment is designed to be easily adjustable to different crops. We have worldwide service locations including service centers in Iowa, Tennessee, Utah, Quebec and Saskatoon in North America.

## **Silver Sponsors**

### **Allied Seed, LLC**

[www.alliedseed.com](http://www.alliedseed.com)

We offer private label and branded products over a wide range of species. Our seeds are produced, processed and packaged at our facilities in Nampa, Idaho, Worland, WY and Albany, Oregon, where we have more than 25,000 acres of forage, turf and cover crop seed production, as well leading-edge technologies and highly trained technical staffs. Seeds are conditioned, treated, coated and can be packaged to your specifications at our facilities.

### **Grassland Oregon**

[www.goseed.com](http://www.goseed.com)

Grassland Oregon was founded in 2000 with the mission to provide novel solutions for growing concerns. We are engaged in research, marketing, and sales of seed. We maintain R&D locations in Oregon and Iowa, where we develop and evaluate varieties. In cooperation with leading researchers around the globe, Grassland Oregon has greatly impacted sustainability in the cover crop, forage, and turf seed sectors. Stop by our table to visit and learn more about what our company offers.

### **Noble Research Institute, LLC**

[www.noble.org](http://www.noble.org)

Noble Research Institute, LLC is an independent nonprofit agricultural research organization dedicated to delivering solutions to great agricultural challenges. Headquartered in Ardmore, Oklahoma, the Noble Research Institute conducts fundamental, translational and applied research; offers no-cost consultation and education to farmers, ranchers and land managers; operates seven research and demonstration farms; and educates students of all ages about science and agriculture.

### **NexGen | Pennington**

[www.nexgenresearch.net](http://www.nexgenresearch.net)

NexGen's purpose is to generate and disseminate knowledge, training, and education by a multidisciplinary approach that supports the turfgrass industry. NexGen encompasses germplasm enhancement and collaborative efforts with University programs. The goal of NexGen is to build turfgrass cultivars that require fewer inputs. This is achieved by designing and conducting research to maximize efficiency in areas of turf quality, seed yield, drought, shade, and disease tolerance.

## Bronze Sponsors

### **Barenbrug USA**

[www.barusa.com](http://www.barusa.com)

Barenbrug USA specializes in plant breeding, seed production and the international marketing of seeds for turf, forage grass and legumes. Founded in 1904, our company stands for top quality that is appreciated by customers both large and small, throughout the world.

### **Johnston Seed Co**

[www.johnstonseed.com](http://www.johnstonseed.com)

At Johnston Seed, we value the partnerships we build with each and every individual, which extend beyond that of customer-supplier. We're always thinking about how we can best serve our customers, who trust in us to provide the highest quality service and products in the industry.

### **Plantation Seed Conditioners, Inc.**

[www.plantationseedupdate.com](http://www.plantationseedupdate.com)

Plantation Seed is a Contract Seed Conditioner of Soybeans, Wheat, and Oats located in Newton, Georgia. We clean and condition seed for national corporations, as well as AGSouth Genetics. AGS is a local seed company based out of Albany, Ga that provides seeds FOR the south grown IN the South. We also Partner with Mixon Seed Company, who specializes in wholesale distribution and logistics of a wide variety of field crop seeds, located both in Newton and Orangeburg, South Carolina.

### **Ragan & Massey, Inc.**

[www.raganandmassey.com](http://www.raganandmassey.com)

Ragan and Massey, Inc. markets and distributes seed for cattlemen, wildlife and homeowners and control products for farms and homes throughout the United States. Since we first opened our doors in 1991, we have grown to offer 34 high-quality, innovative products under 12 proprietary brands that are available in over 3,500 stores nationwide. Today, our founders, Tom Ragan and Mike Massey, continue to lead our company from our headquarters in Ponchatoula, Louisiana.

### **TriCal Superior Forage**

[www.tricalforage.com](http://www.tricalforage.com)

TriCal Superior Forage is a triticale breeding company offering forage options for silage, grazing, hay, or as a cover crop. We offer Spring, Winter, and facultative types of triticale. We also partner with companies to offer other forage crops such as: alfalfa, hybrid rye, forage sorghum, barley, and wheat plus a triticale silage inoculant.

### **UF Genetics Institute**

[www.ufgi.ufl.edu](http://www.ufgi.ufl.edu)

The UFGI is an interdisciplinary program that seeks to promote excellence in the areas of genetics and genomics at the University of Florida. We do this by building community, facilitating collaboration and creating opportunities for intellectual exchanges among investigators working in diverse taxonomic systems but with a common set of approaches in genetics and genomics. We also support the recruitment and retention of outstanding faculty and graduate education in the areas of genetics and genomics. Lastly, we strive to enhance the ability of researchers at the university to compete for multidisciplinary research grants in the area of genetics and genomics.

# Opening Plenary Speakers

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## **Robert Gilbert**

*Dean for Research and Director  
UF/IFAS Florida Agricultural  
Experiment Station  
Gainesville, FL*

Robert Gilbert is the UF/IFAS Dean for Research and Director of the Florida Agricultural Experiment Station, the research arm of UF/IFAS. He became dean in January 2019 and is responsible for overseeing the research mission and administration. His office manages more than \$9 million in resources that are used to strengthen the capacity and innovation of UF/IFAS research. Dr. Gilbert holds a B.A. in biology from Carleton College, an M.S. in agronomy from the University of Florida, and a Ph.D. in soil science from Texas A&M University. After completing a postdoctoral research fellowship with The Rockefeller Foundation in Malawi, he joined the agronomy faculty at the UF/IFAS Everglades Research and Education Center in Belle Glade, FL in 2000. He then became the Center Director until 2014 when he was appointed as the Agronomy Department Chair on UF's main campus.

His past research experience has focused on breeding sugarcane varieties and working with stakeholders to improve one of South Florida's signature crops. He has co-authored 88 refereed journal publications, developed 33 sugarcane cultivars, and presented at 17 international meetings. In service to the profession, he has functioned in numerous roles within the International Society of Sugar Cane Technologists and the Florida division of the American Society of Sugar Cane Technologists. He has been honored with a USDA/ARS Sustained Effort Technology Transfer Award, a UF/IFAS International Achievement Award, and several Denver T. Loupe Best Presentation Awards from the American Society of Sugar Cane Technologists.



## **Jack Payne**

*Senior Vice President for Agriculture  
and Natural Resources  
University of Florida/IFAS  
Gainesville, FL*

Jack Payne is the Senior Vice President for Agriculture and Natural Resources at the University of Florida and the Administrative Head for the Institute of Food and Agricultural Sciences. Prior to his current position he served as a Vice President at Iowa State University, and, previous to Iowa State, he was a Vice President and Dean at Utah State University. Jack also has experience at two other land-grant institutions: Pennsylvania State University, where he served on the faculty of the School of Forest Resources, and, later, at Texas A&M University, where he served as a faculty member in the Fisheries and Wildlife Department.

After leaving Texas A&M University, Payne had a long career with Ducks Unlimited (DU), as their National Director of Conservation. While at Ducks Unlimited, some of his successes included the development of DU's private lands program with agriculture, the development of a national conservation easement program and the expansion of their Mexican program to Central and South America.

Payne received his M.S. in Aquatic Ecology and his Ph.D. in Wildlife Ecology from Utah State University and is a graduate of the Institute for Educational Management at Harvard University. He is a tenured professor in the Department of Wildlife Ecology and Conservation at the University of Florida.

Monday, March 25, 2019 | 8:00am – 9:30am

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**Fredy Altpeter**

*Professor*  
Molecular Genetics & Biotechnology  
UF/IFAS Agronomy Department  
Gainesville, FL

Dr. Fredy Altpeter is Professor of Molecular Genetics and Biotechnology at the University of Florida-IFAS. His research program focuses on genetic improvement of crops using genome editing, intragenic and transgenic approaches and is currently funded by the National Science Foundation, the US Department of Energy and industry. He earned his Dipl. Ing. agr. and Dr. sc. agr. degrees from the University of Hohenheim, Stuttgart, Germany followed by postdoctoral research in plant molecular genetics at the University of Florida and a group leader position at the Plant Genome Resource Center of the IPK Gatersleben, Germany.

Fredy's recent awards include the distinguished service award of the Society for In Vitro Biology and the University of Florida Research Foundation Award for a distinguished research program. He serves as associate editor of "Plant Breeding" and the "Journal of Plant Biotechnology".



**Bob Harriman**

*Vice President*  
Biotechnology  
The Scotts Miracle-Gro Company  
Marysville, Ohio

For the past 20 years, Dr. Harriman has been responsible for leading The Scotts Company's efforts in the development of value-added turfgrass and ornamental products for the lawn and garden. Scott's has developed several high value turfgrass products including bluegrass and St. Augustinegrass grasses that can be mowed less and be more easily managed because of glyphosate tolerance. With its stake in Bonnie vegetables, Scott's is making vegetable growing easier and more rewarding. Scott's is also evaluating flowering bedding plants for superior vigor, greater bloom count and enhanced stress tolerance. Prior to joining Scott's, Harriman was the technical lead of Monsanto's biotech turfgrass and ornamental team, and Program Director of Smart Plants (a Horticulture Program). As a new initiative program, the unit was built from scratch with the primary goal of enhancing the performance of annual bedding plants and turfgrasses for lawns and professional uses. Harriman was part of the negotiating team that lead to the joint development agreement between Monsanto, The Scotts Company and Sanford Scientific. Harriman received a PhD in biochemistry from Purdue University in 1990, and obtained a Bachelors in Biochemistry from the University of Maine.

# Keynote Speaker

Monday, March 25, 2019 | 4:30pm



## **John Beuttenmuller**

*Executive Director*

Florida Foundation Seed Producers, Inc.  
Marianna, Florida, USA

John Beuttenmuller is the Executive Director of Florida Foundation Seed Producers, Inc., a Florida non-profit corporation and direct support organization of the University of Florida. FFSP is responsible for the licensing of plant variety inventions developed by faculty plant breeders within the University of Florida's Institute of Food and Agricultural Sciences.

As Executive Director of FFSP, John oversees FFSP's 650 acre Foundation seed stock farm and seed processing facilities in Marianna, Florida as well as the licensing of new cultivars developed and released by UF/IFAS faculty plant breeders in over 45 different crop species. FFSP averages over 34 new, plant variety disclosures each year.

Prior to his hiring as Executive Director, John served as FFSP's Intellectual Property and Licensing Director. John is active in the agricultural industry, serving on the Board of Directors of the Southern Seed Association, the Florida Seed Association, and the Seed Innovation and Protection Alliance. John is an active member in the Association of University Technology Managers (AUTM). John is also a representative on the Florida Department of Agriculture and Consumer Services' Agricultural Feed, Seed, and Fertilizer Council and a graduate of the Florida Fruit and Vegetable Association's Emerging Leadership Development Program.

John is a native Floridian and a cum laude graduate of the University of Florida's Warrington College of Business Administration.

# Agenda-at-a-Glance

Sunday, March 24, 2019	
4:00pm – 8:00pm	Registration Open
4:00pm – 7:00pm	Sponsor & Poster Presenter Move-In
5:00pm – 8:00pm	Welcome Reception in Poster Hall
Monday, March 25, 2019	
6:30am – 5:30pm	Registration Open
6:30am – 8:00am	Breakfast Buffet in Palms Ballroom
8:00am – 9:30am	Welcome and Opening Plenary
10:00am – 5:00pm	General Session
11:30am – 1:00pm	Lunch Provided in Palms Ballroom
5:00pm – 6:30pm	Poster Session & Networking Reception I
6:30pm	Dinner on Own
Tuesday, March 26, 2019	
6:30am – 5:30pm	Registration Open
6:30am – 8:00am	Breakfast Buffet in Palms Ballroom
8:00am – 5:00pm	General Session
11:45am – 1:00pm	Lunch Provided in Palms Ballroom
5:00pm – 6:30pm	Poster Session & Networking Reception II
6:30pm	Dinner on Own
6:30pm – 8:00pm	Sponsor & Poster Presenter Move-Out
Wednesday, March 27, 2019	
6:30am	Morning Refreshments in Bus Loading Area
7:30am – 4:00pm	Group Off Property for All Day Tour in North Florida (Lunch Provided)
4:00pm	Return to Host Hotel
6:00pm – 6:30pm	Evening Social
6:30pm – 8:30pm	Closing Dinner & Awards



# Detailed Agenda

Sunday, March 24, 2019	
4:00pm	Guest Arrival and Check-in at the Holiday Inn Lake Buena Vista ( <i>Hotel check-in is at 4pm.</i> )
4:00pm - 8:00pm	Registration Open
4:00pm - 7:00pm	Sponsor & Poster Presenter Move-In
5:00pm - 8:00pm	Welcome Reception
Monday, March 25, 2019	
6:30am - 8:00am	Breakfast Buffet in Palms Ballroom ( <i>Attendees Only</i> )
6:30am - 5:30pm	Registration Office Open
Opening Plenary Session [8:00am - 9:30am] - Sponsored by the Scott's Company	
8:00am - 8:10am	Welcome and Introductions by the Planning Committee
8:10am - 8:20am	Welcome from the University of Florida/IFAS Agronomy Department and our Forage and Turf Breeding Programs — <i>Dr. Robert A. Gilbert</i> , Dean for Research and Director, Florida Agricultural Experiment Station, University of Florida/IFAS, Gainesville, FL, USA
8:20am - 8:30am	University of Florida/IFAS Welcome — <i>Dr. Jack Payne</i> , Senior Vice President for Agriculture and Natural Resources, University of Florida/IFAS, Gainesville, Florida, USA
8:30am - 9:00am	Precision Editing of the Complex Sugarcane Genome by Homology Directed Repair of CRISPR/Cas9 Induced DNA Breaks — <i>Dr. Fredy Altpeter</i> , UF/IFAS Agronomy Department, Gainesville, Florida, USA
9:00am - 9:30am	Find a Need and Fill it: Bringing Turfgrass Innovations to the Market — <i>Dr. Bob Harriman</i> , The Scotts Company, Marysville, Ohio, USA
9:30am - 10:00am	Refreshment Break and Networking in the Poster and Sponsor Display Hall



Monday, March 25, 2019 (continued)	
Session 1 [10:00am - 11:30am]	
Session Title	Modern Breeding and Genetic Tools
Moderator	<i>Dr. Kenneth H. Quesenberry</i> , Professor Emeritus, UF/IFAS Agronomy Department, Gainesville, Florida, USA
10:00am	Integrating Genomics, Transcriptomics and Phenomics to Advance Plant Breeding Strategies — <i>Dr. Maria Monteros</i> , Noble Research Institute, Ardmore, Oklahoma, USA
10:15am	Linkage Map with SNP Dosage Data in Tetraploid <i>Urochloa decumbens</i> — <i>Dr. Rebecca Ferreira</i> , University of Campinas, Campinas, Sao Paulo, Brazil
10:30am	Genome-Wide Family Prediction for Agronomic Traits in Alfalfa — <i>Dr. Esteban Rios</i> , UF/IFAS Agronomy Department, Gainesville, Florida, USA
10:45am	Genomic Selection of Agronomic Traits of Winter Wheat: A Case Study in a Forage Wheat Breeding Program — <i>Dr. Frank Maulana</i> , Noble Research Institute, Ardmore, Oklahoma, USA
11:00am	Big Trials and Big Data: Next Generation Forage Breeding — <i>Dr. Pieter Badenhorst</i> , Agriculture Victoria Research, Hamilton VIC, Australia
11:15am	Development of F1 Hybrid Breeding Technology in Ryegrasses — <i>Dr. Noel Cogan</i> , Agriculture Victoria Research, Bundoora VIC, Australia
11:30am - 1:00pm	Lunch Provided ( <i>Attendees Only</i> ) - Palms Ballroom
Session 2 [1:00pm - 2:30pm]	
Session Title	Phenotyping Technology
Moderator	<i>Dr. Fredy Altpeter</i> , UF/IFAS Agronomy Department, Gainesville, Florida, USA
1:00pm	Using Machine Learning to Identify and Analyze Red Clover Space Plants in Breeding Nurseries — <i>Dr. Heathcliffe Riday</i> , U.S. Dairy Forage Research Center (USDA-ARS), Madison, Wisconsin, USA
1:15pm	Rapid Detection of Drought Stress Using Field Radiometry for High Throughput Screening — <i>Dr. David McCall</i> , Virginia Tech, Blacksburg, Virginia, USA
1:30pm	Preliminary Study on Unmanned Aerial Vehicle (UAV)-Based High-Throughput Phenotyping of Plant Height in Seeded Centipedegrass and Ornamental Plants — <i>Dr. Jing Zhang</i> , UF/IFAS Agronomy Department, Gainesville, Florida, USA
1:45pm	Resistance to <i>Aphanomyces</i> Root Rot in Alfalfa ( <i>Medicago sativa</i> L.) — <i>Dr. Deborah Samac</i> , USDA-ARS, St. Paul, Minnesota, USA
2:00pm	Germplasm Screening for Tolerance to Bermudagrass Stem Maggot (BSM) — <i>Dr. William Anderson</i> , USDA/ARS, Tifton, Georgia, USA
2:15pm	Mixing St. Augustinegrass ( <i>Stenotaphrum secundatum</i> ) Cultivars as an Integrated Pest Management Strategy in Residential Lawns — <i>Dr. Adam Dale</i> , UF/IFAS Entomology & Nematology Department, Gainesville, Florida, USA
2:30pm - 3:00pm	Refreshment Break and Networking in the Poster and Sponsor Display Hall

Monday, March 25, 2019 (continued)	
Session 3 [3:00pm - 5:00pm]	
Session Title	Breeding and Selection
Moderator	<i>Dr. Debra Hignight</i> , NexGen Turf Research, Albany, Oregon, USA
3:00pm	Impact of Selection for Flowering Time on Biomass Yield of Switchgrass — <i>Dr. Michael Casler</i> , USDA-ARS, Madison, Wisconsin, USA
3:15pm	Valuing Genetic Gain – What’s The Likely on Farm Value of New Cultivars — <i>Dr. Kevin Smith</i> , University of Melbourne, Hamilton VIC, Australia
3:30pm	Alfalfa Breeding in Argentina — <i>Dr. Daniel Basigalup</i> , INTA Manfredi, Córdoba, Argentina
3:45pm	Heritability of Resilience to Deficit Irrigation in Tall Fescue — <i>Dr. Blair Waldron</i> , USDA, Logan, Utah, USA
4:00pm	Seed Set Evaluation in Inter-Specific Hybrids of Lotus — <i>Dr. Rafael Reyno</i> , National Institute of Agricultural Research, Tacuarembó, Uruguay
4:15pm	Phenotyping of <i>Brachiaria Humidicola</i> Hybrids for its BNI Potential, Biomass Production, Forage Quality and N <sub>2</sub> O Emissions — <i>Dr. Jacobo Arango</i> , CIAT, Cali, Valle del Cauca, Colombia
4:30pm	<u>Keynote Presentation:</u> <i>John Beuttenmuller</i> , Executive Director, Florida Foundation Seed Producers, Inc., Marianna, Florida, USA
5:00pm - 6:30pm	Poster Session & Networking Reception 1 (Presenters at odd numbered posters to stand at display 5:30pm - 6:30pm.)
Tuesday, March 26, 2019	
6:30am - 8:00am	Breakfast Buffet in Palms Ballroom (Attendees Only)
6:30am - 5:30pm	Registration Office Open

Tuesday, March 26, 2019 (continued)	
Session 4 [8:00am - 9:30am]	
Session Title	Genetic Resources and Novel Species
Moderator	Dr. Kevin Kenworthy, UF/IFAS Agronomy Department, Gainesville, Florida, USA
8:00am	Genetic Improvement of <i>Paspalum</i> Species in Northeastern Argentina — Dr. Carlos Acuña, Universidad Nacional del Nordeste, Corrientes, Argentina
8:15am	Broadening the Genepool for Forage and Turf Grass Breeding - New Collections of <i>Lolium</i> and <i>Festuca</i> ssp. — Dr. Silvia Bachmann-Pfabe, Leibniz Institute of Plant Genetics and Crop Plant Research, Malchow, Mecklenburg-Vorpommern, Germany
8:30am	National Plant Germplasm System's Cool-Season Grass and Temperate-Adapted Legume Forage Genetic Resources — Dr. Brian Irish, USDA-ARS, Prosser, Washington, USA
8:45am	Evaluating Annual Legume Forage Cover Crops for the Southern Great Plains — Dr. Suresh Bhamidimarri, Noble Research Institute, Ardmore, Oklahoma, USA
9:00am	<i>Paspalum atratum</i> and <i>P. malacophyllum</i> Pollen Cryopreservation — Dr. Bianca Vigna, Embrapa Pecuária Sudeste, São Carlos, São Paulo, Brazil
9:15am	Review: Breeding and Molecular Research of Some Tropical Grasses in Japan — Dr. Hitoshi Nakagawa, Hamamatsu Photonics K. K., Hamamatsu, Shizuoka, Japan
9:30am - 10:00am	Refreshment Break and Networking in the Poster and Sponsor Display Hall
Session 5 [10:00am - 11:30am]	
Session Title	Use of Molecular Tools for Selection
Moderator	Dr. Steve Reid, DLF Pickseed, Halsey, Oregon, USA
10:00am	Improving the Use of Genomic Tools in Tropical Forage Grass Breeding with Diploid Ruzigrass as a Reference — Dr. Marco Pessoa-Filho, Embrapa Cerrados, Brasília, Distrito Federal, Brazil
10:15am	High-Density Linkage Map with Allele Dosage of Polyploid <i>Megathyrsus maximus</i> — Mrs. Thamiris Gatti Deo, UNICAMP, São Paulo, Brazil
10:30am	Genome-Wide Polymorphisms in Polyploids <i>Paspalum</i> Species from Plicatula Group — Dr. Fernanda Ancelmo de Oliveira, UNICAMP, São Paulo, Brazil
10:45am	Genotyping by Sequencing Provides New Insights into the Molecular Genetic Diversity of Napier Grass Collections and Identified Candidate Genes Associated with Important Forage Traits — Dr. Meki Shehabu Muktar, International Livestock Research Institute (ILRI), Addis Ababa, Ethiopia
11:00am	Genomic Prediction Models for Forage Quality in Timothy ( <i>Phleum pratense</i> L.) in Diverse Environments — Dr. Mallikarjuna Rao Kovi, Norwegian University of Life Sciences, Ås, Akershus, Norway
11:15am	Research on Molecular Mechanism of Seeds Germination in Sheepgrass — Prof. Gongshe Liu, Chinese Academy of Sciences, Beijing, China
11:30am	Genomics-Assisted Breeding for Enhancing Resistance to Biotic and Abiotic Stresses in Alfalfa — Dr. Long-Xi Yu, USDA-ARS, Prosser, Washington, USA
11:45am - 1:00pm	Lunch Provided (Attendees Only) - Palms Ballroom

**Tuesday, March 26, 2019 (continued)****Session 6 [1:00pm - 2:30pm]**

Session Title	Endophytes and Symbiosis
<b>Moderator</b>	<i>Dr. Ann Blount</i> , UF/IFAS North Florida REC & Agronomy Department, Forage Breeding and Genetics, Marianna, Florida, USA
1:00pm	<b>Systems Biology and Molecular Breeding of Grass-endophyte Symbiota —</b> <i>Dr. German Spangenberg</i> , Agriculture Victoria Research, Bundoora, VIC, Australia
1:15pm	<b>Transcriptome Analysis of Perennial Ryegrass: Asexual <i>Epichloë</i> Symbioses During Seedling Growth and Maturation —</b> <i>Dr. Kathryn Guthridge</i> , Agriculture Victoria Research, Bundoora, VIC, Australia
1:30pm	<b>Expression Analysis of Tall Fescue Harboring Different Endophyte Strains in Response to Water Deficit —</b> <i>Dr. Randy Dinkins</i> , USDA-ARS, Lexington, Kentucky, USA
1:45pm	<b>Does Endophyte-Association Improve Productivity in Tall Fescue? The Case of the Novel AR584 Strain in a Non-Limiting Environment —</b> <i>Dr. Javier Do Canto</i> , INIA, Tacuarembó, Uruguay
2:00pm	<b>Genome-Wide Association Study of Symbiotic Nitrogen Fixation Effectiveness in <i>Medicago truncatula</i> —</b> <i>Dr. Raul Huertas</i> , Noble Research Institute, Ardmore, Oklahoma, USA
2:15pm	<b>Endophytes and Mycotoxins in Florida Pastures —</b> <i>Dr. Ann Blount</i> , UF/IFAS North Florida REC & Agronomy Department, Forage Breeding and Genetics, Quincy, Florida, USA
2:30pm - 3:00pm	Refreshment Break and Networking

**Session 7 [3:00pm - 4:00pm]**

Session Title	Abiotic Stress
<b>Moderator</b>	<i>Dr. Esteban Rios</i> , University of Florida/IFAS Agronomy Department, Gainesville, Florida, USA
3:00pm	<b>Detection of Quantitative Trait Loci Associated with Drought Tolerance in St. Augustinegrass —</b> <i>Dr. Xingwang Yu</i> , North Carolina State University, Raleigh, North Carolina, USA
3:15pm	<b>Performance and Correlation for Leaf Dry Matter Yield of Diverse Germplasm of <i>Panicum maximum</i> Jacq. Under Two Levels of Soil Fertility in the Brazilian Cerrado —</b> <i>Dr. Mateus Santos</i> , Embrapa Beef Cattle, Campo Grande, Mato Grosso do Sul, Brazil
3:30pm	<b>Resilience and Stability of Alfalfa Cultivars in North America —</b> <i>Dr. Valentin Picasso</i> , University of Wisconsin - Madison, Madison, Wisconsin, USA
3:45pm	<b>Evaluating Cultivar and Species Traits with the CROPGRO Perennial Forage Model for Grasses and Legumes —</b> <i>Dr. Kenneth Boote</i> , UF/IFAS Agronomy Department, Gainesville, Florida, USA

**Tuesday, March 26, 2019 (continued)****Session 8 - Student Lightning Round [4:00pm - 5:00pm]**

Students will give a five-minute “lightning fast” talk about the work described in their poster abstract, using a maximum of five slides, which will automatically advance at one minute per slide.

The result is a series of fun and fast-paced presentations.

<b>Moderator</b>	<b><i>Dr. Esteban Rios</i>, UF/IFAS Agronomy Department, Gainesville, Florida, USA</b>
4:00pm	<b>Session Introduction and Overview</b>
4:05pm	<b>Identifying St. Augustinegrass Off-types in Sod Production Fields —</b> <b><i>Mrs. Jamie Buhlman</i></b> , UF/IFAS Agronomy Department, Gainesville, Florida, USA
4:10pm	<b>A Novel Kentucky Adapted Red Clover Line Displays Increased 2,4-D Tolerance —</b> <b><i>Mr. Lucas Araujo</i></b> , University of Kentucky, Lexington, Kentucky, USA
4:15pm	<b>QTL Mapping and Proteomic Analysis for the Development of Efficient Selection of Freeze Tolerance in Zoysiagrass —</b> <b><i>Ms. Jessica Brown</i></b> , North Carolina State University, Raleigh, North Carolina, USA
4:20pm	<b>Genotype-By-Environment Analysis for Turf Quality in Bermudagrass —</b> <b><i>Ms. Beatriz Gouveia</i></b> , UF/IFAS Agronomy Department, Gainesville, Florida, USA
4:25pm	<b>Validation of Quantitative Trait Loci Associated with Freeze Tolerance in St. Augustinegrass —</b> <b><i>Ms. Sydney Graham</i></b> , North Carolina State University, Raleigh, North Carolina, USA
4:30pm	<b>Development of Single Nucleotide Polymorphisms (SNP) Markers for Genetic Map Saturation of Hexaploid <i>Urochloa humidicola</i> —</b> <b><i>Mrs. Aline da Costa Lima Moraes</i></b> , UNICAMP, Campinas, Sao Paulo, Brazil
4:35pm	<b>Polyethylene Glycol Effects on Zoysiagrass Root Growth and Leaf Hydration Status in a Hydroponic System —</b> <b><i>Ms. Katherine Cox</i></b> , UF/IFAS Agronomy Department, Gainesville, Florida, USA
4:40pm	<b>Root System Architecture and Root Development of Bahiagrass Mutants under Dry Down and Well-water Conditions —</b> <b><i>Mr. Pablo Boeri</i></b> , UF/IFAS West Florida Research and Education Center, Jay, Florida, USA
4:45pm	<b>Effects of Ploidy on Photosynthesis, Transpiration Efficiency, and Growth of Annual Ryegrass Under Variable Atmospheric Carbon Dioxide and Water Conditions —</b> <b><i>Ms. Jennifer Timmers</i></b> , UF/IFAS Agronomy Department, Gainesville, Florida, USA
4:50pm	<b>Genetic Parameters for Agronomic Traits in a Reference Alfalfa Population —</b> <b><i>Mr. Janam Acharya</i></b> , UF/IFAS Agronomy Department, Gainesville, Florida, USA
4:55pm	<b>Session Wrap-Up and Housekeeping Remarks</b>
5:00pm - 6:30pm	<b>Poster Session &amp; Networking Reception 2</b> (Presenters at even numbered posters to stand at display 5:30pm - 6:30pm.)



# Wednesday, March 27 – Field Tour



## All-Day Tour at the Plant Science Research & Education Unit (PSREU)

Wednesday, March 27, 2019 | Citra, Florida

The Plant Science Research and Education Unit (PSREU) serves University of Florida Institute of Food and Agricultural Sciences (UF/IFAS) faculty with the infrastructure needed to conduct diverse row and specialty crop research projects on more than 1,086 acres, with 700 acres of cultivatable land. Approximately 140 researchers conduct more than 400 projects at the PSREU that include turf production and maintenance, plant breeding, minimum and reduced tillage, crop water management, plant pathology, plant fertility, corn genomics and vegetable production, just to name a few. This field tour features a birds-eye view of cutting edge research on plant breeding and genetics, and much more.

6:30am	Morning Refreshments and Coffee Service in Bus Loading Area
7:15am	Board Buses
7:30am	Buses Depart and Drive to Citra, FL
9:15am	Arrive at PSREU
9:30am	Welcome by the PSREU Director
9:45am	Attendees Divide Into Three Groups for Tours and Presentations by Researchers
10:00am - 10:30am	Station 1: Tour Turf Area   Presented by Dr. Kevin Kenworthy
10:45am - 11:15am	Station 2: Tour Forage Area   Presented by Dr. Esteban Rios
11:30am - 12:00pm	Station 3: Tour Small Grain Area   Presented by Dr. Ali Babar
12:15pm - 12:30pm	Equipment Display
12:30pm - 1:30pm	Group Luncheon Under Pavilion
1:45pm	Board Buses
2:00pm	Depart PSREU - Drive Through Local Area Horse Farms on Return Trip to Hotel
5:00pm	Arrive at Hotel in Lake Buena Vista
6:00pm - 6:30pm	Evening Social
6:30pm - 8:30pm	Closing Dinner & Awards
8:30pm	Conference Concludes

# Poster Display Information

Poster presentations play a key role in the success of IFTBC 2019. Considerable time is dedicated for viewing posters, allowing both attendees and presenters to interact and use these opportunities to share details of their work, successes and lessons learned.

Posters are on display throughout the conference in the Poster Display Room. This is the primary gathering spot where morning, mid-day and afternoon refreshments are served. This allows plenty of time for visibility and networking. See detailed schedule below. Please be present at your poster during the appointed time.

<b>Set Up Begins:</b>	<b>Sunday, March 24, 4:00pm – 7:00pm</b> Posters may also be set-up during the morning refreshment period from 7:00am – 8:00am on Monday. All posters are on display throughout the conference.
<b>Session One:</b>	<b>Monday, March 25, 5:00pm – 6:30pm</b> (Presenters at <i>Odd Numbered Boards</i> to stand at their posters starting at 5:30pm.)
<b>Session Two:</b>	<b>Tuesday, March 26, 5:00pm – 6:30pm</b> (Presenters at <i>Even Numbered Boards</i> to stand at their posters starting at 5:30pm.)
<b>Removal:</b>	<b>Tuesday, March 26, 7:00pm</b> (Immediately following the Poster Session Reception.)

\*Organizers are not responsible for posters that are not removed from the boards and get discarded by the board vendor.

## Important details to note:

- Please be available during the formal poster session. This is the primary opportunity for attendees to meet with you personally and ask questions about your work, so stand at your poster during the appointed time.
- Poster display boards will be dismantled and removed by the vendor on Tuesday evening at the end of the reception. Please remove your poster when leaving the reception.

# Poster Directory

(In alphabetical order by presenter last name)

No.	First Name	Last Name	Organization	Format	Abstract Title
46	Janam	Acharya	University of Florida	Poster & Lightning Talk	Genetic Parameters for Agronomic Traits in a Reference Alfalfa Population
24	Camisha	Alexis	University of Florida	Poster	Polyploid St. Augustinegrass Hybrids Developed Through Embryo Rescue
49	Juliana	Andrade Dias	Federal University of Lavras (UFLA)	Poster	Structure of the Covariance Matrix and Its Implications on the Selection of <i>Urochloa ruziziensis</i> Clones
17	Jacobo	Arango	International Center for Tropical Agriculture	Poster	Phenotyping of <i>Megathyrus maximus</i> Founder Population for Breeding Purposes for Its BNI Potential, Biomass Production, Forage Quality and Nitrous Oxide Emissions
72	Lucas	Araujo	University of Kentucky	Poster & Lightning Talk	A Novel Kentucky Adapted Red Clover Line Displays Increased 2,4-D Tolerance
65	Giselle	Assis	Brazilian Agricultural Research Corporation - Embrapa	Poster	Root System of Forage Peanut Genotypes Under Two Levels of Water Availability
50	Flávia Maria	Avelar Gonçalves	Federal University of Lavras (UFLA)	Poster	Efficiency of Early Selection in the <i>Urochloa ruziziensis</i> Breeding
30	Sanzio	Barrios	Embrapa Beef Cattle	Poster	Agronomic and Nutritional Value Evaluation in a Population of <i>Brachiaria</i> Interspecific Hybrids ( <i>B. ruziziensis</i> x <i>B. brizantha</i> x <i>B. decumbens</i> )
74	Pablo	Boeri	University of Florida	Poster & Lightning Talk	Root System Architecture and Root Development of Bahiagrass Mutants under Dry Down and Well-water Conditions
78	Jessica	Brown	North Carolina State University	Poster & Lightning Talk	QTL Mapping and Proteomic Analysis for the Development of Efficient Selection of Freeze Tolerance in Zoysiagrass
25	Jamie	Buhlman	University of Florida	Poster	Measuring Mowing Frequency in Genetically Modified St. Augustinegrass
26	Jamie	Buhlman	University of Florida	Poster & Lightning Talk	Identifying St. Augustinegrass Off-types in Sod Production Fields
83	Phil	Busey	Phil Busey Agronomy Consulting Inc.	Poster	Characterization of Genetic Off-types in 'Celebration' Bermudagrass by Inferred Ploidy Level through Flow Cytometry
31	Vinicius	Carreteiro Gomes	UNESP - São Paulo State University	Poster	Nutritive Value of New <i>Paspalum</i> Accessions for Diversification In Tropical Livestock
21	Valheria	Castiblanco	International Center for Tropical Agriculture	Poster	Determining Sites Ideal for a Pilot Experiment in Colombia to Trial New Forages in East Africa



No.	First Name	Last Name	Organization	Format	Abstract Title
18	Valheria	Castiblanco	International Center for Tropical Agriculture	Poster	Identification of <i>Brachiaria humidicola</i> Hybrids with Waterlogging Tolerance and Biological Nitrification Inhibition Capability
20	Valheria	Castiblanco	International Center for Tropical Agriculture	Poster	Models for Estimating Nutrition Quality of <i>B. Humidicola</i> Using Near Infrared Reflectance Spectroscopy
19	Valheria	Castiblanco	International Center for Tropical Agriculture	Poster	Phenotyping <i>Urochloa humidicola</i> Genotypes against Spittlebug <i>Aeneolamia varia</i> (Hemiptera: Cercopidae): An Experimental Comparison between Digital Image and Visual Evaluation
59	Lucimara	Chiari	Embrapa Beef Cattle	Poster	Development of Novel Polymorphic EST-SSR Markers in Guineagrass ( <i>Panicum maximum</i> ) for Variability Genetic Studies
41	Noel	Cogan	Agriculture Victoria Research	Poster	Boosting Genetic Gain in Tall Fescue via Speed Breeding and Genomic Selection
39	Noel	Cogan	Agriculture Victoria Research	Poster	Cultivar Sub-Selection for Delayed Inflorescence and Improved Water-Soluble Carbohydrate Content and Yield in Perennial Ryegrass
40	Noel	Cogan	Agriculture Victoria Research	Poster	Developing Canopy Based Reflectance Techniques for the Non-Destructive Assessment of Nutritive Characteristics in Perennial Ryegrass Breeding Programs
42	Noel	Cogan	Agriculture Victoria Research	Poster	Implementation of Genomic Selection in Commercial Breeding of Perennial Ryegrass
82	Katherine	Cox	University of Florida	Poster & Lightning Talk	Polyethylene Glycol Effects on Zoysiagrass Root Growth and Leaf Hydration Status in a Hydroponic System
51	Clarice	Coyne	USDA	Poster	Evaluation of Minor Food and Forage Cool-Season Legume Germplasm as Overwintering Cover Crop Green Manures
37	Guangxin	Cui	Lanzhou Institute of Husbandry and Pharmaceutical Sciences, Chinese Academy of Agriculture Sciences	Poster	Domestication and Cultivation of <i>Limonium aureum</i> (L.) Hill
60	Aline	da Costa Lima Moraes	UNICAMP	Poster & Lightning Talk	Development of Single Nucleotide Polymorphisms (SNP) Markers for Genetic Map Saturation of Hexaploid <i>Urochloa Humidicola</i>
32	Rocheteau	Dareus	UF Student	Poster	Ploidy Level Effect on Biomass Yield and Foliar Diseases in Annual Ryegrass ( <i>Lolium multiflorum</i> Lam.) across 12 Years in Florida

No.	First Name	Last Name	Organization	Format	Abstract Title
68	Huirong	Duan	Lanzhou Institute of Husbandry and Pharmaceutical Science, Chinese Academy of Agricultural Sciences	Poster	Effects of NACL Treatments on the Growth and Succulence of <i>Salicornia europaea</i>
55	José	Dubeux	University of Florida	Poster	Developing Black Oat Cultivars for Florida Dairies
23	Maxwell	Duncan	University of Florida	Poster	Inhibition of <i>Gaeumannomyces Graminis</i> Var. <i>Graminis</i> by Soil Inhabiting Bacteria Associated with St. Augustinegrass
27	Flavia	Gimenes	Instituto de Zootecnia	Poster	Bromatological Composition of Spontaneous Plants, Grasses and Legume
28	Flavia	Gimenes	Instituto de Zootecnia	Poster	Nitrogen Concentration in Forage Legume Tissues Submitted to Nitrogen Doses at Planting
81	Nicolás	Glison	Facultad de Agronomía, Universidad de la República	Poster	Modeling Seedling Emergence of Dallisgrass and Bahiagrass Forage Cultivars with an Empirical Environmental Variable
76	Beatriz	Tome Gouveia	Universidade Federal de Lavras	Poster	Combining Ability of <i>Brachiaria</i> Hybrids Considering Agronomic Traits
77	Beatriz	Gouveia	University of Florida	Poster & Lightning Talk	Genotype-By-Environment Analysis for Turf Quality in Bermudagrass
80	Sydney	Graham	North Carolina State University	Poster & Lightning Talk	Validation of Quantitative Trait Loci Associated with Freeze Tolerance in St. Augustinegrass
67	Zhenfei	Guo	Nanjing Agricultural University	Poster	An Ethylene Responsive Factor from <i>Medicago falcata</i> Confers Cold Tolerance by Upregulating Polyamine Turnover, Antioxidant Protection, and Proline Accumulation
43	Kathryn	Guthridge	Agriculture Victoria Research	Poster	Genetic Modification of Asexual <i>Epichloë</i> Endophytes with the <i>perA</i> Gene for Peramine Biosynthesis
44	Kathryn	Guthridge	Agriculture Victoria Research	Poster	Method Optimisation for the Quantification of Alkaloids in Endophyte-Infected Perennial Ryegrass
29	Liana	Jank	Embrapa Beef Cattle	Poster	<i>Panicum maximum</i> Hybrid Evaluation in Brazil
57	Baskaran	Kannan	University of Florida	Poster	Napiergrass ( <i>Cenchrus purpureus</i> Schumach.) Genome Survey and High-Density Genetic Map Construction
58	Baskaran	Kannan	University of Florida	Poster	Oilcane: Metabolic Engineering for Elevating Lipid Content in Vegetative Tissues of Sugarcane

No.	First Name	Last Name	Organization	Format	Abstract Title
2	Kevin	Kenworthy	University of Florida	Poster	Release of 'FAES1307', 'FAES1312', 'FAES1313' and 'FAES1319' Zoysiagrass Cultivars from the University of Florida
1	Kevin	Kenworthy	University of Florida	Poster	Release of 'FSA1602' St. Augustinegrass from the University of Florida
62	Bryan	Kindiger	USDA-ARS	Poster	Invivo Generation of Dihaploids in Tall Fescue
36	Jun	Li	Institute of Grassland Research, Chinese Academy of Agricultural Sciences	Poster	Development of Simple Sequence Repeat (SSR) Markers in <i>Medicago ruthenica</i> and Their Application for Evaluating Outcrossing Fertility under Open-pollination Conditions
66	Shaoyun	Lu	South China Agricultural University	Poster	Transgenic Centipedegrass Overexpressing S-Adenosylmethione Decarboxylase (SAMDC) Gene for Improved Cold Tolerance
69	Felipe	Martins	UNICAMP	Poster	Genotyping by Sequencing Approach for Autotetraploidy <i>Urochloa ruziziensis</i> Genetic Breeding
70	Karem	Meireles	Embrapa Beef Cattle	Poster	<i>Urochloa brizantha</i> Mock Reference Genome From GBS-SNP-Crop Approach
38	Susana	Milla-Lewis	North Carolina State Univeristy	Poster	Genetic Improvement of Centipedegrass through Chemical Mutagenesis
64	Ali	Missaoui	University of Georgia	Poster	Is Simultaneous Improvement of Fall Dormancy (FD) and Winter Hardiness (WH) Possible in Alfalfa? QTL Mapping and Inheritance of FD & WH
71	Chakravarthi	Mohan	University of Florida	Poster	Targeted Mutagenesis of the Complex Sugarcane Genome with CRISPR/CAS9
53	Alemayehu Teresa	Negawo	International Livestock Research Institute (ILRI)	Poster	The First In-Depth Insight into the Genetic Diversity of a Buffelgrass ( <i>Cenchrus ciliaris</i> L.) Collection Using Genotyping-By-Sequencing Analysis
79	Valentin	Picasso	University of Wisconsin - Madison	Poster	Variability in Vernalization Requirements of Kernza Intermediate Wheatgrass Populations
3	Kenneth	Quesenberry	University of Florida	Poster	Naturally Occurring Stable 8x and Chimerical 4x/8x Zoysiagrass Genotypes Revealed by Flow Cytometry
48	Paul	Reith	University of Florida	Poster	Annual Ryegrass Breeding at the University of Florida
34	Weibo	Ren	Institute of Grassland Research of Chinese Academy of Agricultural Science	Poster	Study on EMS Mutagenesis Effect of Sheepgrass

No.	First Name	Last Name	Organization	Format	Abstract Title
56	Heathcliffe	Riday	U.S. Dairy Forage Research Center (USDA-ARS)	Poster	Progress in Hairy Vetch Cover Crop Breeding
4	Esteban	Rios	University of Florida	Poster	Genetic Parameters for Nutritive Value in Bermudagrass Germplasm Determined by NIRS
85	Joseph	Robins	USDA-ARS	Poster	Comparative Turfgrass Performance of <i>Lolium perenne</i> Germplasm under Limited Irrigation
73	Deborah	Samac	USDA-ARS	Poster	Genome Editing in Alfalfa ( <i>Medicago sativa</i> ) to Hyper-Accumulate Phosphate
63	Mateus	Santos	Embrapa Beef Cattle	Poster	GGE Biplot Analysis in Multi-Environment Trials and Harvests for Leaf Dry Matter Yield in <i>Panicum Maximum</i> Jacq. ( <i>Megathyrsus Maximus</i> Jacq.)
22	Rosangela	Simeão	Embrapa	Poster	Autotetraploid <i>Urochloa ruziziensis</i> Breeding
14	Kevin	Smith	University of Melbourne	Poster	Application of Multispectral Image Sensors for Evaluation of Perennial Ryegrass Persistence in Field Plots
15	Kevin	Smith	University of Melbourne	Poster	Combining NDVI and Plant Height as a Proxy to Enable High-Throughput Phenotyping of Herbage Yield In Perennial Ryegrass Breeding Program
16	Kevin	Smith	University of Melbourne	Poster	Use of New Genomic Tools to Assess and Trace Genetically Modified Forages
7	German	Spangenberg	Agriculture Victoria Research	Poster	A High Throughput Bioassay to Evaluate the Effectiveness of Different Asexual <i>Epichloë</i> Spp. Endophyte Strains for Control of Aphid Pests of Perennial Ryegrass ( <i>Lolium perenne</i> )
9	German	Spangenberg	Agriculture Victoria Research	Poster	Applications of Unmanned Aircraft System for Genomic Selection of Drought Tolerance in Perennial Ryegrass
10	German	Spangenberg	Agriculture Victoria Research	Poster	Functional Metabolomics Analysis of Lolitrem B and Its Biosynthetic Intermediates Identifies Catecholaminergic Activation Profiles and Non-Tremorgenic Metabolites
5	German	Spangenberg	Agriculture Victoria Research	Poster	Harnessing the Power of Long Read Sequencing in Fungal Endophyte Genome Assembly
8	German	Spangenberg	Agriculture Victoria Research	Poster	Investigating the Effects of Fungal Endophytes on the Pasture Pest <i>Heteronychus arator</i> (African Black Beetle)
6	German	Spangenberg	Agriculture Victoria Research	Poster	Near-Infrared Spectroscopy for Rapid Assessment of Seed Quality Traits in <i>Lolium</i>

No.	First Name	Last Name	Organization	Format	Abstract Title
11	German	Spangenberg	Agriculture Victoria Research	Poster	Taxonomic Characterisation of <i>Brachiaria</i> Grass Associated Endophytes
12	German	Spangenberg	Agriculture Victoria Research	Poster	The Genetic Basis for <i>Epoxy-Janthitrem</i> Biosynthesis in Perennial Ryegrass Endophytes
52	Pablo	Speranza	Universidad de Buenos Aires, Facultad de Agronomía	Poster	Extensive Clonality in a Bahiagrass Germplasm Collection from Uruguay
84	Jennifer	Timmers	University of Florida	Poster & Lightning Talk	Effects of Ploidy on Photosynthesis, Transpiration Efficiency, and Growth of Annual Ryegrass under Variable Atmospheric Carbon Dioxide and Water Conditions
45	Michael	Trammell	Noble Research Institute, LLC	Poster	Complexities of a Breeding Pipeline: Determining the Value of Endophytes in Summer Dormant Tall Fescue
54	Maryjo	Valle	University of Florida	Poster	Genetic Variability in the USDA <i>Cynodon</i> Germplasm Collection for Bermudagrass Stem Maggot and Agronomic Traits
33	Joao	Vendramini	University of Florida	Poster	Bermuda 2000 – A New Bermudagrass Cultivar for Florida
75	Bianca	Vigna	Embrapa Pecuária Sudeste	Poster	Transcriptome Analysis of <i>Paspalum vaginatum</i> under Drought Condition
35	Zhaolan	Wang	Institute of Grassland Research, Chinese Academy of Agricultural Sciences	Poster	The Study on Drought Resistance of <i>Medicago sativa</i> L. Using Transcriptional Sequencing
47	Xinquan	Zhang	Sichuan Agricultural University	Poster	The Flowering Regulation of Orchardgrass during Vernalization

# Additional Information

## Free Internet Access

Free wireless internet access is available to IFTBC 2019 attendees in the meeting space and guest rooms. To access Internet, follow these instructions on your device:

1. Connect to the network "Holiday Inn Event"
2. You will be directed to the splash page (Attending Meeting) where you will enter: Conference Code: 3675
3. Click on "I agree to the terms of use"
4. Click on "Done"

**Note:** The passcode is the same for internet access in your guest room.

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## Name Badge

Your name badge serves as your admission to all networking functions while attending IFTBC 2019, so be sure to wear it throughout the conference. Attendees must present the applicable meal ticket for all banquet functions. Tickets are handed out at registration, and are in your name badge holder.

Guests must also wear their name badges for entry into functions that are included with the guest fee. The guest fee allows guests 18 years of age and older to attend the Welcome Social Sunday evening, the Poster Session Networking Receptions on Monday and Tuesday, and the Closing Dinner Banquet Social on Wednesday. Please be sure to register all guests and pay the applicable registration fees.

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## Lost & Found

If you find a lost article, bring it to the staff at registration. If you lose an article, first check with conference registration staff. If the lost article(s) has not been turned in, check with the hotel front desk staff.

# Notes

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# Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.