A G R O N O M Y

Program of the
Southern Branch
American Society of Agronomy
Annual Meeting
February 1-3, 2015
The Westin Peachtree Plaza
Atlanta, GA

2014-2015 Officers

President:
Dr. Yoana C. Newman
University of Florida

Vice-President & Program Chair:
Dr. Mark S. Reiter
Virginia Tech

Secretary/Treasurer:
Dr. Dexter B. Watts
USDA-ARS, Auburn, AL

Past President:
Dr. Steve Hague
Texas A&M University

SUNDAY, FEBRUARY 1, 2015
Registration: 10:00 AM – 4:00 PM
Room: Chastain Terrace,
The Westin Peachtree Plaza

POSTER SESSION
1:00 PM – 4:00 PM
Authors Present from 1:00 PM – 3:00 PM
Room: The Overlook,
The Westin Peachtree Plaza

UNDERGRADUATE STUDENT POSTER COMPETITION – CROPS AND SOILS

1. Screening Elite Cotton Genotype from Different Breeding Programs for Low Temperature and Drought Stress Tolerance. Ethan Norvell*, K. Raja Reddy and Ted Wallace, Mississippi State University

2. The Importance of Soil Sampling Depth for Nutrient Application Recommendation in Kentucky. Chelsea Holleman* and Iin Handayani, Murray State University

3. Dynamics of Soil Infiltration Rates in Various Agroecosystems. Landon M Gibbs*, Murray State University

4. The Impact of Tillage Systems on Soil Physical Properties in Bond County, Illinois. Katelynn Mollett* and Iin Handayani, Murray State University
5. Influence of Tillage and Fertilizer Regime on Presence of Select Pathogenic Organisms in a Silt Loam Soil. Tara Watkins*, Hunter Consley, Naomi Rowland, Rebecca Gilfillen and Todd Willian, Western Kentucky University

**GRADUATE STUDENT POSTER COMPETITION - CROPS**

6. First Year Results of a Grazing Evaluation of Cool-Season Forages with and without Legumes. Robert McKee*, Jennifer Michelle Johnson and Edzard van Santen, Auburn University

7. Evaluation of Multiple Herbicide Groups on Establishing Pearl Millet x Napiergrass Hybrids. Gregory Wilson¹, Paul A. Baumann¹, Byron Burson² and Russel W. Jessup³, (1)Texas A&M University, (2)USDA-ARS

8. Performance of Selected Browse Species in the Greenhouse. Rishi Khatri*, Uma Karki, Jordan Byrd, Anthony Kumi, Lila Karki and Byeng Ming, Tuskegee University


11. Soybean Seed Emergence and Seedling Growth and Developmental Responses to Temperature. Firas A. Alsarji*, Ryan A. Rosselot and K. Raja Reddy, Mississippi State University


13. Characterizing Genetic Variability Among the Rice Grown in the US Midosuth. Salah Jumaa¹, Timothy W. Walker² and K. Raja Reddy³, (1)Mississippi State University, (2)Horizon Ag LLC


15. Simulated and Insect Herbivory Effects on Protein Precipitable Phenolic and Nitrogen Concentrations of Two Legumes. Tiana Blackmon¹, James P. Muir², Barry Lambert¹, Roger Witte³ and David Kattes¹, (1)Tarleton State University, (2)Texas A&M AgriLife Research-Stephenville


**GRADUATE STUDENT POSTER COMPETITION - SOILS**


21. Effects of Biochar on Growth, Yield and Biofuel Production in Sunflower (Helianthus annuus). Matthew Pfister* and Subhrajit K. Saha, Georgia Southern University


24. **Updating the "Salt Index" of Fertilizers.** Richard C. Yudin*, Yuncong Li and Edward A. Hanlon Jr., University of Florida

**PROFESSIONAL POSTER – CROPS**

25. **Is Breeding for Pest Resistance in Switchgrass a Viable Goal in North-Central Mississippi?** Brian S. Baldwin*, Jonathan D. Richwine, Jesse I. Morrison and Jason Brett Rushing, Mississippi State University

26. **Factors Impacting Yield of Irrigated Corn in Arkansas.** Jason Kelley*, Tyler Keene, Scott Hayes and Matt Gregory, University of Arkansas

27. **Elevated Atmospheric CO\textsubscript{2} Effects on Cogongrass Ecotypes.** Stephen A. Prior\textsuperscript{1}, G. Brett Runion\textsuperscript{1}, H. Allen Torbert\textsuperscript{3} and Edzard van Santen\textsuperscript{2}, (1)USDA-ARS, (2)Auburn University

28. **Elevated CO\textsubscript{2} Effects on Ragweed Ecotypes: Growth and Fungal Associations.** G. Brett Runion\textsuperscript{1}, Stephen A. Prior\textsuperscript{1}, Andrew J. Price\textsuperscript{1}, J. Scott McElroy\textsuperscript{2} and H. Allen Torbert\textsuperscript{3}, (1)USDA-ARS, (2)Auburn University


**PROFESSIONAL POSTER – SOILS**

30. **CO\textsubscript{2}, N\textsubscript{2}O and CH\textsubscript{4} Fluxes from Agricultural Soils under Corn (Zea mays L) Production.** Samuel Dennis*, Qi Deng, Dafeng Hui and Chandra Reddy, Tennessee State University

31. **Corn N Sensor Calibration.** Carl R. Crozier*, Ronnie Heiniger and Gary T. Roberson, North Carolina State University


33. **Farm Manure to Energy Initiative.** Mark S. Reiter\textsuperscript{1}, Kristen Hughes-Evans\textsuperscript{2}, Sara Reiter\textsuperscript{3} and Jane Corson-Lassiter\textsuperscript{4}, (1)Virginia Tech, (2)Sustainable Chesapeake, (3)Eastern Shore RC&D Council, (4)USDA-NRCS

34. **Effect of ESN Coated Urea Application Timing and Rate on Bermudagrass Yield in Mississippi.** Joshua Andrew White* and Rocky W. Lemus, Mississippi State University

35. **Soil Nutrient Accumulation Removal While Keeping Corn Production Stable.** Rebecca Gilfillen*, Annesly Netthisinghe and Paul Woosley, Western Kentucky University

**SAAS Program**

4:00 PM - 4:15 PM
SAAS Business Meeting, Augusta Room 1

4:15 PM - 6:00 PM
General Session/Keynote Speaker, Augusta Room 1

6:00 PM – ‘till
Super Bowl Party, TBD

**MONDAY, FEBRUARY 2, 2915**

Registration: 7:00 AM – 5:00 PM
Room: Chastain Terrace, 
The Westin Peachtree Plaza

GRADUATE STUDENT ORAL COMPETITION – CROPS
Room: Chastain F, 
The Westin Peachtree Plaza

7:55 AM  Introductory Remarks.

8:00 AM  Nutritive Value of Cool-Season Grass Baleage As Affected By Nitrogen. Jonathan D. Richwine*, Jesse I. Morrison and Brian S. Baldwin, Mississippi State University

8:15 AM  Cool-Season Forage Grass Palatability and Preference in Dairy Cattle. Eric Billman*, Ben Goff and Tim Phillips, University of Kentucky

8:30 AM  Selection and Breeding to Eliminate Seed Dormancy in Eastern Gamagrass. Jesse I. Morrison¹, Brian S. Baldwin¹, Rocky W. Lemus¹, Paul D. Meints², Timothy A. Rinehart³, Jonathan D. Richwine¹, Jerry Michael Phillips¹ and Denise E. Costich⁴, (1)Mississippi State University, (2)Minnesota Soybean Research and Promotion Council, (3)USDA-ARS, (4)International Maize and Wheat Improvement Center

8:45 AM  Seed Priming Induced Heat and Drought Stress Tolerance during Pearl Millet x Napiergrass Establishment. Anthony Watson¹⁴, Byron Burson⁵, Lee Tarpley⁶ and Russell Jessup⁷, (1)Texas A&M AgriLife Research, (2)USDA-ARS, (3)Texas AgriLife Research-Beaumont, (4)Texas A&M University

9:00 AM  Suppressing Bermudagrass Using Topramezone. Justin P. Duckworth* and Paul Woosley, Western Kentucky University

9:15 AM  Row Pattern, Row Spacing, and Seeding Rate Effects on Peanut. Michael Plumblee* and R. Scott Tubbs, University of Georgia - Tifton

9:30 AM  Break.

9:45 AM  Mapping of Quantitative Trait Loci for Resistance to Aflatoxin Accumulation in a Resistant Corn Inbred Line Mp715. Ramesh Dhakal*, Louisiana State University

10:00 AM  Predicting Aflatoxin Contamination Risk in Corn with a Generic Drought Index. Damianos Damianidis¹, Brenda V. Ortiz², Gary L. Windham² and Prem Woli³, (1)Auburn University, (2)USDA-ARS, (3)Washington State University


10:45 AM  Improving Grain Yields in Senegal through Millet-Cowpea Intercropping. Patrick Trail* and A. Ozzie Abaye, Virginia Tech

11:00 AM  Discussion.

11:15 AM  Lunch Break.

GRADUATE STUDENT ORAL COMPETITION – SOILS

12:25 PM  Introductory Remarks.

12:30 PM  Fertilizer Nitrogen Stabilizer Effects on Corn Growth and Nitrogen Use. Michael Nattrass* and Jac J. Varco, Mississippi State University

12:45 PM  The Spatial Variability of Soil Nitrogen and Carbon in a Pasture System. Joseph Van Noy*, University of Kentucky


1:30 PM  Alfalfa Response to Potassium Rate and Timing of Application. Timothy Grant* and Hubert J. Savoy Jr., University of Tennessee - Knoxville

1:45 PM  Effect of Ca Source on Runner Peanut Yield, Grade, Seed Ca, and Germination. Rui Yang*, Julie A. Howe¹, Glendon Harris² and Kris Balkcom¹, (1)Auburn University, (2)University of Georgia

2:00 PM  Optimizing Corn and Clover Configurations for a Sustainable Living Mulch System. Zachary P. Sanders* and Nicholas S. Hill, University of Georgia-Athens

2:15 PM  Can Applying a Nonionic Surfactant Increase Soil Water and Nutrient Content and Increase Cotton Boll Density in a Sandy Loam Soil? Gandura Abagandura*, Clemson University

2:30 PM  Break.

PROFESSIONAL ORAL PRESENTATIONS – CROPS 1

2:45 PM  Blocking Direction in N.C. Wheat Performance Trials. Daryl Bowman*, North Carolina State University

3:00 PM  Climate Variability and Adaptation Options for Cereal Crops in the Southeast USA. Brenda V. Ortiz¹, Prem Wol³, David Buntin², Kathy Flanders² and Jerry Johnson³, (1)Auburn University, (2)Washington State University, (3)University of Georgia

3:15 PM  Seed Treatments Improved Wheat Emergence and Yield Under Dry Sowing on Permanent Beds. Michael J. Mulvaney*, University of Florida

3:30 PM  Optimizing Sweet Corn and Clover Configurations for a Sustainable Living Mulch System. Nicholas S. Hill* and Zachary P. Sanders, University of Georgia-Athens

3:45 PM  Effects of Irrigation, Seeding Rates, and Row Type on Grain Sorghum in the Midsouth. H. Arnold Bruns*, USDA-ARS

4:00 PM  Multi-State Evaluation of a Seed Treatment and in-Furrow Granular Insecticide for Thrips and Tswv Management in Peanut. W. Monfort⁴, Mark Abney⁵, Albert K. Culbreath¹, John Beasley¹, Ames Herbert¹, David Jordan⁷ and Rick Brandenburg⁶, (1)University of Georgia - Tifton, (2)University of Georgia, (3)Auburn University, (4)Virginia Tech, (5)North Carolina State University

4:15 PM  Productivity of Hybrid and Inbred Rice Lines Managed Under Transplanted and Direct Seeding Conditions at Makurdi, Nigeria. Terkimbi Vange*, Gabriel Ogala Ojo and Ayuba Sahabi, (1)University of Agriculture, Makurdi

4:30 PM  Factors That Impact Yield of Irrigated Grain Sorghum in Arkansas. Jason Kelley*, Tyler Keene, Scott Hayes and Matt Gregory, University of Arkansas

4:45 PM  Agronomy Business Meeting

TUESDAY, FEBRUARY 3, 2014

PASTURES AND FORAGES ORAL PRESENTATIONS – JOINT SESSION WITH ANIMAL SCIENCES
Room: Chastain F,
The Westin Peachtree Plaza

8:10 AM  Introductory Remarks.
Application of Gypsum to Control P Runoff from Poultry Litter Fertilization of Pasture.  
H. Allen Torbert* and Dexter B. Watts, USDA-ARS

H. Allen Torbert**¹, Dexter B. Watts¹ and Mark S. Reiter², (1)USDA-ARS, (2)Virginia Tech

Harvest Date and N Application Impact in Bermudagrass Forage Production and Quality.  
Rocky W. Lemus* and Joshua Andrew White, Mississippi State University

Agronomic Characteristics of Dual-Purpose Canola Grown in Piedmont Soils of North Georgia.  
Sandra Leanne Dillard*, Dennis W. Hancock, Lawton Stewart and Sam Ingram, University of Georgia-Athens

Behavioral Thermoregulation: Sheep Moderation of Core Temperature through Shade Utilization.  
Gabriel Pent* and John Herschel Fike, Virginia Tech

Ecology of Grazing Lands Systems - a Novel Learning Experience.  
John Herschel Fike¹, Robert L. Kallenbach², Carlos Villalobos³ and Bridgett McIntosh¹, (1)Virginia Tech, (2)University of Missouri, (3)Texas Tech

Seedling Method and Clover Species for Grazing Calves in Southern Arkansas.  
P. Beck¹, B. Stewart¹, C. Shelton¹, A. McWilliams¹, M. Sims¹, and J. Jennings*, (1)University of Arkansas SWREC, (2)University of Arkansas, Little Rock

Performance of Stocker Cattle Grazing ‘Tifton 85’ Bermudagrass Supplemented with Distillers’ Dried Grains.  
W.B. Smith¹, F.M. Rouquette¹, J.L. Kerby¹, L.O. Tedeschii, J.L. Foster³, J.P. Banta¹, K.C. McCuistion¹, and T.J. Machado³, (1)Texas A&M AgriLife Research, Overton, (2)Texas A&M University, College Station, (3)Texas A&M AgriLife Research, Beeville, (4)Texas A&M University, Kingsville

Effect of Grazing Management on Performance of Steers Grazing Mixed Alfalfa and Bermudagrass Pastures.  
W. Galyen¹, E. B. Kegley¹, J.G. Powell¹, P. Beck², D.S. Hubbell, III³, T. Hess³, T. Butler³, and J. Rogers³, (1)University of Arkansas, Fayetteville, (2)University of Arkansas SWREC, (3)University of Arkansas Livestock and Forestry Research Station, (4)The Samuel Roberts Noble Foundation

Production Characteristics of Stockpiled ‘Alicia’ Bermudagrass in Louisiana.  
G. Scaglia¹, G.T. Gentry², and J. Gurie², (1)LSU AgCenter, (2)LSU AgCenter Dean Lee Research Station

Forage and Sweet Sorghum Silages as Alternatives to Corn Silage for Growing Cattle.  
M.H. Poore*, K.R. Caffrey, M.S. Chinn, and M.W. Veal, North Carolina State University

Impact of Nitrogen Source, and Rate on Yield and Nutritive Value of Stockpiled Tall Fescue.  
B.T. Campbell, C.D. Teutsch, and N.T. Shireman, Virginia Tech

Animal Performance, In Vivo Forage Digestibility and Forage Intake of Beef Steers Grazing Annual Ryegrass Varieties Differing in Water Soluble Carbohydrate Content, With and Without Corn Supplementation.  
J.G. Andrae¹, M. Alende²*, S.K. Duckett¹, G. Volpi Lagreca¹, and A.C. Fluck³, (1)Clemson University, (2)INTA, (3)Universidad Federal de Pelotas

Supplementing Soybean Hulls to Stocker Cattle Grazing Wheat During Periods of High N Prices.  
J.T. Biermacher¹, J. Rogers, C.A. Moffet, and R. Reuter, The Samuel Roberts Noble Foundation, Inc.
12:00  
*Lunch Break.*

**PROFESSIONAL ORAL PRESENTATIONS – SOILS**  
*Room: Chastain F.*  
*The Westin Peachtree Plaza*

12:55 PM  
Introductory Remarks.

1:00 PM  
**Yield Response of Corn to Varying Nitrogen Rates.** Leo Espinoza* and Mukhammadzakhrab Ismanov, University of Arkansas

1:15 PM  
**Development of a New Manure Amendment for Reducing Phosphorus Runoff and Ammonia Volatilization from Poultry Litter.** Philip A. Moore* Jr., USDA-ARS

1:30 PM  
**Verification of Fertilizer Recommendations in a Corn, Wheat, Soybean Rotation in TN.** Hubert J. Savoy* Jr. and Xinhua Yin, University of Tennessee - Knoxville

1:45 PM  
**Towards a Living Mulch System: Corn Establishment, Herbicide Efficacy, and N Availability in a Binary Mixture of White Clover.** Nicholas S. Hill* and Zachary P. Sanders, University of Georgia-Athens

2:00 PM  
**Changes in Soil Test Phosphorus over Time As Affected By Phosphorus Rate and AVAIL.** M. Wayne Ebelhar*, Mississippi State University

2:15 PM  
**Incorporation of Cover Crops in Dryland Cotton during Extended Drought Conditions.** Paul B. DeLaune*, Texas A&M Agrilife Research

2:30 PM  
**Crop Residue Management and Tillage Interactions for Soybean/Corn Rotations.** M. Wayne Ebelhar*, Normie Buehring and Willaim Kingery, Mississippi State University

2:45 PM  
**Soil Texture By Near Infrared Reflectance Spectroscopy.** Jason E. Mowrer*, University of Georgia

3:00 PM  
Break.

**PROFESSIONAL ORAL PRESENTATIONS – CROPS 2**

3:15 PM  
**High Throughput Phenotyping Strategies for Cotton.** Steve Hague*, Texas A&M University

3:30 PM  
**Potassium Rates for New Generation Cotton Cultivars.** Elizabeth A. Guertal* and David B. Weaver, Auburn University

3:45 PM  
**Optimizing Planting and Harvesting Dates of Energybeet Varieties Grown for Bioenergy in South Florida.** Maninder Pal Singh* and Gregg Nuessly, University of Florida

4:00 PM  
**Evaluation of Industrial Hemp (Cannabis sativa L.) Cultivars for Fiber and Grain Production in Kentucky.** Paul Woosley*¹, Todd William* and David Williams², (1)Western Kentucky University, (2)University of Kentucky